

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  [X]  
Filed by a Party other than the Registrant  [ ]

Check the appropriate box:

- [X] Preliminary Proxy Statement
- [ ] Definitive Proxy Statement
- [ ] Definitive Additional Materials
- [ ] Soliciting Material Under Rule 14a-12
- [ ] Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

MKS INSTRUMENTS, INC.  
(Name of Registrant as Specified in Its Charter)

(Name of Person(s) Filing Proxy Statement if Other Than the Registrant)

Payment of Filing Fee (check the appropriate box):

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

1. Title of each class of securities to which transaction applies:\_\_\_\_\_
2. Aggregate number of securities to which transaction applies:\_\_\_\_\_
3. Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):\_\_\_\_\_
4. Proposed maximum aggregate value of transaction:\_\_\_\_\_
5. Total fee paid:\_\_\_\_\_

- [ ] Fee paid previously with preliminary materials:\_\_\_\_\_
- [ ] Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the

previous filing by registration statement number, or the form or schedule and the date of its filing.

1. Amount previously paid: \_\_\_\_\_
2. Form, Schedule or Registration Statement No.: \_\_\_\_\_
3. Filing Party: \_\_\_\_\_
4. Date Filed: \_\_\_\_\_

MKS INSTRUMENTS, INC.  
SIX SHATTUCK ROAD  
ANDOVER, MASSACHUSETTS 01810

April 10, 2001

Dear Stockholder:

You are cordially invited to attend the Annual Meeting of Stockholders of MKS Instruments, Inc. (the "Company") to be held on Wednesday, May 16, 2001, at 10:00 a.m. at the Andover Country Club, 60 Canterbury Street, Andover, Massachusetts 01810.

At the Annual Meeting you will be asked (i) to elect two (2) members of the Board of Directors of the Company; (ii) to approve an amendment to the Company's Restated Articles of Organization increasing the number of authorized shares of Common Stock from 50,000,000 to 75,000,000; (iii) to ratify the appointment of the Company's independent accountants, PricewaterhouseCoopers LLP; and (iv) to transact such other business as may properly come before the meeting or any adjournment thereof. Details of the matters to be considered at the Annual Meeting are contained in the Proxy Statement, which we urge you to review carefully.

Whether or not you plan to attend the Annual Meeting, please complete, date, sign and return your Proxy 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.

On behalf of the Board of Directors, I would like to express our appreciation for your continued interest in the affairs of the Company.

Sincerely,

-----  
John R. Bertucci  
Chairman

MKS INSTRUMENTS, INC.  
SIX SHATTUCK ROAD  
ANDOVER, MASSACHUSETTS 01810

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

To the Stockholders:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Stockholders of MKS INSTRUMENTS, INC. (the "Company"), a Massachusetts corporation, will be held on Wednesday, May 16, 2001 at 10:00 a.m. at the Andover Country Club, 60 Canterbury Street, Andover, Massachusetts 01810, for the following purposes:

1. To elect two (2) members of the Board of Directors for a term of three (3) years;
2. To approve an amendment to the Company's Restated Articles of Organization increasing the number of authorized shares of Common Stock from 50,000,000 to 75,000,000;
3. To consider and act upon a proposal to ratify the appointment by the Board of Directors, of PricewaterhouseCoopers LLP as independent accountants for the Company for the fiscal year ending December 31, 2001; and
4. To consider and act upon any matters incidental to the foregoing and any other matters that may properly come before the meeting or any adjournment or adjournments thereof.

The Board of Directors has no knowledge of any other business to be transacted at the Annual Meeting.

The Board of Directors has fixed the close of business on March 30, 2001 as the record date for the determination of stockholders entitled to notice of and to vote at the Annual Meeting and any adjournment or adjournments thereof. The stock transfer books of the Company will remain open for the purchase and sale of the Company's Common Stock.

A copy of the Company's Annual Report to Stockholders for the year ended December 31, 2000, which contains consolidated financial statements and other information of interest to stockholders, accompanies this Notice and the enclosed Proxy Statement.

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. You must also bring a form of personal identification. In order to vote your shares at the Annual Meeting, you must obtain from the nominee a proxy issued in your name.

By Order of the Board of Directors

-----  
Richard S. Chute  
Clerk

Andover, Massachusetts  
April 10, 2001

IMPORTANT

WHETHER OR NOT YOU EXPECT TO ATTEND IN PERSON, PLEASE PROMPTLY SIGN, DATE, AND RETURN THE ENCLOSED PROXY. PROMPTLY SIGNING, DATING, AND RETURNING THE PROXY WILL SAVE THE COMPANY 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.  
SIX SHATTUCK ROAD  
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. (the "Company" or "MKS"), a Massachusetts corporation, for use at the Annual Meeting of Stockholders to be held on May 16, 2001, at 10:00 a.m. at the Andover Country Club, 60 Canterbury Street, Andover, Massachusetts 01810, and at any adjournment or postponement thereof (the "Annual Meeting").

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

VOTING SECURITIES AND VOTES REQUIRED

On March 30, 2001, the record date for the determination of stockholders entitled to notice of and to vote at the Annual Meeting, there were issued and outstanding and entitled to vote \_\_\_\_\_ shares of Common Stock, no par value per share (the "Common Stock"). Each share entitles the record holder to one vote on each matter.

Under the Company's Amended and Restated By-Laws (the "By-Laws"), the holders of a majority of the shares of Common Stock issued and outstanding and entitled to vote at the Annual Meeting shall constitute a quorum for the transaction of business at the Annual Meeting. Shares of Common Stock present in person or represented by proxy (including shares which abstain or do not vote with respect to one or more of the matters presented for stockholder approval) will be counted for purposes of determining whether a quorum exists at the Annual Meeting.

The affirmative vote of the holders of a plurality of the shares of Common Stock voting on the matter is required for the election of Directors. The affirmative vote of the holders of a majority of the outstanding shares of Common Stock is required to approve the proposed amendment to the Company's Restated Articles of Organization. All other matters require the approval of the holders of a majority of the shares of Common Stock present at the Annual Meeting or represented by proxy.

Shares held by stockholders who abstain from voting as to a particular matter, and shares held in "street name" by brokers or nominees, who indicate on their proxies that they do not have discretionary authority to vote such shares as to a particular matter, will not be counted as votes in favor of such matter, and also will not be counted as shares voting on such matter. Accordingly, abstentions and "broker non-votes" will have no effect on the voting on a matter

that requires the affirmative vote of a certain percentage of the shares voting on the matter. However, because shares which abstain and shares represented by broker non-votes are nonetheless considered outstanding shares, abstentions and broker non-votes with respect to the proposed amendment to the Company's Restated Articles of Organization will have the same effect as a vote against such proposed amendment.

