

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 under §240.14a-12

MKS Instruments, Inc.

(Name of Registrant as Specified in its Charter)

Payment of Filing Fee (Check all boxes that apply):

- No fee required.
- Fee paid previously with preliminary materials.
- Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11



March 27, 2024

Dear Shareholder:

You are cordially invited to attend the 2024 Annual Meeting of Shareholders of MKS Instruments, Inc. to be held on Tuesday, May 7, 2024 at 10:00 a.m., Eastern Time, at our headquarters at 2 Tech Drive, Suite 201, Andover, Massachusetts 01810.

The attached 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) the election of three Class I Directors, each for a three-year term, (ii) the approval, on an advisory basis, of executive compensation, (iii) the ratification of the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2024, and (iv) the consideration of one shareholder proposal regarding simple majority voting, if properly presented at the meeting.

Whether or not you plan to attend the Annual Meeting, please carefully review the attached proxy materials and take the time to cast your vote.

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

Sincerely,

JOHN T.C. LEE
President and Chief Executive Officer



**NOTICE OF 2024 ANNUAL MEETING OF SHAREHOLDERS
TO BE HELD ON TUESDAY, MAY 7, 2024 at 10:00 A.M. EASTERN TIME**

To our Shareholders:

The 2024 Annual Meeting of Shareholders of MKS INSTRUMENTS, INC., a Massachusetts corporation, will be held on Tuesday, May 7, 2024 at 10:00 a.m., Eastern Time, at our headquarters at 2 Tech Drive, Suite 201, Andover, Massachusetts 01810, for the following purposes:

1. The election of three Class I Directors, each for a three-year term;
2. The approval, on an advisory basis, of executive compensation;
3. The ratification of the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2024; and
4. The consideration of one shareholder proposal regarding simple majority voting, if properly presented at the meeting.

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

We provide access to our proxy materials over the Internet under the U.S. Securities and Exchange Commission's "notice and access" rules. As a result, we mail to our shareholders a Notice of Internet Availability of Proxy Materials, which we refer to as the Notice. We are mailing the Notice on or about March 27, 2024, and it contains instructions on how to access the proxy statement and our Annual Report for the fiscal year ended December 31, 2023, which we refer to as the 2023 Annual Report, over the Internet. The Notice also contains instructions on how our shareholders can receive a paper copy of our proxy materials, including this proxy statement, our 2023 Annual Report, and a form of proxy card or voting instruction card. All shareholders who do not receive the Notice, including shareholders who have previously requested to receive paper copies of proxy materials, will receive a paper copy of the proxy materials by mail unless they have previously requested delivery of proxy materials electronically.

The Board of Directors has fixed the close of business on February 28, 2024 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. Your vote is important no matter how many shares you own. Whether or not you expect to attend the meeting, we urge you to vote your shares.

If you are a shareholder of record, you may vote by using the Internet or calling the toll-free telephone number as described in the instructions included in your Notice, or, if you received a paper copy of the proxy materials, by completing, signing, dating, and returning your proxy card or voting instruction card. If you are a beneficial shareholder (meaning the shares you own are held in "street name" by a bank, broker, or other nominee), you may vote by following the instructions your broker, bank, or other nominee provides to you. Your prompt response is necessary to ensure that your shares are represented at the meeting. You can change your vote and revoke your proxy any time before the polls close at the meeting by following the procedures described in the accompanying proxy statement.

By Order of the Board of Directors,

KATHLEEN F. BURKE
Secretary

Andover, Massachusetts
March 27, 2024

TABLE OF CONTENTS

PROXY STATEMENT	1
VOTING OF SECURITIES AND VOTES REQUIRED	1
VOTING AND MEETING INFORMATION	2
Voting Your Shares	2
Attending the 2024 Annual Meeting	3
Proxy Materials	3
Shareholder List	3
PROPOSAL ONE – ELECTION OF DIRECTORS	4
DIRECTORS	4
Director Skills, Experience, and Background	12
Board Skills Matrix	15
Board Diversity Matrix	15
Demographic Ratio Graphs	16
PROPOSAL TWO – ADVISORY VOTE ON EXECUTIVE COMPENSATION	17
PROPOSAL THREE – RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	18
PROPOSAL FOUR – SHAREHOLDER PROPOSAL REGARDING SIMPLE MAJORITY VOTING	19
MKS Board of Directors’ Statement in Opposition to Shareholder Proposal	19
CORPORATE GOVERNANCE	21
Board Independence	21
Board Leadership Structure	21
Communications from Shareholders	21
Code of Business Conduct and Ethics	22
Board’s Role in Risk Oversight	22
Transactions with Related Persons	22
Board of Director Meetings and Committees of the Board of Directors	23
Director Candidates	26
ENVIRONMENTAL, SOCIAL, AND GOVERNANCE	27
Governance	27
Human Capital Management	27
Health & Safety	28
Environmental Management	28
DIRECTOR COMPENSATION	30
Cash Compensation	30
Equity Compensation	30
Director Compensation Table for 2023	30
AUDIT AND FINANCIAL ACCOUNTING OVERSIGHT	31
Audit Committee Report	31
Principal Accountant Fees and Services	32
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT	34
EXECUTIVE OFFICERS	36
EXECUTIVE COMPENSATION	39
Compensation Discussion and Analysis	39
COMPENSATION COMMITTEE REPORT	51
EXECUTIVE COMPENSATION TABLES	52
Summary Compensation Table for 2023	52
CEO Pay Ratio	54

Pay Versus Performance	55
Grants of Plan-Based Awards in Fiscal Year 2023 Table	59
Outstanding Equity Awards at 2023 Fiscal Year-End Table	60
Option Exercises and Stock Vested in Fiscal Year 2023 Table	60
Potential Payments Upon Termination or Change-in-Control	61
EQUITY COMPENSATION PLAN INFORMATION	68
OTHER MATTERS	69
Expenses and Solicitation	69
Deadline for Submission of Shareholder Proposals for the 2025 Annual Meeting	69
Householding of Annual Meeting Materials	69
No Incorporation by Reference	70
APPENDIX A	A-1
Reconciliation of 2023 Loss from Operations to 2023 Non-GAAP Operating Income	A-1
Reconciliation of 2023 Net Loss to 2023 Adjusted EBITDA	A-1

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 2024 Annual Meeting of Shareholders to be held on Tuesday, May 7, 2024 at 10:00 a.m., Eastern Time, at our headquarters at 2 Tech Drive, Suite 201, Andover, Massachusetts 01810, and at any adjournment or postponement thereof, which we refer to as the 2024 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 applicable shareholder’s instructions. If no choice is specified in the proxy, the shares will be voted in accordance with the recommendations of our Board of Directors. The Board of Directors recommends that you vote FOR each director nominee, FOR each of Proposals 2 and 3, and AGAINST the shareholder proposal in Proposal 4. Any proxy may be revoked by a shareholder at any time before its exercise by delivery of written revocation to the Secretary of MKS or by voting during the 2024 Annual Meeting. Attendance at the 2024 Annual Meeting will not in itself be deemed to revoke a proxy.