THE NOTICE OF ANNUAL MEETING, THIS PROXY STATEMENT AND THE COMPANY'S ANNUAL REPORT TO STOCKHOLDERS FOR THE YEAR ENDED DECEMBER 31, 2000, ARE BEING MAILED TO STOCKHOLDERS ON OR ABOUT APRIL 10, 2001. A COPY OF THE COMPANY'S ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2000, AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION (THE "COMMISSION"), EXCLUDING EXHIBITS, WILL BE FURNISHED WITHOUT CHARGE TO ANY STOCKHOLDER UPON WRITTEN REQUEST TO CCBN.COM INVESTOR CONNECT, ATTN: MARK BERGERON, GWS, 148 WARD HILL, HAVERHILL, MA 01835. 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 stockholder known to the Company to be the beneficial owner of more than 5% of the outstanding shares of Common Stock; (ii) each current director of the Company; (iii) the executive officers named in the Summary Compensation Table below; and (iv) all directors and executive officers of the Company as a group. Unless otherwise indicated in the footnotes to the table, (i) all information set forth in the table is as of January 31, 2001; and (ii) the address for each director and executive officer of the Company is: c/o MKS Instruments, Inc., Six Shattuck Road, Andover, Massachusetts 01810.

Name of Beneficial Owners	Number of Shares Beneficially Owned (1)	Percentage of Class Outstanding
John R. Bertucci	15,245,610 (2)	41.4%
Peter R. Younger	58,482 (3)	*
Ronald C. Weigner	160,957 (4)	*
William D. Stewart	160,502 (5)	*
Robert L. Klimm	18,750 (6)	*
Joseph A. Maher	111,704 (7)	*
Richard S. Chute	1,788,583 (8)	4.9%
Owen W. Robbins	25,092 (6)	*
Robert J. Therrien	25,092	*
Louis P. Valente	25,092 (6)	*
Robert R. Anderson	73,515 (9)	*
Hans-Jochen Kahl	46,913 (10)	*
Other 5% stockholder		
Thomas H. Belknap	1,668,696 (11)	4.5%

All directors and executive officers as a group  
(18 persons)

17,102,770 (12)

45.5%

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

- (1) The Company believes that each stockholder has sole voting and investment power with respect to the shares listed, except as otherwise noted. The number of shares beneficially owned by each stockholder is determined under rules of the Commission, and the information is not necessarily indicative of ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the person has sole or shared voting power or investment power and also any shares which the individual has the right to acquire within 60 days after January 31, 2001 through 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 stockholder of beneficial ownership of those shares of Common Stock. Shares of Common Stock which an individual or entity has a right to acquire within the 60-day period following January 31, 2001 pursuant to the exercise of options or warrants are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or entity, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person or entity shown in the table.
- (2) Includes 5,840,906 shares held directly by Mr. Bertucci, 5,939,125 shares held directly by Mr. Bertucci's family members, and 3,431,837 shares held by Bertucci family trusts for which either Mr. or Mrs. Bertucci serves as a co-trustee. In addition, includes 33,742 shares subject to options exercisable within 60 days of January 31, 2001.
- (3) Includes 1,532 shares held directly by Mr. Younger, 700 shares held by certain of the Younger family trusts for which Mr. Younger serves as trustee, and 56,250 shares subject to options exercisable within 60 days of January 31, 2001.
- (4) Includes 1,357 shares held directly by Mr. Weigner and 159,600 shares subject to options exercisable within 60 days of January 31, 2001.
- (5) Includes 1,152 shares held directly by Mr. Stewart and 159,350 shares subject to options exercisable within 60 days of January 31, 2001.
- (6) Consists of shares subject to options exercisable within 60 days of January 31, 2001.
- (7) Includes 12,049 shares held directly by Mr. Maher and 99,655 shares subject to options exercisable within 60 days of January 31, 2001.
- (8) Includes 1,763,491 shares held by certain of the Bertucci family trusts for which Mr. Chute serves as a co-trustee and 25,092 shares subject to options held by Mr. Chute exercisable within 60 days of January 31, 2001.

- (9) Includes 32,871 shares held directly by Mr. Anderson, 11,503 shares held in trust for the benefit of a child of Mr. Anderson, of which Mr. Anderson is the trustee, and 29,141 shares subject to options exercisable within 60 days of January 31, 2001.
- (10) Includes 20,206 shares held directly by Mr. Kahl, 4,084 shares held by Mr. Kahl's wife, and 22,623 shares subject to options exercisable within 60 days of January 31, 2001.
- (11) Includes 1,668,346 shares held by certain of the Bertucci family trusts for which Mr. Belknap serves as a co-trustee and 350 shares held directly by Mr. Belknap.
- (12) Includes 807,812 shares subject to options exercisable within 60 days of January 31, 2001.

To the knowledge of the Company, there are no agreements among any of the foregoing persons or entities with respect to the voting of shares of Common Stock of the Company.

#### PROPOSAL ONE

##### ELECTION OF DIRECTORS

The By-Laws of the Company provide for a Board of Directors which is divided into three classes. The term of the Class I Directors expires at the 2003 Annual Meeting. The term of the Class II Directors expires at the 2001 Annual Meeting, and the term of the Class III Directors expires at the 2002 Annual Meeting. Mr. Owen W. Robbins and Mr. Richard S. Chute are currently proposed for election to serve as Class II Directors.

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 both 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.

THE BOARD OF DIRECTORS RECOMMENDS THE ELECTION OF MR. OWEN W. ROBBINS AND MR. RICHARD S. CHUTE AS DIRECTORS, EACH TO SERVE A TERM WHICH EXPIRES AT THE 2004 ANNUAL MEETING.

DIRECTORS

Set forth below are the names and ages of each member of the Board of Directors (including those who are nominees for election as Class II Directors) and the positions and offices held by him, his principal occupation and business experience during the past five years, the names of other publicly held companies of which he serves as a director and the year of the commencement of his term as 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 31, 2001, appears under the heading "Security Ownership of Certain Beneficial Owners and Management."

Name	Age	Position	Class to Which Director Belongs
John R. Bertucci.....	60	Director; Chairman and Chief Executive Officer	III
*Richard S. Chute.....	62	Director; Clerk	II
*Owen W. Robbins (2).....	71	Director	II
Robert J. Therrien (1).....	66	Director	I
Louis P. Valente (1)(2).....	70	Director	I
Robert R. Anderson(2).....	63	Director	III
Hans-Jochen Kahl(1).....	61	Director	I

(1) Member of Compensation Committee.

(2) Member of Audit Committee.

\* Nominee for election at this meeting.

Mr. Bertucci has served as a director of MKS since 1974 and has been Chairman of the Board of Directors and Chief Executive Officer since November 1995. Mr. Bertucci served as President of MKS from 1974 to May 1999. From 1970 to 1974, he was Vice President and General Manager. Mr. Bertucci has an M.S. in Industrial Administration and a B.A. in Metallurgical Engineering from Carnegie-Mellon University. Mr. Bertucci is also a director of Intellisense Corporation, and was a director of Applied Science and Technology, Inc. ("ASTex") from September 1994 to January 2001, when ASTex was acquired by MKS.

Mr. Chute has served as a director of MKS since 1974. Mr. Chute has been a member of the law firm of Hill & Barlow, a Professional Corporation, since 1971.

Mr. Robbins has served as a director of MKS since February 1996. Mr. Robbins was Executive Vice President of Teradyne, Inc., a manufacturer of electronic test systems and backplane connection systems used in the electronics and telecommunications industries, from March 1992 to May 1997, and its Chief Financial Officer from February 1980 to May 1997. Mr. Robbins served on the Board of Directors of Teradyne, Inc. from March 1992 to May 2000, at which time he retired as a Director, and was its Vice Chairman from January 1996 to May 1997, at which time he retired from Teradyne, Inc.