We provide access to our proxy materials over the Internet under the “notice and access” rules of the U.S. Securities and Exchange Commission, which we refer to as the SEC. As a result, we mail to our shareholders a Notice of Internet Availability of Proxy Materials, which we refer to as the Notice. We are mailing the Notice on or about March 27, 2024. The Notice contains instructions on how to access the proxy statement and our Annual Report for the fiscal year ended December 31, 2023, which we refer to as the 2023 Annual Report, over the Internet. The Notice also contains instructions on how our shareholders can receive a paper copy of our proxy materials, including this proxy statement, our 2023 Annual Report, and a form of proxy card or voting instruction card. All shareholders who do not receive the Notice, including shareholders who have previously requested to receive paper copies of proxy materials, will receive a paper copy of the proxy materials by mail unless they have previously requested delivery of proxy materials electronically.

Important notice regarding the availability of proxy materials for the 2024 Annual Meeting to be held on May 7, 2024: This proxy statement and the 2023 Annual Report are available for viewing, printing, and downloading free of charge at investor.mks.com/annual-meeting-materials.

VOTING OF SECURITIES AND VOTES REQUIRED

At the close of business on February 28, 2024, the record date for the determination of shareholders entitled to notice of, and to vote at, the 2024 Annual Meeting, there were issued and outstanding and entitled to vote 67,055,476 shares of our common stock, no par value per share, which we refer to as our Common Stock. Each outstanding share entitles the record holder to one vote on each matter submitted at the 2024 Annual Meeting.

In order to transact business at the 2024 Annual Meeting, we must have a quorum. Under our Amended and Restated By-Laws, or our By-Laws, the holders of a majority of the shares of Common Stock issued and outstanding and entitled to vote at the 2024 Annual Meeting shall constitute a quorum for the transaction of business at the 2024 Annual Meeting. Shares of Common Stock held by shareholders present at the 2024 Annual Meeting 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 2024 Annual Meeting. If a quorum is not present, the meeting will be adjourned until a quorum is obtained.

For the election of directors (Proposal One), you may vote “For” or “Withhold” for each director nominee. The affirmative vote of the holders of a plurality of the votes cast on the matter is required for the election of directors; provided, however, any director nominee who receives a greater number of withhold votes than affirmative votes, which we refer to as a Majority Withheld 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 Withheld 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 www.mks.com/corporate-governance under Corporate Governance Documents.

For the advisory vote on executive compensation (Proposal Two), the ratification of PricewaterhouseCoopers LLP (Proposal Three) and the shareholder proposal regarding simple majority voting (Proposal Four), you may vote “For,” “Against,” or “Abstain.” Proposal Two, Proposal Three, and Proposal Four require the affirmative vote of the holders of a majority of the votes cast on the matter. Proposal Two is a non-binding proposal.

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 other nominees who indicate on their proxies that they do not have discretionary authority to vote such shares as to a particular matter, including the election of directors, the advisory vote on executive compensation, and the shareholder proposal regarding simple majority voting, will not be counted as votes in favor of, or as votes cast for, that matter. Accordingly, we expect abstentions and broker non-votes will have no effect on the voting on the proposals. If the shares you own are held in street name by a bank, broker, or other nominee, then your bank, broker, or other nominee, 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 instructions your bank, broker, or other nominee provides to you.

For additional details about voting and attending the 2024 Annual Meeting, see “Voting and Meeting Information” below.

VOTING AND MEETING INFORMATION

The following sections provide additional details about voting and attending the 2024 Annual Meeting.

Voting Your Shares

If you are a **shareholder of record**, you may vote your shares in any of the following ways:

Internet



You may vote your shares in advance of the 2024 Annual Meeting via the Internet by accessing our online portal at www.proxyvote.com. Proxies submitted via the Internet must be received by 11:59 p.m. Eastern Time on May 6, 2024.

Telephone



You may vote your shares in advance of the 2024 Annual Meeting telephonically by calling 1-800-690-6903 and following the instructions on your proxy card. Proxies submitted by telephone must be received by 11:59 p.m. Eastern Time on May 6, 2024.

Mail



If you received a paper copy of the proxy materials, you may vote your shares in advance of the 2024 Annual Meeting by completing, signing, dating, and returning your proxy card or voting instruction card. Proxies submitted via mail must be received by May 6, 2024.

In-Person at the 2024 Annual Meeting



You may vote your shares during the 2024 Annual Meeting by (i) if you received a paper copy of the proxy materials, completing your proxy card or voting instruction card or (ii) if you did not receive a paper copy of the proxy materials, completing a ballot to be provided by the Company at the meeting. If you have previously submitted your proxy and you vote your shares in accordance with these instructions during the 2024 Annual Meeting, your previously submitted proxy will be revoked.

If you are a **beneficial shareholder** (meaning the shares you own are held in “street name” by a bank, broker, or other nominee), your bank, broker, or other nominee will provide a vote instruction form to you with this proxy statement, which you may use to direct how your shares will be voted. **You must instruct your bank, broker, or other nominee how to vote with respect to the election of directors, the executive compensation advisory vote, and the shareholder proposal regarding simple majority voting; your bank, broker, or other nominee cannot exercise its discretion to vote on these matters on your behalf.** Many banks and brokers offer the option of voting over the Internet or by telephone, instructions for which would be provided by your bank or

broker on your vote instruction form. You may only vote your shares in-person at the 2024 Annual Meeting if you obtain a proxy issued in your name from your bank, broker, or other nominee. For instructions on how to revoke or change your vote, you should contact your bank, broker, or other nominee.

Attending the 2024 Annual Meeting

Admission of shareholders of record and beneficial shareholders to the 2024 Annual Meeting will begin at 9:45 a.m. Eastern Time. Shareholders of record who wish to attend the meeting should be prepared to present photo identification and beneficial shareholders who wish to attend the meeting should be prepared to present photo identification and a letter from their bank, broker, or other nominee confirming beneficial ownership of shares of our Common Stock.

Proxy Materials

You can view and download our proxy materials and 2023 Annual Report at our online portal, available to shareholders at www.proxyvote.com.

Shareholder List

During the 2024 Annual Meeting, a complete list of our shareholders of record will be available for viewing by shareholders for any purpose germane to the 2024 Annual Meeting. Shareholders submitting any such request will be asked to provide the 16-digit control number found on their proxy card, voting instruction card, or Notice.

Whether or not you plan to attend the 2024 Annual Meeting, we urge you to vote your shares over the Internet or by telephone, or complete, sign, date, and return the proxy card in the accompanying postage-prepaid envelope if you received a printed proxy card. A prompt response will greatly facilitate arrangements for the 2024 Annual Meeting and your cooperation will be appreciated. Shareholders who attend the 2024 Annual Meeting may vote their shares at the 2024 Annual Meeting even if they have previously sent in their proxies.

PROPOSAL ONE – ELECTION OF DIRECTORS

Our By-Laws provide for a Board of Directors that is divided into three classes. The term of the Class I Directors expires at the 2024 Annual Meeting, the term of the Class II Directors expires at the 2025 Annual Meeting of Shareholders, and the term of the Class III Directors expires at the 2026 Annual Meeting of Shareholders. Our Board of Directors, upon the recommendation of our Nominating and Corporate Governance Committee, has nominated Rajeev Batra, Gerald G. Colella, and Elizabeth A. Mora to serve as Class I Directors for a term to expire at the 2027 Annual Meeting of Shareholders. Mr. Batra, Mr. Colella, and Ms. Mora currently serve as directors. 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 any of them is not a candidate at the time the election occurs, it is intended that such proxies will be voted for the election of a substitute nominee to be designated by the Board of Directors.

THE BOARD OF DIRECTORS BELIEVES THAT APPROVAL OF THE ELECTION OF RAJEEV BATRA, 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” ALL NOMINEES.

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 they hold with the Company. In addition, set forth below are biographies for each continuing director and director nominee, which include information about each individual’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 individual, directly or indirectly, as of February 28, 2024, appears in this proxy statement under the heading “Security Ownership of Certain Beneficial Owners and Management.”

Name	Age	Position	Audit Committee	Compensation Committee	Nominating and Corporate Governance Committee	Class to Which Director Currently Belongs
Rajeev Batra*	56	Director				I
Peter J. Cannone III	58	Director				III
Gerald G. Colella*	67	Chair				I
Joseph B. Donahue	65	Director				III
John T.C. Lee	61	Director, President and CEO				II
Jacqueline F. Moloney	70	Lead Director				II
Elizabeth A. Mora*	63	Director				I
Michelle M. Warner	57	Director				II

 Chair

 Member

* Nominee for election at the 2024 Annual Meeting



Rajeev Batra

President, Siemens Industry Inc., and Member, Siemens U.S. Managing Board

Age: **56**

Standing Committees: **Compensation (Chair); Nominating and Corporate Governance**

Director since: **2018**

Other Current Public Company Directorships: **Shapeways Holdings, Inc.**

Independent

Background

Mr. Batra has served as the President of Siemens Industry Inc. since 2023 and a member of the Siemens U.S. Managing Board since 2021. As President of Siemens Industry Inc., he serves in a pivotal leadership and advisory role to Siemens' U.S. entities on driving Digital Transformation initiatives across American industry. Mr. Batra previously held a wide range of high-level management, strategy, and sales positions at Siemens, culminating in his role as President of Siemens Digital Industries U.S., an innovation pioneer in industrial automation and digitalization in the discrete and process industries, from 2019 to 2023. Mr. Batra also served as President of the Digital Factory Division from 2014 to 2019; President of the Industry Automation Division from 2009 to 2014; Vice President and General Manager of the Automation & Motion Division from 2007 to 2009; and Vice President and General Manager of the Automotive & Aerospace Vertical Markets from 2002 to 2007, all for Siemens U.S. In addition to the other current public company directorship listed above, Mr. Batra is a director of Amsted Industries, a private, global manufacturer of industrial components, Chair of the Board of Trustees and Executive Committee of the Manufacturers Alliance, a non-profit manufacturing leadership network, and former Chair and Member of the Board of Governors of the National Electrical Manufacturers Association (NEMA), a trade association of electrical equipment manufacturers. Mr. Batra received a B.S. in Electrical Engineering from Lawrence Technological University and an M.B.A. from the University of Michigan.

Key Qualifications as Determined by our Board of Directors

- Significant management and leadership experience, cultivated over 25+ years in senior roles in broad global industrial markets
- Extensive technology background, including in automation, industrial software, digitalization, OT/IT convergence, cybersecurity, and I4.0/IoT
- Proven ability to develop and grow product, systems, digital services, and turnkey businesses in the Process and Discrete Markets, and founding Siemens' Automotive & Aerospace Vertical Markets in the United States



Peter J. Cannone III

Chairman and CEO, Demand Science

Age: 58

Standing Committees: **Audit**

Director since: 2021

Independent

Background

Since 2020, Mr. Cannone has served as Chairman and Chief Executive Officer of Demand Science Group, LLC, a leading global revenue intelligence platform delivering a comprehensive suite of business-to-business solutions, capping a long career as a senior executive for large and mid-market public and private technology companies in both growth and turnaround modes. His previous experience includes serving as General Partner of Optum Ventures, a healthcare-focused venture capital firm, from 2019 to 2020; Chief Executive Officer of UpCurve, Inc., a management company, where he oversaw portfolio firms that provided critical digital, cloud, financial and healthcare solutions to small and midsize businesses, from 2018 to 2019; Chief Executive Officer of ThriveHive, a provider of digital marketing services and one of UpCurve's portfolio firms, from 2015 to 2019; President and Chief Executive Officer of OnForce, a leading vendor of SaaS technology-enabled workforce solutions, from 2007 to 2014; and a member of senior management at PC Connection, Inc. and MicroWarehouse from 1997 to 2006. Mr. Cannone holds a B.A. in Economics from the University of Massachusetts, Amherst, and an M.B.A. from Rensselaer Polytechnic Institute.

Key Qualifications as Determined by our Board of Directors

- Proven leader of public and private technology companies with 25+ years of experience in executive and senior management roles
- Direct knowledge of and experience in mergers and acquisitions, capital raising, marketing, and financial planning and analysis
- Track record of building high-performance teams and developing executives



Gerald G. Colella

Chair of the Board and Former CEO, MKS Instruments

Age: **67** Other Current Public Company Directorships: **Columbus McKinnon Corporation** (Chair of the Board)

Director since: **2014**

Independent

Background

After joining MKS in 1983, Mr. Colella progressed from positions in materials planning and logistics to leading our global business and service operations before assuming senior management roles, including Vice President and Chief Business Officer, President and Chief Operating Officer and, ultimately, Chief Executive Officer. As CEO from 2014 until his retirement in 2020, he steered MKS through a period of unprecedented growth, increasing MKS' revenue from approximately \$780 million to over \$2 billion. Since 2020, Mr. Colella has served as Chair of our Board of Directors. In addition to the other current public company directorship listed above, Mr. Colella served as a director of GCP Applied Technologies Inc. from 2017 to 2020. Mr. Colella holds a B.A. in Secondary Education from the University of Massachusetts and an M.B.A. from Southern New Hampshire University.

Key Qualifications as Determined by our Board of Directors

- Deep insights into our business, industries and markets as a result of 35+ year career at MKS, culminating as CEO
- Direct knowledge of and experience in operations, marketing, business strategy, and growth, organically and through acquisitions
- Extensive background in leadership, management, and governance at the most senior levels of a public company



Joseph B. Donahue

Former EVP and COO, TE Connectivity

Age: **65**

Standing Committees: **Audit**

Director since: **2020**

Independent

Background

Mr. Donahue served as Executive Vice President and Chief Operating Officer of TE Connectivity Ltd. (formerly Tyco Electronics Ltd.), a publicly held manufacturer of connectors, sensors, and minimally invasive surgical assemblies for the automotive, industrial, medical, aerospace, and communications/consumer markets, from 2011 until 2017. In this role, Mr. Donahue was responsible for all aspects of corporate global operations, including supply chain, manufacturing, environment, health and safety, facilities, technology, and lean process improvement. He concurrently served as President of the Network Solutions segment of TE Connectivity from 2012 until the divestiture of that business in 2015. He also served at TE Connectivity as President, Transportation Solutions segment from 2010 through 2012, President of the Global Automotive Division from 2008 through 2009 and Senior Vice President of the same division beginning in 2007. From 2006 to 2007, he was Group Vice President, Wood Coatings Division, for Valspar Corporation, a manufacturer of commercial and industrial coatings. Over the prior 16 years, Mr. Donahue held a variety of senior management roles at TE Connectivity and AMP Incorporated. Mr. Donahue has served as a director of Kraton Corporation, a private, global sustainable producer of specialty polymers and high-value biobased products derived from pine wood pulping co-products, since 2023. Mr. Donahue holds a B.S. in Biological Sciences and an M.S. in Plastics Engineering from the University of Massachusetts Lowell. He also holds an M.S. in Manufacturing Systems Engineering from Lehigh University.