Mr. Therrien has served as a director of MKS since February 1996. Mr. Therrien has been President and Chief Executive Officer of Brooks Automation, Inc., a manufacturer of semiconductor processing equipment, since 1989.

Mr. Valente has served as a director of MKS since February 1996. Mr. Valente has been Chairman and Chief Executive Officer of Palomar Medical Technologies, Inc., a company which designs, manufactures and markets cosmetic lasers, since September 1997. He has been a director of Palomar Medical Technologies, Inc. since February 1997 and was its President and Chief Executive Officer from May 1997 to September 1997. Mr. Valente is also a director of two privately held medical software companies.

Mr. Anderson has served as a director of MKS since January 2001. Mr. Anderson is a private investor. From October 1998 to October 2000, Mr. Anderson served as Chief Executive Officer of Yield Dynamics, Inc., a private semiconductor control software company and presently serves as a director. He also served as CEO of Silcon Valley Research, Inc., a semiconductor design automation software company from December 1996 to August 1998. Mr. Anderson currently serves as a director of Metron Technology N.V., a distributor of parts and equipment for the semiconductor industry, Trikon Technologies, Inc., a manufacturer of semiconductor process equipment, and Aehr Test Systems, Inc., a manufacturer of semiconductor test and burn in equipment. He also serves as a director to three other private development stage companies, and as a trustee of Bentley College. Mr. Anderson also served as a director of Applied Science and Technology, Inc. ("ASTeX") from October 1995 to January 2001, when ASTeX was acquired by MKS.

Mr. Kahl has served as a director of MKS since January 2001. From June 1994 through September 1996, Mr. Kahl served as a consultant to Ebara, a Japanese manufacturer of industrial water pumps and vacuum process equipment for the semiconductor industry. Mr. Kahl was employed by Leybold AG, formerly Leybold-Heraeus GmbH, a leading international manufacturer of vacuum pumps and other vacuum process equipment for the semiconductor industry, from July 1983 to March 1992, where he served as a managing director and was primarily responsible for sales, marketing and strategic planning. Since November 1996, he has served as a director of Solid State Management, a privately held manufacturer of high precision measurement tools. Mr. Kahl served as a director of Compact Instrument Technology, LLC, of Woburn, Massachusetts from May 1999 until March 2000, when Compact was acquired by MKS. Mr. Kahl also served as a director of ASTeX from October 1995 to January 2001, when ASTeX was acquired by MKS.

#### DIRECTOR COMPENSATION

Directors of MKS are reimbursed for expenses incurred in connection with their attendance at Board of Directors and committee meetings. Directors who are not employees of MKS are paid an annual fee of \$10,000 and \$1,000 for each Board of Directors meeting they

attend and \$500 for each committee meeting they attend which is not held on the same day as a Board of Directors meeting. Messrs. Chute, Robbins, Therrien and Valente, four of MKS's non-employee directors, have each been granted options, under MKS's 1996 Director Stock Option Plan (under which no further grants will be made), to purchase 8,592 shares of Common Stock at a weighted average exercise price of \$4.81 per share. Each has also been granted options to purchase 22,500 shares of Common Stock at a weighted average exercise price of \$22.34 per share under the 1997 Director Stock Option Plan (the "1997 Director Plan"). Mr. Anderson and Mr. Kahl have each been granted options to purchase 11,250 shares of Common Stock at an exercise price of \$20.125 per share under the 1997 Director Plan.

#### 1997 DIRECTOR STOCK OPTION PLAN

MKS's 1997 Director Plan authorizes the issuance of up to an aggregate of 300,000 shares of Common Stock. The 1997 Director Plan is administered by MKS's Board of Directors. Options are granted under the 1997 Director Plan only to directors of MKS who are not employees of MKS. Under the 1997 Director Plan, non-employee directors receive an option to purchase 11,250 shares of common stock upon their initial election to the Board of Directors. Each initial option vests over a three-year period in twelve (12) equal quarterly installments following the date of grant. On the date of each annual meeting of the stockholders, options are automatically granted to each eligible director who has been in office for at least six (6) months prior to the date of the annual meeting of the stockholders. Each annual option entitles the holder to purchase 6,000 shares of Common Stock. Each annual option will generally become exercisable on the day prior to the first annual meeting of stockholders following the date of grant, or if no such meeting is held within thirteen (13) months after the date of grant, on the thirteen (13) month anniversary of the date of grant. The exercise price of all options granted under the 1997 Director Plan is equal to the fair market value of the Common Stock on the date of grant. Options granted under the 1997 Director Plan terminate upon the earlier of three (3) months after the optionee ceases to be a director of MKS or ten (10) years after the grant date. In the event of a change in control of MKS, the vesting of all options then outstanding would be accelerated in full and any restrictions on exercising outstanding options would terminate.

The Company's 1996 Director Stock Option Plan, under which options have been granted to, and may still be exercised by, four non-employee directors of MKS, has been terminated. See "Director Compensation."

#### COMMITTEES OF THE BOARD OF DIRECTORS

The Compensation Committee for the year 2000 consisted of Messrs. Therrien and Valente. Mr. Kahl joined the Compensation Committee in February 2001. The Compensation Committee reviews and evaluates the salaries, supplemental compensation and benefits of all officers of MKS, reviews general policy matters relating to compensation and benefits of employees of MKS and makes recommendations concerning these matters to the Board of Directors. The Compensation Committee also administers MKS's stock option and stock purchase plans.

The Audit Committee for the year 2000 consisted of Messrs. Robbins, Therrien and Valente. Mr. Therrien resigned from the Audit Committee in February 2001 and Mr. Anderson

joined the Audit Committee in February 2001. The Audit Committee reviews with MKS's independent auditor the scope and timing of its audit services, the auditor's report on MKS's financial statements following completion of its audit and MKS's policies and procedures with respect to internal accounting and financial controls. In addition, the Audit Committee will make annual recommendations to the Board of Directors for the appointment of independent auditors for the ensuing year.

The Board of Directors held eight (8) meetings during 2000. Each director attended at least 75% of the total number of meetings of the Board of Directors and all committees of the Board on which he served.

#### COMPENSATION COMMITTEE REPORT ON EXECUTIVE COMPENSATION

The Company's executive compensation program is administered by the Compensation Committee of the Board of Directors. In January 2000, Mr. Chute resigned from the Compensation Committee. For the remainder of 2000, the Compensation Committee was comprised of two non-employee directors, Messrs. Therrien and Valente (the "Committee"). Mr. Kahl joined the Committee in February 2001. The Committee is responsible for determining the salaries of, establishing bonus programs for, and granting stock options to, the Company's executive officers.

The Committee believes that the primary objectives of the Company's compensation policies are to attract, retain, motivate, and reward a management team that can effectively implement and execute the Company's strategic business plan and lead the Company in achieving its long-term growth and earnings goals. These compensation policies include an overall management compensation program that: (i) is competitive with management compensation programs at companies of similar size; (ii) recognizes individual initiative, leadership and achievement; (iii) provides short-term bonus incentives for management to meet the Company's net income performance goals; and (iv) provides long-term incentive compensation in the form of stock options to encourage management to continue to focus on shareholder return.