Key Qualifications as Determined by our Board of Directors

- Extensive experience in executive leadership roles for companies serving multiple markets, including industrials
- Valuable insights into managing all aspects of global operations and overseeing mergers and acquisitions
- Deep understanding of international organizations, having lived and worked in Japan, China, and Germany



John T.C. Lee

President and CEO, MKS Instruments

Age: **61**

Other Current Public Company Directorships: **Cognex Corporation**

Director since: **2020**

Background

Dr. Lee has served in progressive leadership roles since joining MKS in 2007, culminating in his appointment as our President and Chief Executive Officer in 2020. He previously served as our President from 2019 to 2020; our President and Chief Operating Officer from 2018 to 2019; our Senior Vice President and Chief Operating Officer from 2016 to 2018; our Senior Vice President of Business Units from 2014 to 2016; our Senior Vice President, Controls, HPS (our integrated process solutions business) and Pressure, Flow, Measurement and Control (PFMC) from 2012 to 2013; our Senior Vice President, Controls and PFMC from 2011 to 2012, and our Group Vice President, Controls and Information Technology products from 2007 to 2011. Prior to MKS, Dr. Lee served in leadership roles at Applied Materials, a global leader providing processing equipment to the semiconductor and display markets, from 2002 to 2007, including Managing Director of Factory Technology and Projects within the Solar Business Group and General Manager of the Cleans Product Group and the Maydan Technology Center. Prior to Applied Materials, Dr. Lee served as Research Director of the Silicon Fabrication Research Department at Lucent Technologies, Inc., a voice, data, and video communications provider, from 1997 to 2002 and as a Member of the Technical Staff in the Plasma Processing Research Group within Bell Labs from 1991 to 1997. In addition to the other current public company directorship listed above, he has served as Chair of the Massachusetts High Technology Council (MHTC) since 2023 and as a member of the Executive Committee of the Board of Directors of MHTC since 2021. He previously served as Vice Chair of MHTC from 2021 to 2023. Dr. Lee holds a B.S. from Princeton University and both an M.S.CEP and a Ph.D. from the Massachusetts Institute of Technology, all in Chemical Engineering.

Key Qualifications as Determined by our Board of Directors

- Deep understanding of our extensive and complex product portfolio, driven by strong technical education and background
- Unique leadership perspective from progressive leadership roles at MKS and Applied Materials, one of our largest customers
- Direct knowledge of and experience in engineering, operations, mergers and acquisitions, and business development



Jacqueline F. Moloney

Professor and Chancellor Emerita, the University of Massachusetts Lowell

Lead Director

Age: **70**

Standing Committees: **Compensation; Nominating and Corporate Governance** (Chair)

Director since: **2016**

Other Current Public Company Directorships: **Enterprise Bancorp, Inc.**

Independent

Background

Dr. Moloney is a Professor and Chancellor Emerita at the University of Massachusetts Lowell who has been recognized as a national leader in innovation and entrepreneurship in higher education. During a nearly 40-year career at UMass Lowell, a public university with over 17,000 students, Dr. Moloney served as Chancellor from 2015 to 2022, Executive Vice Chancellor from 2007 to 2015, and Dean of Online and Continuing Education from 1994 to 2007, in addition to serving as a Professor since 1986. Dr. Moloney has over 35 years of experience as a leader in non-profit organizations. In recognition of her leadership and business acumen, she and UMass Lowell were recognized in the top 20 of the Boston Globe's Top 100 Women-Led Businesses for five consecutive years, she was recognized as one of seven prominent "Women Who Mean Business" by the Boston Business Journal, she was selected by the Massachusetts Technology Leadership Council as a finalist for the CEO of the Year award in 2018 and 2019, and she was named Chief Executive HR Champion by the College and University Professional Association for Human Resources in 2018. In addition to the other current public company directorship listed above, Dr. Moloney served as a member of the Board of Directors of the Massachusetts High Technology Council from 2015 to 2022. Dr. Moloney holds a B.S. in Sociology from UMass Lowell, an M.A. in Social Psychology from Goddard College, and an Ed.D. from UMass Lowell.

Key Qualifications as Determined by our Board of Directors

- Valuable knowledge of and insights into emerging strategic planning and management and business trends
- Deep history of working with business and industry, including establishing incubators at UMass Lowell for early-stage companies
- Strong leadership and interpersonal skills and business acumen



Elizabeth A. Mora

Former Chief Administrative Officer of The Charles Stark Draper Laboratory

Age: **63**

Standing Committees: **Audit** (Chair); **Compensation**

Director since: **2012**
Independent

Other Current Public Company Directorships: **Everest Consolidator Acquisition Corporation**; **Inogen, Inc.** (Chair of the Board); **Limoneira Company**; **NUBURU, Inc.**

Background

Over her 30+ year career, Ms. Mora established herself as a financial and accounting expert and business operations leader, culminating in her role as Chief Administrative Officer of The Charles Stark Draper Laboratory, a non-profit engineering innovation company, from 2016 to 2020. Ms. Mora was previously Chief Financial Officer of Draper Labs; Chief Financial Officer and Vice President for Finance of Harvard University; Associate Vice President, Research Administration and the Director of the Office of Sponsored Research of Harvard University; and a founding member of the National Regulatory Consulting Practice at Coopers & Lybrand (now PricewaterhouseCoopers LLP), where she began her career. In addition to the other current public company directorships listed above, Ms. Mora has served on the Advisory Board of The Association of LGBTQ+ Corporate Directors since 2022 and previously served as a director of GCP Applied Technologies Inc. from 2016 to 2020. Ms. Mora is a Certified Public Accountant and has a B.A. in Political Science from the University of California, Berkeley and an M.B.A. from the Simmons College Graduate School of Management.

Key Qualifications as Determined by our Board of Directors

- Financial and accounting expert who served as the CFO of two major organizations, Draper Labs and Harvard University
- Seasoned director with substantial experience navigating a range of public company corporate governance and regulatory issues
- Critical insights into cybersecurity matters through prior oversight of IT at Draper Labs, a leader in cybersecurity threat detection



Michelle M. Warner

Executive Director of CEO Perspectives, Corporate Leadership Center

Age: 57

Standing Committees: **Nominating and Corporate Governance**

Director since: 2019

Independent

Background

Ms. Warner has served as Executive Director of CEO Perspectives, a leadership development program for executives of Fortune 500 and select growth companies run by Corporate Leadership Center, NFP, since 2022. She also founded and has served as principal of MMW Advisors, LLC, where she serves as an independent advisor in the areas of M&A execution, team and process development, and board and governance excellence, since 2020. Previously, Ms. Warner served as a senior executive of multinational public companies for over 20 years, most recently as Senior Vice President, General Counsel, and Corporate Secretary for USG Corporation, a leading manufacturer of building products and solutions, from 2016 until its acquisition by privately held Gebr. Knauf KG in 2019, and as Corporate Vice President, Deputy General Counsel, and Corporate Secretary of Motorola Solutions, Inc. (formerly Motorola, Inc.), a provider of communication infrastructure, devices, accessories, software, and services, from 2013 to 2015. She is a member of the President's Council of the Museum of Science and Industry, Chicago, where she completed a two-year term as Chair and as an ex officio member of the Board of Trustees. In addition, she serves on the Board of Advisors of Denison University. Ms. Warner received a J.D. from the Northwestern University School of Law and a B.S. in Economics from Denison University.