The Committee's goal is to use compensation policies to closely align the interests of the Company's management with the interests of shareholders so that the Company's management have incentives to achieve short-term performance goals while building long-term value for the Company's shareholders. In establishing base salaries for executive officers, the Committee considers numerous factors such as the executive's responsibilities, the executive's importance to the Company, the executive's performance, historical salary levels of the executive, and the salaries of executives at certain other companies whose business is similar to that of the Company. The Committee will review its compensation policies from time to time in order to determine the reasonableness of the Company's compensation programs and to take into account factors which are unique to the Company.

The Company has entered into employment agreements with certain senior officers of the Company. The Committee believes that the salaries and benefits provided to these senior officers reflect appropriate base salaries and benefits as compared to senior officers of other

companies of similar size. These agreements provide for termination for cause as well as termination without cause and restrict the officers' ability to compete with the Company.

#### Bonus Plan

To further provide incentives for management to continue to improve operating results, the Board of Directors implemented the Management Incentive Plan ("Bonus Plan"). The amounts to be distributed pursuant to the Bonus Plan are determined by the income generated by the Company. The Committee believes that the Bonus Plan provides significant incentive to the executive officers of the Company to exceed the Company's income goals.

#### Long-Term Incentive Compensation

Long-term incentive compensation, in the form of stock options, allows the executive officers to share in any appreciation in the value of the Company's Common Stock. The Committee believes that stock option participation aligns executive officers' interests with those of the stockholders. In addition, the Committee believes that awarding options to executive officers helps to balance the short-term focus of annual incentive compensation with a longer term view and may help to retain key executive officers. Moreover, because options granted to executive officers generally become exercisable over a four or five year period and terminate upon or shortly after the termination of the executive's employment with the Company, stock options serve as a means of retaining these executives.

When establishing stock option grant levels, the Committee considers general corporate performance, the Chief Executive Officer's recommendations, level of seniority and experience, the dilutive impact of the options, previous grants of stock options, vesting schedules of outstanding options and the current stock price.

It is the policy of the Company to make an initial stock option grant to all executive officers at the time they commence employment consistent with the number of options granted to executive officers in the industry at similar levels of seniority. In addition, the Committee may also make grants throughout the year. In making such grants, the Committee considers individual contributions to the Company's financial, operational and strategic objectives.

Senior management also participates in Company-wide employee benefit plans, including the Company's 401(k) Plan. Benefits under these plans are not dependent upon individual performance.

#### Compensation of Chief Executive Officer

Mr. Bertucci's compensation was based upon a careful analysis of other comparable companies' Chief Executive Officers' compensation and Mr. Bertucci's efforts and success in improving the Company's operating results, establishing strategic goals and objectives for long-term growth of the Company, and advancing the Company in obtaining its strategic goals.

## Section 162(m)

Section 162(m) of the Internal Revenue Code generally disallows a tax deduction to public companies for certain compensation in excess of \$1.0 million paid to the company's chief executive officer and the four other most highly compensated executive officers. Certain compensation, including qualified performance-based compensation, will not be subject to the deduction limit if certain requirements are met.

The Committee reviews the potential effect of Section 162(m) periodically and generally seeks to structure the long-term incentive compensation granted to its executive officers through option issuances under the Amended and Restated 1995 Stock Incentive Plan in a manner that is intended to avoid disallowances under Section 162(m). However, because the Company's Bonus Plan is not operated in a manner designed to qualify as performance-based compensation under Section 162(m), it is possible that a portion of any bonus payable to Mr. Bertucci and certain other executives under the Bonus Plan will not be deductible for federal income tax purposes. The Committee reserves the right to use its judgment to authorize compensation payments which may be in excess of the Section 162(m) limit when the Committee believes such payments are appropriate, after taking into consideration changing business conditions or the officer's performance, and are in the best interests of the stockholders.

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 Compensation Committee for 2000  
 Louis P. Valente, Chairman  
 Robert J. Therrien

## COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

In 2000, the Compensation Committee comprised Messrs. Therrien and Valente. Messrs. Therrien and Valente were not, at any time, officers or employees of MKS or any subsidiary of MKS, and neither had any relationship with MKS requiring disclosure under Item 404 of Regulation S-K under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). No executive officer of MKS 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 MKS's Board of Directors or Compensation Committee.

## REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee of the Company's Board of Directors is currently composed of three members and acts under a written charter first adopted and approved in 2000. A copy of this charter is attached to this proxy statement as APPENDIX B. The members of the Audit Committee are independent directors, as defined by its charter and the rules of the Nasdaq Stock Market, and possess the financial sophistication required by such charter and rules. The Audit Committee held two meetings during 2000.

Management is responsible for the Company's internal controls and the financial reporting process. The Company's independent accountants are responsible for performing an independent audit of the Company's financial statements in accordance with generally accepted accounting principles and issue a report on those financial statements. The Audit Committee is responsible for monitoring and overseeing these processes. As appropriate, the Audit Committee reviews and evaluates, and discusses with the Company's management, internal accounting, financial and auditing personnel and the independent auditors, the following:

- - the plan for, and the independent auditors' report on, each audit of the Company's financial statements;
- - the Company's financial disclosure documents, including all financial statements and reports filed with the Securities and Exchange Commission or sent to shareholders;
- - changes in the Company's accounting practices, principles, controls or methodologies;
- - significant developments or changes in accounting rules applicable to the Company; and
- - the adequacy of the Company's internal controls and accounting, financial and auditing personnel.

The Audit Committee reviewed the Company's audited financial statements for the fiscal year ended December 31, 2000, and discussed these financial statements with the Company's management. Management represented to the Audit Committee that the Company's financial statements had been prepared in accordance with generally accepted accounting principles. The Audit Committee also reviewed and discussed the audited financial statements and the matters required by Statement on Auditing Standards 61 Communication with Audit Committees with the Company's independent auditors. SAS 61 requires the Company's independent auditors to discuss with the Company's Audit Committee, among other things, the following:

- - methods to account for significant unusual transactions;
- - the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus;
- - the process used by management in formulating particularly sensitive accounting estimates and the basis for the auditors' conclusions regarding the reasonableness of those estimates; and
- - disagreements with management over the application of accounting principles, the basis for management's accounting estimates and the disclosures in the financial statements.

The Company's independent auditors also provided the Audit Committee with the written disclosures and the letter required by Independence Standards Board Standard No. 1 (Independence Discussions with Audit Committees). Independence Standards Board Standard No. 1 requires auditors annually to disclose in writing all relationships that in the auditor's professional opinion may reasonably be thought to bear on independence, confirm their perceived independence and engage in a discussion of independence. In addition, the Audit Committee discussed with the independent auditors their independence from the Company.

Based on its discussions with management and the independent auditors, and its review of the representations and information provided by management and the independent auditors, the Audit Committee recommended to the Company's Board of Directors that the audited

financial statements be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2000.

Management has advised us that for the year ended December 31, 2000, the Company was billed by its independent auditors, PricewaterhouseCoopers LLP ("PwC") for services in the following categories:

Audit Fees:

PwC billed the Company an aggregate of \$264,000 in fees for professional services rendered in connection with the audit of the Company's financial statements for the most recent fiscal year and the reviews of the financial statements included in each of the Company's Quarterly Reports on Form 10-Q during the last fiscal year.