Key Qualifications as Determined by our Board of Directors

- Former General Counsel with deep knowledge of and critical perspectives on securities and corporate governance matters
- Unique insights into leading global organizations from role as Executive Director of leadership development program for executives
- Significant experience overseeing and executing on major mergers and acquisitions and other complex transactions

Director Skills, Experience, and Background

MKS enables technologies that transform our world, delivering foundational technology solutions to leading edge semiconductor manufacturing, electronics and packaging, and specialty industrial applications. As we discuss below under the heading "Corporate Governance – Director Candidates," the Nominating and Corporate Governance Committee is responsible for evaluating the appropriate skills, experience, and background that MKS seeks in Board members in the context of our business and the existing composition of the Board of Directors. This evaluation includes numerous factors, such as integrity, business acumen, knowledge of our business and industries, effectiveness, experience, diligence, conflicts of interest, and the ability to act in the interests of all shareholders.

Listed below are the skills and experience that we consider important for our directors given our current business and organizational structure. The continuing directors' and director nominees' biographies and the matrix below note each director's and director nominee's relevant experience, qualifications, and skills relative to this list.

Skills/Competencies

- Industry Experience

We serve the semiconductor, electronics and packaging, and specialty industrial markets. Directors with education and experience in technologies in these markets provide valuable perspectives on our research and development efforts, competing technologies, the products and processes we develop, our manufacturing and assembly, and the markets in which we compete.

- Mergers and Acquisitions/Business Development Experience

Directors with a background in mergers and acquisitions and business development provide insights into developing and implementing strategies for growing our business. Useful experience in this area includes skills in assessing and analyzing the “fit” of a proposed acquisition with our long-term strategy, valuing transactions, and assessing management’s integration plans and overseeing integration activities for completed acquisitions into our existing operations.

- CEO/COO/CFO Experience

Directors who have served in senior leadership positions are important to us because they have the experience and perspective to analyze, shape, and oversee the execution of important operational and policy issues.

- Experienced Public Company Director

Directors with board experience at other public companies understand the dynamics and operation of a corporate board, the relationship of a public company board to the Chief Executive Officer and other executive officers, the legal and regulatory landscape in which public companies must operate, and how to oversee an ever-changing mix of strategic, operational, and compliance-related matters.

- International Experience

We are a global organization with manufacturing, research and development, and sales offices in many countries. We sell our products to thousands of customers worldwide and a significant portion of our revenues are from sales to customers in international markets. Our manufacturing facility locations include Austria, Brazil, Canada, China, Czech Republic, France, Germany, India, Israel, Italy, Malaysia, Mexico, Romania, Singapore, South Korea, and the United States. Because of these factors, directors with international experience provide valuable business, regulatory, and cultural perspectives regarding many important aspects of our business.

Functional Background

- Accounting/Finance

Directors with knowledge of financial markets, financing operations, and accounting and financial reporting processes assist the Board of Directors with advising on and overseeing our capital structure, our financing and investing activities as well as our financial reporting and internal controls.

- Engineering/Research and Development

Our Vacuum Solutions Division and Photonics Solutions Division products incorporate sophisticated technologies to measure, monitor, deliver, analyze, power, control, and improve complex semiconductor and advanced manufacturing processes, thereby enhancing uptime, yield, and throughput for our customers. Our Materials Solutions Division products include a broad portfolio of specialty chemistry solutions for surface finishing, functional coating, and corrosion resistance applications. We have developed, and continue to develop, new products to address industry trends. Directors with education and experience in engineering and research and development provide valuable perspectives regarding our research and development efforts, competing technologies, the products and processes we develop, our manufacturing and assembly, and the markets in which we compete.

- Regulatory/Legal/Governance

Directors with a regulatory, legal, or governance background assist the Board of Directors in fulfilling its oversight responsibilities regarding our compliance, engagement with regulatory authorities, and governance structure.

- Marketing/Sales

Directors with marketing, brand management and sales experience provide expertise and guidance as we seek to expand the markets in which we compete, grow sales, and strengthen our brands.

- Operations

As we operate in many cyclical markets, with rapid demand changes, and have a broad footprint of international manufacturing operations, understanding of and experience with manufacturing and other operational processes are valuable assets to our Board of Directors.

- Digitization/Cybersecurity/Internet of Things

The markets we serve increasingly rely on digitization and electronic connectivity as growth drivers, including, for example, the Internet of Things, or IoT. Further, we rely on various information technology, or IT, networks and systems, some of which are managed by third parties, to process, transmit, and store electronic information and to carry out and support a variety of business activities. The safety and security of our digital information, and the digital information of our customers, suppliers, and other business partners, are paramount to our success. Directors who have a sophisticated understanding of global digitization and/or cybersecurity literacy assist with the Board of Directors' oversight of driving future growth and securing our digital information in the rapidly evolving digital landscape.

Personal Demographics

Representation of a mix of ages, genders, and races brings diversity of thought to the Board of Directors and helps expand the Board of Directors' understanding of the needs and perspectives of all of our stakeholders. In addition, we consider the tenure each director has on our Board of Directors to ensure the continued independence and effectiveness of the Board of Directors.

Board Skills Matrix

The below matrix and the directors' biographies note each director's relevant experience, qualifications, and skills relative to the skills and experience we consider important for our directors.

	Directors							
	1	2	3	4	5	6	7	8
	Rajeev Batra	Peter J. Cannone III	Gerald G. Colella	Joseph B. Donahue	John T.C. Lee	Jacqueline F. Moloney	Elizabeth A. Mora	Michelle M. Warner
Skills/Competencies								
• Industry Experience	✓		✓	✓	✓			✓
• M&A/Business Development Experience		✓	✓	✓	✓	✓		✓
• CEO/COO/CFO Experience	✓	✓	✓	✓	✓	✓	✓	
• Experienced Public Company Director	✓		✓		✓	✓	✓	
• International Experience		✓	✓	✓	✓	✓		✓
Functional Background								
• Accounting/Finance							✓	
• Engineering/R&D	✓			✓	✓			
• Regulatory/Legal/Governance							✓	✓
• Marketing/Sales	✓	✓	✓					
• Operations	✓		✓	✓				
• Digitization/Cybersecurity/IoT	✓						✓	
Personal Demographics								
• Tenure (years)	6	3	10	4	4	8	12	5
• Age	56	58	67	65	61	70	63	57

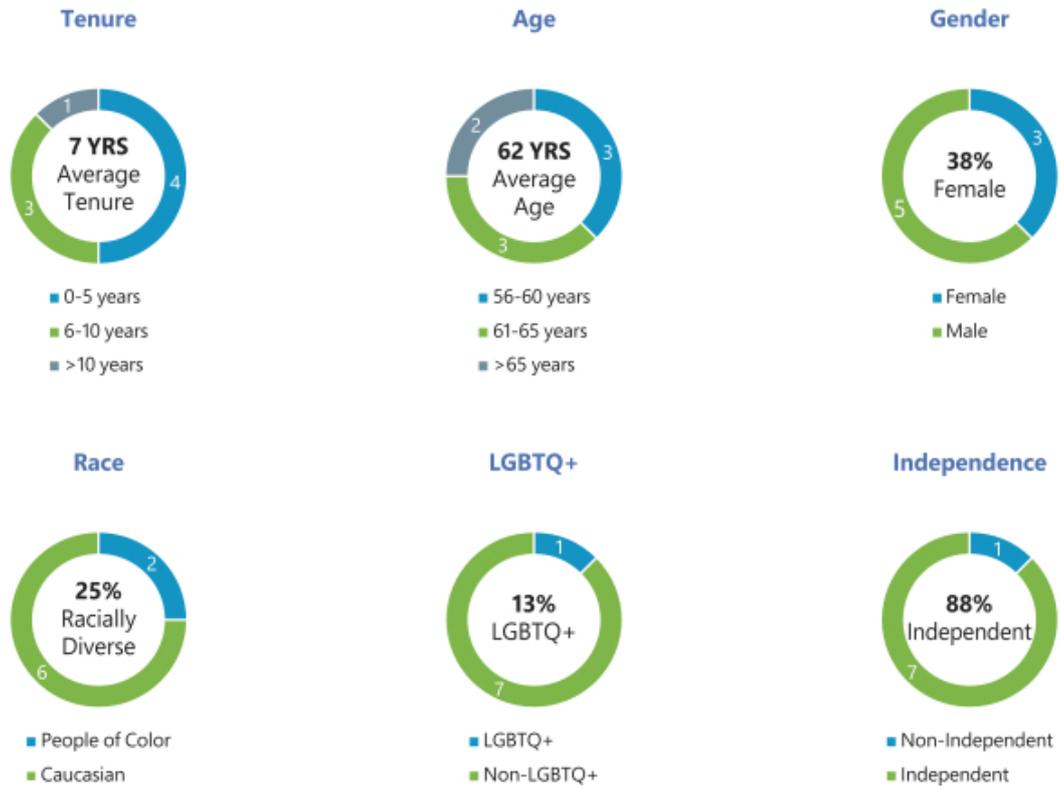
Board Diversity Matrix

The below matrix shows diversity statistics for our directors as of March 27, 2024.

Total Number of Directors	8			
	Female	Male	Non-Binary	Did Not Disclose Gender
PART I: Gender Identity				
• Directors	3	5	—	—
PART II: Demographic Background				
• African American or Black	—	—	—	—
• Alaskan Native or Native American	—	—	—	—
• Asian	—	2	—	—
• Hispanic or Latinx	—	—	—	—
• Native Hawaiian or Pacific Islander	—	—	—	—
• White	3	3	—	—
• Two or More Races or Ethnicities	—	—	—	—
• LGBTQ+			1	
• Did Not Disclose Demographic Background			—	

Demographic Ratio Graphs

The following demographic ratio graphs show data for our directors.



PROPOSAL TWO – ADVISORY VOTE ON EXECUTIVE COMPENSATION

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank 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 program is designed to attract, motivate, and retain our executive officers, who are critical to our success. Under this program, our executive officers are rewarded for the achievement of specific short-term and long-term goals. Please see the “Compensation Discussion and Analysis” for additional details about our executive compensation program and philosophy, including information about the compensation of our Named Executive Officers.

The Compensation Committee continually reviews the compensation program for our executive officers to ensure it achieves the desired goals of aligning our executive compensation structure with our shareholders’ interests and current market practices. At the 2023 Annual Meeting of Shareholders, our shareholders overwhelmingly approved our executive compensation, with approximately 97% of the votes cast voting in favor of the “say-on-pay” proposal. The Compensation Committee considered the results of the 2023 “say-on-pay” vote, and based upon strong shareholder support, determined that our executive compensation program did not require any material changes in response to the 2023 “say-on-pay” vote.

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 SEC, 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 THREE – RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Our Audit Committee has selected PricewaterhouseCoopers LLP, or PwC, as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2024. PwC was our independent registered public accounting firm for the fiscal year ended December 31, 2023.

Representatives of PwC have been invited to and are expected to attend the 2024 Annual Meeting. They 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 selection of PwC as our independent registered public accounting firm is not obtained at the 2024 Annual Meeting, the Board of Directors will reconsider its appointment.

THE BOARD OF DIRECTORS BELIEVES THAT THE PROPOSAL TO RATIFY THE SELECTION OF PWC AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2024 IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE "FOR" THIS PROPOSAL.

PROPOSAL FOUR – SHAREHOLDER PROPOSAL REGARDING SIMPLE MAJORITY VOTING

In accordance with SEC rules, we have set forth below a shareholder proposal from Mr. John Chevedden of 2215 Nelson Avenue, No. 205, Redondo Beach, CA 90278. Mr. Chevedden has notified us that he is the beneficial owner of 40 shares of the Company's common stock and that he intends to present the following proposal at the 2024 Annual Meeting. The shareholder proposal will be voted upon at the 2024 Annual Meeting if properly presented. The Company assumes no responsibility for the content or accuracy of the text of the shareholder's resolution or the statement and graphic the shareholder furnished in support thereof, which appear below exactly as submitted.

Proposal 4 – Simple Majority Vote



Shareholders request that our board take each step necessary so that each voting requirement in our charter and bylaws (that is explicit or implicit due to default to state law) that calls for a greater than simple majority vote be replaced by a requirement for a majority of the votes cast for and against applicable proposals, or a simple majority in compliance with applicable laws. If necessary this means the closest standard to a majority of the votes cast for and against such proposals consistent with applicable laws. This includes making the necessary changes in plain English.

Shareholders are willing to pay a premium for shares of companies that have excellent corporate governance. Supermajority voting requirements have been found to be one of 6 entrenching mechanisms that are negatively related to company performance according to "What Matters in Corporate Governance" by Lucien Bebchuk, Alma Cohen and Allen Ferrell of the Harvard Law School. Supermajority requirements are used to block initiatives supported by most shareowners but opposed by a status quo management.

This proposal topic won from 74% to 88% support at Weyerhaeuser, Alcoa, Waste Management, Goldman Sachs, FirstEnergy, McGraw-Hill and Macy's. These votes would have been higher than 74% to 88% if more shareholders had access to independent proxy voting advice. This proposal topic also received overwhelming 98%-support each at the 2023 annual meetings of American Airlines (AAL) and The Carlyle Group (CG).

The overwhelming shareholder support for this proposal topic at hundreds of major companies raises the question of why MKS Instruments had not initiated this proposal topic earlier.

Please vote yes:
Simple Majority Vote – Proposal 4

MKS Board of Directors' Statement in Opposition to Shareholder Proposal

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "AGAINST" PROPOSAL FOUR

The Board of Directors opposes this proposal because adopting it would cause fundamental changes in shareholder rights that we do not believe are in the best interests of MKS or its shareholders and that would not necessarily enhance shareholder value. A "simple majority" vote requirement already applies to most corporate matters submitted to a vote of our shareholders, as well as extraordinary matters that are approved by the Board of Directors. Furthermore, MKS' existing voting requirements are consistent with the default provisions of Massachusetts corporate law, which provide for a higher voting requirement in limited circumstances to protect the interests of a significant minority of shareholders, which may further the long-term interests of MKS.

Under MKS' Restated Articles of Organization, as amended, which we refer to as the Articles, and the By-laws, most matters subject to a shareholder vote require a "simple majority" as the proponent requests. The fundamental matters that require a vote of two-thirds of the shares outstanding are limited to the following:

- making certain amendments to MKS' Articles;
- making certain amendments to MKS' By-laws;
- selling, leasing or exchanging all or substantially all of MKS' property and assets; and
- approving an agreement of merger or consolidation.