Financial Information Systems Design and Implementation Fees:

PwC did not bill the Company for any professional services rendered for the most recent fiscal year in connection with financial information systems design or implementation, the operation of the Company's information system or the management of its local area network.

All Other Fees(1):

PwC billed the Company an aggregate of \$1,171,000 for all other services rendered for the most recent fiscal year.

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(1) All Other Fees includes fees for the following routine audit and tax services:

Tax advice and tax return assistance	\$417,000
Due diligence, accounting and tax advice in support of acquisitions and related offering statements	\$754,000

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

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

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 Audit Committee for 2000  
 Owen W. Robbins, Chairman  
 Robert J. Therrien  
 Louis P. Valente

## EXECUTIVE OFFICERS

Name	Age	Position
John R. Bertucci.....	60	Chairman and Chief Executive Officer
Peter R. Younger.....	56	President and Chief Operating Officer
Ronald C. Weigner.....	55	Vice President and Chief Financial Officer
William D. Stewart.....	56	Vice President and General Manager, HPS Products
Robert L. Klimm.....	50	Vice President and General Manager, Materials Delivery and Analysis Products
Leo Berlinghieri.....	47	Vice President, Global Sales and Service
F. Thomas McNabb.....	40	Vice President and General Manager, Pressure Measurement and Control Products
Richard S. Post.....	57	Vice President, Business Development
John E. Ross.....	56	Vice President and General Manager, ASTeX Products

The following is a brief summary of the background of each executive officer of MKS, other than Mr. Bertucci, whose background is described above:

Mr. Younger joined MKS in May 1999 as President and Chief Operating Officer. He was most recently Vice President and General Manager of Eaton's Semiconductor Equipment Operations. Mr. Younger is currently a Board member of Semiconductor Equipment and Materials International (SEMI), a global association of approximately 2,200 member companies in the semiconductor equipment and materials industry, and was the organization's chairman from 1997 to 1998. In addition, he served on the Board of Directors for the North Shore Chamber of Commerce from 1993 to 1997. Mr. Younger holds an A.B. in Physics from Cornell University, and an M.A. and Ph.D. in Physics from Boston University.

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

Mr. Stewart has served as Vice President and General Manager, HPS Products group since November 1997. From October 1986 to November 1997, he was President of HPS Products group, which MKS acquired in 1986. Mr. Stewart co-founded HPS in 1976. Mr. Stewart has an M.B.A. from Northwestern University and a B.S. in Business Administration from the University of Colorado. Mr. Stewart also serves on the Board of Directors of the Janus Fund.

Mr. Klimm has served as Vice President and General Manager, Materials Delivery and Analysis Products group of MKS since December 1999. Mr. Klimm was Vice President and

General Manager of the Factory Automation Division of PRI Automation from 1997 to 1999. From 1990 to 1997 he held various positions at Eaton's Semiconductor Equipment Operations, culminating as General Manager of the Implant Systems Division. Mr. Klimm has an M.B.A. from the Sloan School at MIT, an M.A. in Electrical Engineering from Northeastern University and a B.S. in Electrical Engineering from Lehigh University.

Mr. Berlinghieri has served as Vice President, Global Sales and Service of MKS since November 1995. From 1980 to November 1995, he served in various management positions of MKS, including Manufacturing Manager, Production and Inventory Control Manager, and Director of Customer Support Operations. Mr. Berlinghieri is also Treasurer of the TQM-BASE Council, Inc., a non-profit quality management consortium comprised of Boston-area semiconductor capital equipment manufacturers.

Mr. McNabb has served as Vice President and General Manager, Pressure Measurement and Control Products group of MKS since October 2000. From September 1997 to October 2000, he managed several business units at PRI Automation, culminating as Vice President of Lithography Automation and then Vice President of Factory Systems Engineering. From 1983 to 1997, Mr. McNabb held a variety of management positions with Texas Instruments, including Marketing, Operations, Engineering Applications, Program Management, Business Development, and Business Unit Management. Mr. McNabb has a B.S. in Civil Engineering from the University of Vermont.

Mr. Post has served as Vice President, Business Development of MKS since January 2001. Mr. Post founded ASTeX in 1987 and served as its Chief Executive Officer and Chairman of the Board until January 2001. From 1981 to 1987, Mr. Post served as a Senior Research Scientist at the Massachusetts Institute of Technology. At MIT, Mr. Post served in the position of head of the Mirror Confinement Division of the Plasma Fusion Center. Mr. Post earned his Ph.D. in plasma physics from Columbia University and his B.S. from the University of California at Berkeley. He has also completed the owner/president management program at Harvard Business School.

Mr. Ross has been Vice President and General Manager, ASTeX Products group of MKS since January 2001. Mr. Ross was the President and Chief Operating Officer of ASTeX from August 2000 until it was acquired by MKS, and was ASTeX's Senior Vice President, Global Customer Operations from June 2000 until August 2000, its Vice President, Business Development, from January 2000 until June 2000 and served as a Consultant to ASTeX from September 1999 until January 2000. From June 1998 to May 1999, Mr. Ross was the Senior Vice President of Operations at Topaz Technologies, a company that designs and manufactures professional, wide format ink jet printing systems. From June 1993 to June 1998, Mr. Ross was the General Manager and Vice President of Operations at Applied Magnetics Corporation, a manufacturer of read/write recording heads for computer disk drives. Mr. Ross is also a director of Life Quality Products, Inc., a privately-held company. Mr. Ross holds a B.S. in Chemistry from Hull University in Hull, England.

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

## EXECUTIVE COMPENSATION

The following table sets forth information with respect to the compensation of MKS's Chief Executive Officer, each of the four other most highly compensated executive officers (the "Named Executive Officers") and Joseph A. Maher, Jr., MKS's former Vice President and General Manager, Pressure Measurement and Control Products for the years ended December 31, 2000, 1999 and 1998.

## SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Other Annual Compensation			Long-Term Compensation Awards	
		Salary	Bonus	Other Annual Compensation	Securities Underlying Options(#)	All Other Compensation(1)
John R. Bertucci Chairman and Chief Executive Officer	2000	\$391,281	\$593,372	--	--	\$ 8,500
	1999	348,720	476,957	--	--	12,800
	1998	337,440	--	--	--	8,000
Peter R. Younger President and Chief Operating Officer	2000	241,114	293,448	--	15,000	13,600
	1999	138,117	138,114	--	150,000	--
Ronald C. Weigner Vice President and Chief Financial Officer	2000	196,743	160,871	--	12,000	13,600
	1999	187,838	132,517	--	--	12,800
	1998	164,257	--	--	60,000	8,000
William D. Stewart Vice President and General Manager, HPS Products	2000	206,135	170,449	--	11,000	13,600
	1999	191,693	140,225	--	--	12,800
	1998	173,893	--	--	60,000	8,000
Robert L. Klimm Vice President and General Manager, Materials Delivery and Analysis Products	2000	193,419	161,741	--	--	4,168
	1999	11,531	8,009	--	75,000	--
Joseph A. Maher, Jr. (2) Vice President and General Manager, Pressure Measurement and Control Products	2000	201,875	158,165	--	5,500	13,600
	1999	176,514	132,517	--	--	12,800
	1998	161,307	--	--	60,000	8,000

(1) Represents amounts paid into a 401(k) plan. Other compensation in the form of perquisites and other personal benefits has been omitted in those instances where such perquisites and other personal benefits constituted less than the lesser of \$50,000 or 10 percent of the total salary and bonus for each Named Executive Officer for such year.