None of the foregoing matters should be considered ordinary events for the Company, which is why our Articles require a two-thirds shareholder vote to approve such matters in the absence of approval by the Board of Directors. Specifically, our Articles provide that if the Board of Directors approves these extraordinary matters (other than with respect to certain amendments to the By-laws which may be approved by the Board of Directors without shareholder approval), then the shareholder vote required for such matter will be lowered to a majority of the shares outstanding and entitled to vote thereon. Our Board of Directors and our Nominating and Corporate Governance Committee believe that, absent approval by the Board of Directors, approval of these fundamental matters should be widely supported by shareholders, and the current two-thirds voting requirement should be maintained.

Lowering the voting threshold to a "simple majority" would permit the approval of an extraordinary transaction, such as a sale, merger or dissolution of the Company, without broad consensus among shareholders or approval by the Board of Directors. Similarly, reducing the approval requirement to a "simple majority" for amendments to the Articles could lead to corporate governance changes that negatively impact a significant percentage of MKS shareholders who did not agree with a particular action.

The current voting provisions further protect MKS' shareholders by encouraging persons or firms making unsolicited takeover proposals to negotiate directly with the Board of Directors to ensure that the interests of all MKS shareholders are served. Because approval by the Board of Directors is required to lower the shareholder approval threshold, the Board of Directors is empowered to evaluate proposed offers, consider alternative proposals and protect shareholders against abusive tactics during a takeover process, giving them the flexibility to negotiate the best possible return and maximize the value of MKS for all shareholders. Without a two-thirds voting requirement, a few large shareholders could approve a transaction that is opposed by nearly half the shareholders and the Board of Directors. For example, given the concentration of beneficial ownership at year-end 2023 in the hands of a relatively small number of institutional holders, if the simple majority voting standard was adopted as proposed, that relatively small number of shareholders could substantially influence fundamental changes to corporate governance that may not be in the best interests of our Company and that are opposed by a significant number of other shareholders. By maintaining a two-thirds voting requirement, there is a balance between concentrations within the shareholder base and an excessively high threshold for shareholders to act, and the Board of Directors will have additional leverage to negotiate on behalf of all shareholders.

The voting requirements in our Articles and By-laws, which are consistent with the default provisions provided under Massachusetts law, are designed to ensure that for a limited number of fundamental matters to be approved, absent approval by the Board of Directors, a two-thirds majority of shareholders must vote in favor of these matters, thereby protecting a significant minority of shareholders and enhancing long-term shareholder value. In these limited instances, MKS believes it is appropriate to obtain the approval of a broad consensus of shareholders, rather than a "simple majority" as the proponent suggests.

FOR THESE REASONS, THE BOARD OF DIRECTORS BELIEVES THAT THIS PROPOSAL IS NOT IN THE BEST INTERESTS OF MKS OR OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE "AGAINST" THIS PROPOSAL.

Board Independence

The Board of Directors has determined that all of the members of the Board of Directors, other than Dr. Lee, are independent as defined under applicable Nasdaq rules. Dr. Lee is not independent as he currently serves as our President and Chief Executive Officer.

Board Leadership Structure

Since 2005, we have separated the roles of Chief Executive Officer and Chair 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 of the Company and the day-to-day leadership and performance of the Company, while the Chair of the Board of Directors provides guidance to the Chief Executive Officer, sets the agenda for Board meetings, and presides over meetings of the Board of Directors.

In addition, our Corporate Governance Guidelines provide that during any period in which the Chair of the Board of Directors is not an independent director, and in such other instances as the Board of Directors may determine from time to time, a Lead Director shall be elected by and from the independent directors. While our independent directors are not currently obligated under our Corporate Governance Guidelines to elect a Lead Director, as our Chair is independent, they have elected to continue to do so. Dr. Moloney has served as our Lead Director since 2020.

The primary role of the Lead Director is to serve as a liaison between the independent directors and the Chair of the Board of Directors and/or the Chief Executive Officer and to represent the independent directors, as appropriate. Pursuant to our Corporate Governance Guidelines, 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 Chair 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;
- facilitate communications and serve as a liaison between the independent directors and the Chair of the Board of Directors and/or the Chief Executive Officer, provided that any director is free to communicate directly with the Chair of the Board of Directors and with the Chief Executive Officer;
- work with the Chair 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; and
- otherwise consult with the Chair 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.

Communications from Shareholders

The Board of Directors will give 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 or she 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., Executive Vice President, General Counsel, and Secretary, MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, MA 01810.

Code of Business Conduct and 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 on our website at www.mks.com/corporate-governance under Corporate Governance Documents. 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.

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 standing 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 business conduct and ethics. The Audit Committee also is responsible for discussing the Company's policies with respect to financial risk assessment and financial risk management and overseeing the steps management has taken with respect to data privacy and cybersecurity risk exposure. 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 for our senior management. 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, corporate governance, and environmental, social, and governance, or ESG, including climate-related risks.

In addition, from time to time, the Board of Directors may constitute a special committee to focus on a particular matter or risk. As previously disclosed, in February 2023, we identified that we had become subject to a ransomware event and took immediate action to activate our incident response and business continuity protocols to contain the incident. Our Board of Directors responded quickly and constituted a special committee of the Board of Directors for cybersecurity, which included Mr. Colella, the Chair of our Board, Ms. Mora, the Chair of our Audit Committee, and Mr. Cannone and Mr. Donahue, each a member of our Audit Committee, to oversee the investigation, recovery, and restoration phases following the incident. The special committee held 21 meetings during the first three months following the identification of the incident. At these meetings, our Chief Executive Officer, our Chief Financial Officer, our General Counsel, our Executive Vice President of Operations and Corporate Marketing, and our then-Chief Information Officer reported to the special committee on various aspects of the incident, including the IT forensic investigation, business restoration and recovery activities, and the impact of the incident on our annual audit and assessment of internal controls as well as the filing of our Annual Report on Form 10-K for the year ended December 31, 2022. In May 2023, the special committee for cybersecurity was dissolved and the Audit Committee assumed responsibility for overseeing our response to the incident.

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.

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 directors, officers, and employees from engaging in any 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 for disclosing to the Company any transaction or relationship that reasonably could be expected to give rise to a conflict of interest, and executive officers and directors must report such transactions to the Board of Directors, which shall be responsible for determining whether such transaction or relationship constitutes a 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 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 transactions since the beginning of our prior fiscal year with such affiliated persons and entities or with any person or entity known by MKS to be the beneficial owner of more than 5% of our voting securities, and provide 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 such transaction, the Audit Committee 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.

Carlyle Partners VI Cayman Holdings, L.P., CEP IV Participations, S.à r.l. SICAR, and Gamma Holding Company Limited, which we refer to collectively as Carlyle, previously beneficially owned more than 5% of the Company’s outstanding voting shares. Based on filings Carlyle made with the SEC, Carlyle collectively beneficially owned approximately 13% of the Company’s outstanding voting shares as of March 8, 2023 and none of the Company’s outstanding voting shares as of December 31, 2023. Carlyle was the controlling shareholder of Atotech prior to our acquisition of Atotech Limited in August 2022, which we refer to as the Atotech Acquisition. In connection with the Atotech Acquisition, on the closing date of the Atotech Acquisition, the Company and Carlyle entered into an investor rights agreement, pursuant to which the Company granted Carlyle certain registration rights with respect to the shares of Common Stock that Carlyle received as a result of the Atotech Acquisition, or the Company Shares. In June 2023, the Company facilitated an underwritten offering by Carlyle of 2,000,000 of the Company Shares pursuant to a registration statement previously filed by the Company with the SEC, which resulted in proceeds of \$193,520,000 before expenses. As part of our Related Person Transaction Procedures, our Audit Committee reviewed the foregoing relationship with Carlyle and approved the Company’s entry into, and performance of its obligations under, the underwriting agreement among the Company, Carlyle, and the underwriter.