(2) Effective October 13, 2000, Mr. Maher resigned as the Company's Vice President and General Manager, Pressure Measurement and Control Products.

## STOCK OPTION GRANTS

## Option Grants in Fiscal Year 2000

(a) Name	Individual Grants				Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term(4)	
	(b) Number of Securities Underlying Options Granted (#)(1)	(c) % of Total Options Granted to Employees in Fiscal Year(2)	(d) Exercise or Base Price (\$/Sh)	(e) Expiration Date(3)	(f) 5%	(g) 10%
John R. Bertucci	--	--	--	--	--	--
Peter R. Younger	15,000	2.4%	\$ 32.00	01/04/10	\$ 301,500.00	\$ 765,150.00
Ronald C. Weigner	12,000	1.9	32.00	01/04/10	241,200.00	612,120.00
William D. Stewart	11,000	1.7	32.00	01/04/10	221,100.00	561,110.00
Robert L. Klimm	--	--	--	--	--	--
Joseph A. Maher, Jr	5,500	0.9	32.00	01/04/10	110,550.00	280,555.00

- (1) The Options granted in the fiscal year ended December 31, 2000 are exercisable as follows: 25% of the shares become exercisable on the first anniversary of the date of issue. An additional 6.25% of the initial grant of options vests on each successive quarter.
- (2) In the fiscal year ended December 31, 2000, options to purchase a total of 637,092 shares of MKS Common Stock were granted to employees of MKS, including officers.
- (3) The options are subject to earlier termination upon certain events related to termination of employment.
- (4) The dollar gains under these columns result from calculations discussing hypothetical growth rates as set by the Commission and are not intended to forecast future price appreciation of the Common Stock.

## Aggregated Option Exercises in Last Fiscal Year and Fiscal Year-End Option Values

Name	Shares Acquired on Exercise (#)	Value Realized	Number of Securities Underlying Unexercised Options at Fiscal Year End		Value of Unexercised In-the-Money Options at Fiscal Year End(1)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
John R. Bertucci	--	--	--	--	--	--
Peter R. Younger	--	--	45,000	120,000	\$ 45,000.00	\$ 105,000.00
Ronald C. Weigner	--	--	153,600	45,000	1,639,872.00	291,390.00
William D. Stewart	--	--	153,600	44,000	1,639,872.00	291,390.00
Robert L. Klimm	--	--	15,000	60,000	--	--
Joseph A. Maher, Jr	--	--	121,950	70,150	1,289,506.50	641,755.50

- (1) Total value of "in-the-money" unexercised options is based on the difference between the last sales price of the Company's Common Stock on the Nasdaq Stock Market on December 29, 2000 (\$15.50 per share) and the exercise price of "in-the-money" options, multiplied by the number of shares subject to such options.

## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Mr. Chute, a director of MKS, MKS's clerk, and co-trustee of certain Bertucci family trusts and Mr. Thomas H. Belknap, a co-trustee of certain Bertucci family trusts, are attorneys at the law firm of Hill & Barlow, a Professional Corporation. Hill & Barlow has provided legal services to MKS during the calendar year ended December 31, 2000 for which it was compensated by MKS in the aggregate amount of \$286,790.

Mr. Stewart, Vice President and General Manager of the HPS Products group, is the general partner of Aspen Industrial Park Partnership ("Aspen"). MKS leases from Aspen certain

facilities occupied by MKS's HPS Products group in Boulder, Colorado. MKS paid Aspen \$434,329 in 2000 to lease such facilities.

#### EMPLOYMENT AGREEMENTS

MKS entered into employment agreements with each of Messrs. Younger, Weigner, Stewart, Klimm and Maher. The terms of such employment agreement are included in the summary below.

Each agreement sets the base salary for each employee which is reviewed annually. In addition to a base salary, each employee is entitled, under MKS's Management Incentive Program, to a bonus equal to a percentage of his base salary if MKS attains specified financial goals during the year. Each employee is also entitled to standard benefits including:

- participation in a profit sharing and retirement savings plan
- vacation days
- life insurance
- medical/dental insurance

The remaining provisions of each agreement are also substantially the same.

The term of employment for each is month to month with termination:

- upon the death of the employee
- at the election of MKS if the employee fails or refuses to perform
- at the election of MKS if the employee commits any acts not in MKS's best interest

Payment by MKS upon termination depends on how employment is terminated:

- if employment is terminated by death, MKS must pay the employee's estate the compensation owed to him at the end of the month of his death
- if employment is terminated at the election of MKS because the employee fails or refuses to perform, MKS must pay the employee through the last day of actual employment

Each of the agreements contains non-competition provisions during the term of employment and for the period of one year after termination of employment. Under these provisions, Messrs. Younger, Weigner, Stewart, Klimm and Maher may not:

- engage in any competitive business or activity

- for the 12 months subsequent to termination, work for, employ, become a partner with, or cause to be employed, any employee, officer or agent of MKS
- for the 12 months subsequent to termination, give, sell or lease any competitive services or goods to any customer of MKS
- have any financial interest in or be a director, officer, stockholder, partner, employee or consultant to any competitor of MKS

SECTION 16(a) BENEFICIAL  
OWNERSHIP REPORTING COMPLIANCE

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

Based solely on a review of the copies of such forms furnished to the Company and written representations from the executive officers and directors, the Company believes that all of its executive officers, directors and greater than ten percent (10%) beneficial owners complied with all applicable Section 16(a) filing requirements.

COMPARATIVE STOCK PERFORMANCE

The following graph compares the cumulative total stockholder return (assuming reinvestment of dividends) from investing \$100 on March 30, 1999 (the Company's first trading day), and plotted at the last trading days of each fiscal quarter in the years ended December 31, 1999 and 2000, in each of (i) the Company's Common Stock; (ii) a Peer Group Index of semiconductor equipment/material manufacturers (the "MG Group Index"), compiled by Media General Financial Services, Inc. ("Media General"); and (iii) the Nasdaq Market Index of companies (the "Nasdaq Market Index"). The graph was compiled by Media General. The stock price performance on the graph below is not necessarily indicative of future price performance. The Company's Common Stock is listed on the Nasdaq National Market under the ticker symbol "MKSI".

## PERFORMANCE GRAPH

COMPARISON OF CUMULATIVE TOTAL RETURN OF ONE OR MORE COMPANIES, PEER GROUPS,  
INDUSTRY INDEXES AND/OR BROAD MARKETS

Company/Index/Market	FISCAL QUARTER ENDED								
	3/30/99	3/31/99	6/30/99	9/30/99	12/31/99	3/31/00	6/30/00	9/30/00	12/31/00
MKS INSTRUMENTS, INC.	100.00	95.11	132.44	158.22	256.89	359.11	278.22	194.67	110.22
MG GROUP INDEX	100.00	100.00	127.86	133.86	219.29	315.68	287.14	186.46	133.76
NASDAQ MARKET INDEX	100.00	100.00	108.81	110.58	163.32	185.83	159.83	147.49	99.12

Note: Base price date is 3/30/1999

## PROPOSAL TWO

## APPROVAL OF AN AMENDMENT INCREASING AUTHORIZED COMMON STOCK

On March 13, 2001, the Board of Directors of the Company approved, subject to stockholder approval, an amendment to the Company's Restated Articles of Organization increasing the number of authorized shares of Common Stock from 50,000,000 to 75,000,000.

The authorized Common Stock of the Company currently consists of 50,000,000 shares, no par value, of which (i) 25,604,049 shares were outstanding as of December 31, 2000 and (ii) 10,060,299 shares were reserved for issuance as of December 31, 2000 pursuant to the Company's existing stock plans.

The Board of Directors believes that the authorization of additional shares of Common Stock is desirable to provide shares for issuance in connection with the exercise of stock options expected to be granted under the Company's option and stock purchase plans, and in connection with possible future stock splits, stock dividends, financings, joint ventures, acquisitions and other general corporate purposes. Other than as described above, however, there are not existing plans, understandings or agreements for the issuance of any shares of Common Stock. If the amendment is adopted by the Company's stockholders, the Board of Directors will have the authority to issue shares of Common Stock without the necessity of further stockholder action. The issuance of additional shares of Common Stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, would have the effect of diluting the Company's current stockholders and could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of the Company. Holders of the Common Stock have no preemptive rights with respect to any shares which may be issued in the future.

THE BOARD OF DIRECTORS BELIEVES THAT THE PROPOSED AMENDMENT IS IN THE BEST INTERESTS OF THE COMPANY AND ITS STOCKHOLDERS AND THEREFORE RECOMMENDS A VOTE "FOR" THIS PROPOSAL.

PROPOSAL THREE

RATIFICATION OF APPOINTMENT  
OF INDEPENDENT ACCOUNTANTS

On March 13, 2001, the Board of Directors, on the recommendation of its Audit Committee, appointed the firm of PricewaterhouseCoopers LLP ("PwC") as the Company's independent accountants for the fiscal year of the Company ending December 31, 2001. PwC was the Company's independent accountants for the fiscal year ended December 31, 2000.

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 stockholders.

In the event that the ratification of the appointment of PwC as the independent accountants for the Company is not obtained at the Annual Meeting, the Board of Directors will reconsider its appointment.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE PROPOSAL TO RATIFY THE APPOINTMENT OF PRICEWATERHOUSECOOPERS LLP AS INDEPENDENT ACCOUNTANTS OF THE COMPANY FOR THE FISCAL YEAR ENDING DECEMBER 31, 2001.

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 the Company. In addition to solicitations by mail, the Company's directors, officers and regular employees, without additional remuneration, may solicit proxies by telephone, telegraph and personal interviews and the Company reserves 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 the Company will reimburse them for their reasonable out-of-pocket expenses incurred in connection with the distribution of proxy materials.

DEADLINE FOR SUBMISSION OF STOCKHOLDER PROPOSALS  
FOR THE 2002 ANNUAL MEETING

Proposals of stockholders intended to be presented at the 2002 Annual Meeting of Stockholders must be received by the Company at its principal office in Andover, Massachusetts not later than November 30, 2001, for inclusion in the proxy statement for that meeting.

In addition, MKS's By-Laws require that MKS be given advance notice of matters that stockholders wish to present for action at an annual meeting of stockholders (other than matters included in MKS' proxy statement in accordance with Rule 14a-8 of the Exchange Act). The required written notice must be delivered to the Clerk of MKS at the principal offices of MKS at least sixty (60) days prior to the Annual Meeting, but no more than ninety (90) days prior to such meeting. However, if less than forty (40) days notice of the Annual Meeting is provided to the stockholders, the written notice of the stockholder must be sent to the Clerk of MKS no later than ten (10) days after the notice of the Annual Meeting was received. The advance notice provisions of MKS's By-Laws contain the requirements of the written notice of stockholders and supersede the notice requirement contained in recent amendments to Rule 14a-4 under the Exchange Act.

By Order of the Board of Directors

-----  
Richard S. Chute  
Clerk

April 10, 2001

THE BOARD OF DIRECTORS ENCOURAGES STOCKHOLDERS TO ATTEND THE 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. STOCKHOLDERS WHO ATTEND THIS MEETING MAY VOTE THEIR STOCK PERSONALLY EVEN THOUGH THEY HAVE SENT IN THEIR PROXIES.

DETACH HERE

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

MKS INSTRUMENTS, INC.

2001 ANNUAL MEETING OF STOCKHOLDERS  
MAY 16, 2001

The undersigned stockholder of MKS Instruments, Inc., a Massachusetts corporation (the "Company"), hereby acknowledges receipt of the Notice of Annual Meeting of Stockholders and Proxy Statement, each dated April 10, 2001, and hereby appoints John R. Bertucci and Ronald C. Weigner, and each of them acting singly, proxies and attorneys-in-fact, with full power to each of substitution, on behalf and in the name of the undersigned, to represent the undersigned at the 2001 Annual Meeting of Stockholders of the Company to be held on May 16, 2001, at 10:00 a.m. at the Andover Country Club, 60 Canterbury Street, Andover, Massachusetts 01810, and at any adjournment(s) thereof, and to vote all shares of Common Stock which the undersigned would be entitled to vote if then and there personally present, on the matters set forth on the reverse side, and, in their discretion, upon any other matters which may properly come before the meeting.

- - - - -  
SEE REVERSE  
SIDE  
- - - - -

CONTINUED AND TO BE SIGNED ON REVERSE SIDE

- - - - -  
SEE REVERSE  
SIDE  
- - - - -

DETACH HERE

PLEASE MARK  
[X] VOTES AS IN  
THIS EXAMPLE.

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

- 1. To elect two (2) members of the Board of Directors for a term of three (3) years.  
NOMINEES: (01) Owen W. Robbins, (02) Richard S. Chute.

FOR ALL NOMINEES	[ ]	WITHHOLD FROM ALL NOMINEES	[ ]	FOR ALL EXCEPT	[ ]
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(INSTRUCTION: To withhold authority to vote for any individual nominee, mark "FOR ALL EXCEPT" box and write that nominee's number in the space provided above.)

- |                                                                                                                                                                         |     |         |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------|---------|
| 2. To approve an amendment to the Company's Restated Articles of Organization increasing the number of authorized shares of Common Stock from 50,000,000 to 75,000,000. | FOR | AGAINST | ABSTAIN |
|                                                                                                                                                                         | [ ] | [ ]     | [ ]     |

- |                                                                                                                                                     |     |         |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------|---------|
| 3. To ratify the appointment of PricewaterhouseCoopers LLP as independent accountants for the Company for the fiscal year ending December 31, 2001. | FOR | AGAINST | ABSTAIN |
|                                                                                                                                                     | [ ] | [ ]     | [ ]     |

- |                                                                                                                          |     |         |         |
|--------------------------------------------------------------------------------------------------------------------------|-----|---------|---------|
| 4. To transact such other business as may properly come before the meeting or any postponements or adjournments thereof. | FOR | AGAINST | ABSTAIN |
|                                                                                                                          | [ ] | [ ]     | [ ]     |

MARK HERE FOR ADDRESS CHANGE AND NOTE BELOW	[ ]	MARK HERE IF YOU PLAN TO ATTEND THE MEETING	[ ]
---------------------------------------------	-----	---------------------------------------------	-----

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

(This proxy should be marked, dated and signed by the stockholder(s) exactly as his or her name appears hereon, and returned promptly in the enclosed envelope. When shares are held by joint tenants, both should sign. When signing as attorney, as executor, administrator, trustee or guardian, please give full title as such. If a corporation, please sign in full corporate name by president or other authorized officer. If a partnership, please sign in partnership name by authorized person, who should state his or her title.)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

MKS INSTRUMENTS, INC.  
AUDIT COMMITTEE CHARTER

PURPOSE

The primary purpose of the Audit Committee (the "Committee") is to assist the Board of Directors (the "Board") in fulfilling its responsibility to oversee management's conduct of the Company's financial reporting process, including by overseeing the financial reports and other financial information provided by the Company to any governmental or regulatory body, the public or other users thereof, the Company's systems of internal accounting and financial controls, and the annual independent audit of the Company's financial statements.

In discharging its oversight role, the Committee is empowered to investigate any matter brought to its attention with full access to all books, records, facilities and personnel of the Company and the power to retain outside counsel, auditors or other experts for this purpose. The Board and the Committee are in place to represent the Company's shareholders; accordingly, the outside auditor is ultimately accountable to the Board and the Committee.

The Committee shall review the adequacy of this Charter on an annual basis.

MEMBERSHIP

The Committee shall be comprised of not less than three members of the Board, and the Committee's composition will meet the requirements of the Audit Committee Policy of the NASD.

Accordingly, all of the members will be directors:

1. Who have no relationship to the Company that may interfere with the exercise of their independence from management and the Company;
2. Who are able to read and understand fundamental financial statements, including the Company's balance sheet, income statement, and cash flow statement, or must become able to do so within a reasonable time after his or her appointment to the Committee. At least one member of the Committee must have past employment experience in finance or accounting, professional certification in accounting, or other comparable experience or background which result in the member having financial sophistication (such as being or having been a chief executive officer, chief financial officer or other senior officer with financial oversight responsibilities);
3. Who have not been an employee of the Company or any affiliate of the Company in the current year or in any of the past three years;

4. Who have no immediate family member who has been employed by the Company or an affiliate of the Company in any of the past three years (an immediate family member includes a person's spouse, parents, children, siblings, mother-in-law, father-in-law, brother-in-law, sister-in-law, son-in-law, daughter-in-law, and anyone who resides in a person's home);
5. Who is not employed as an executive of an entity other than the Company having a compensation committee which includes any of the Company's executives;
6. Who did not within the last fiscal year receive from the Company or any affiliate of the Company compensation - other than benefits under a tax qualified retirement plan, compensation for director service or nondiscretionary compensation - greater than \$60,000; and
7. Who has not in any of the past three years been a partner in, or controlling shareholder or executive of, a for profit business organization to which the Company made or from which the Company received payment (other than payment arising solely from investments in the Company's securities) that exceeds the greater of: (i) \$200,000; or (ii) more than 5% of the Company's or business organization's consolidated gross revenues.

#### KEY RESPONSIBILITIES

The Committee's job is one of oversight and it recognizes that the Company's management is responsible for preparing the Company's financial statements and that the outside auditors are responsible for auditing those financial statements. Additionally, the Committee recognizes that financial management, as well as the outside auditors, have more time, knowledge and more detailed information on the Company than do Committee members; consequently, in carrying out its oversight responsibilities, the Committee is not providing any expert or special assurance as to the Company's financial statements or any professional certification as to the outside auditor's work.

The following functions shall be the common recurring activities of the Committee in carrying out its oversight function. These functions are set forth as a guide with the understanding that the Committee may diverge from this guide as appropriate given the circumstances.

- - The Committee shall review with management and the outside auditors the audited financial statements to be included in the Company's Annual Report on Form 10-K (or the Annual Report to Shareholders if distributed prior to the filing of Form 10-K) and review and consider with the outside auditors the matters required to be discussed by Statement of Auditing Standards ("SAS") No. 61.
- - As a whole, or through the Committee chair, the Committee shall review with the outside auditors the matters (if any) required to be discussed by SAS No. 61 in connection with the interim financial reviews conducted by the outside auditors; this review will occur prior to the Company's filing of the Form 10-Q.

- - The Committee shall discuss with management and the outside auditors the quality and adequacy of the Company's internal controls, accounting policies and estimates.
- - The Committee shall review and reassess the adequacy of this Charter at least annually.
- - The Committee shall:
  - request from the outside auditors annually, a formal written statement delineating all relationships between the auditor and the Company consistent with Independence Standards Board Standard Number 1;
  - discuss with the outside auditors any such disclosed relationships or services and their impact on the outside auditor's independence; and
  - recommend that the Board take appropriate action to oversee the independence of the outside auditor.
- - The Committee, subject to any action that may be taken by the Board, shall have the ultimate authority and responsibility to select (or nominate for shareholder approval), evaluate and, where appropriate, replace the outside auditor.
- - The Committee will prepare the report required by the rules of the Securities and Exchange Commission to be included in the Company's annual proxy statement, commencing with the proxy statement for the 2001 Annual Meeting.
- - Based on the criteria set forth in Item 306(a) of Regulation S-K and, if so determined by the Committee, recommend to the Board that the audited financial statements for each fiscal year be included in the Company's Annual Report on Form 10-K in respect of such year.
- - The Committee will perform such other functions as may be required by law, the Company's Articles of Organization or its By-Laws.
- - The Committee shall annually inform the outside auditor, the Chief Financial Officer, the Controller, and the most senior other person, if any, responsible for the internal audit activities, that they should promptly contact the Committee or its Chairman about any significant issue or disagreement concerning the Company's accounting practices or financial statements that is not resolved to their satisfaction. Where such communications are made to the Chairman, he or she shall confer with the outside auditor concerning any such communications, and shall notify the other members of the Committee of any communications which the outside auditor or the Chairman in the exercise of his or her business judgment believes should be considered by the Committee prior to its next scheduled meeting.
- - The Committee shall direct the outside auditor to use its best efforts to perform all reviews of interim financial information prior to disclosure by the Company of such information, and to discuss promptly with the Chairman of the Committee and the Chief Financial Officer any matters identified in connection with the auditor's review of interim financial information

which are required to be discussed by Statement on Auditing Standards No. 61. The Chairman of the Committee shall discuss any such matters with the outside auditor, and shall notify the other members of the Committee of any discussions which the outside auditor or the Chairman in the exercise of his or her business judgment believes should be considered by the Committee prior to disclosure or filing of the interim financial information, or the Committee's next scheduled meeting.

- - The Committee shall direct management to advise the Committee in the event that the Company proposes to disclose or file interim financial information prior to completion of review by the outside auditor.
- - The Committee shall meet privately at least once per year with: (i) the outside auditor; (ii) the Chief Financial Officer; (iii) the Controller; and (iv) the most senior person (if any) responsible for the internal audit activities of the Company.