FMR LLC beneficially owned approximately 6% of the Company’s outstanding voting shares as of February 28, 2024, based on a filing it made with the SEC. Certain affiliates of FMR LLC provide the Company with recordkeeping and administrative services related to the Company’s stock plans, 401(k) plan, and health savings accounts for the Company’s employees. In 2023, the Company paid these affiliates of FMR LLC approximately \$219,000 for these services. The service contracts for these services were negotiated at arm’s length. As part of our Related Person Transaction Procedures, our Audit Committee reviewed the foregoing relationship with FMR LLC.

Board of Director Meetings and Committees of the Board of Directors

The Board of Directors held five meetings in 2023. During 2023, 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 2023 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

Audit Committee

The Audit Committee consists of Ms. Mora (Chair), Mr. Cannone, and Mr. Donahue. Geoffrey Wild was a member of the Audit Committee until May 2023, when his tenure as a director ended. The Board of Directors has determined that each of Ms. Mora, Mr. Cannone, and Mr. Donahue is an "audit committee financial expert" as defined in applicable SEC regulations. Each member of the Audit Committee also meets the requirements for independence under applicable Nasdaq and SEC rules. 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 our 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 our earnings press releases in advance of public disclosure, as well as generally discussing the types of financial information and earnings guidance, including "pro forma" and other "adjusted" non-GAAP information, provided to analysts, rating agencies, and others;
- meeting independently with our internal audit staff, independent registered public accounting firm, and management;
- reviewing our procedures for reviewing related person transactions, recommending any changes to these procedures, and reviewing any related person transactions;
- reviewing and approving our corporate investment policy, including our hedging policy;
- reviewing and approving derivative financial instruments, including those subject to mandatory clearing;
- overseeing the work of management to monitor and control data privacy and cybersecurity risk exposure, including risks related to the ransomware event we identified in February 2023;
- reviewing with management our overall tax strategy, including areas requiring significant judgment or risk; and
- preparing the Audit Committee report required to be included in the annual proxy statement.

The Audit Committee held ten meetings in 2023.

Compensation Committee

The Compensation Committee consists of Mr. Batra (Chair), Dr. Moloney, and Ms. Mora. Each member of the Compensation Committee meets the requirements for independence under applicable Nasdaq and SEC rules. The Compensation Committee's responsibilities include:

- reviewing and approving the compensation of our Chief Executive Officer, our other executive officers and, at the discretion of the Compensation Committee, other direct reports to our Chief Executive Officer;
- overseeing the evaluation of our Chief Executive Officer, our other executive officers and, at the discretion of the Compensation Committee, other direct reports to our Chief Executive Officer;

- overseeing our Chief Executive Officer and our other executives' succession planning;
- periodically reviewing and approving our management incentive bonus plans;
- overseeing the risks associated with our 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;
- reviewing the results of advisory shareholder votes on executive compensation and recommending how frequently the Company should conduct such votes;
- overseeing our stock ownership guidelines and monitoring compliance therewith;
- reviewing and approving our clawback policy and monitoring compliance therewith;
- overseeing, reviewing, and reporting to the Board of Directors on the development, implementation, and effectiveness of the Company's initiatives and strategies regarding human capital management;
- 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 six meetings in 2023. 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.

Compensation Risk Assessment

Our Compensation Committee engaged its independent compensation consultant, Pearl Meyer & Partners, LLC, or Pearl Meyer, to conduct 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 2023, Mr. Batra, Dr. Moloney, and Ms. Mora served on the Compensation Committee. None of the members of the Compensation Committee during 2023 were, at any time, officers or employees of MKS or our subsidiaries, and none of them had any relationship with us requiring disclosure under applicable SEC rules and regulations. 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.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee consists of Dr. Moloney (Chair), Mr. Batra, and Ms. Warner. Each member of the Nominating and Corporate Governance Committee meets the requirements for

independence under applicable Nasdaq and SEC rules. 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 and to each of the committees of the Board of Directors, including the director recommended to serve as chair of each committee;
- designating a Lead Director (if any), subject to the approval of the independent directors;
- reviewing each director's continuation on the Board of Directors at least once every three years;
- overseeing the director succession planning process;
- reviewing each director's independence under Nasdaq listing standards and the applicable rules of the SEC;
- overseeing corporate governance policies and reviewing the Articles, By-laws, corporate governance guidelines and other key corporate governance policies, including reviewing and monitoring compliance with the Company's overboarding policy;
- overseeing, reviewing, and reporting to the Board of Directors on the Company's ESG strategy, goals, and initiatives, including climate-related risks and opportunities;
- 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;
- conducting the annual evaluations of the Board of Directors, each of the committees of the Board of Directors and the directors who are up for nomination; and
- monitoring communications from shareholders and other interested parties, including shareholder proposals, such as those related to ESG.

The Nominating and Corporate Governance Committee held three meetings in 2023.

For information relating to the nomination of directors, see "Director Candidates" below.

Director Candidates

The Nominating and Corporate Governance Committee recommended to the Board of Directors that the director nominees, Mr. Batra, Mr. Colella, and Ms. Mora, be nominated by the Board of Directors for election as Class I Directors at the 2024 Annual Meeting. The Nominating and Corporate Governance Committee utilizes a number of processes to identify and evaluate director candidates, including the engagement of a third-party executive search firm and other resources to identify potential director candidates, as needed. Activities relating to identifying and selecting nominees include Board assessments of each incumbent director nominee for the current year, requests to Board members and others for recommendations of potential candidates, 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 other members of 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 industries, effectiveness, 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. The Nominating and Corporate Governance Committee also assesses the candidate's professional background and skills against those of the existing Board members to ensure a breadth and diversity of expertise that suits the Company's current and future business risks, industries, and challenges. See "Directors —

Board Skills Matrix.” 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. 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, and the Nominating and Corporate Governance Committee actively seeks diverse candidates for the pool from which candidates are chosen. 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 material 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., Executive Vice President, General Counsel, and Secretary, MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, MA 01810. Assuming that appropriate biographical and background material has been provided on a timely basis, the Nominating and Corporate Governance Committee will evaluate shareholder-recommended candidates by following substantially the same process, and applying the same criteria, as it does in considering other candidates.

Shareholders also have the right under our By-Laws to directly nominate director candidates, without any action or recommendation on the part of the Nominating and Corporate Governance Committee or the Board of Directors, by following the procedures set forth under the heading “Deadline for Submission of Shareholder Proposals for the 2025 Annual Meeting” below.

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE

Governance

ESG is a key priority for MKS and our leaders. As such, our ESG Program and overall ESG Management System is overseen by the CEO and the Nominating and Corporate Governance Committee.

MKS’ cross-functional ESG Steering Committee, which meets throughout the year, sets program strategy, defines annual objectives, provides guidance on high-level tactics to achieve its stated objectives, communicates the ESG Program to internal and external stakeholders, and monitors ESG industry trends. In accordance with its charter, the Nominating and Corporate Governance Committee also reviews and reports to the Board of Directors on the Company’s ESG strategy, goals, and initiatives, including climate-related risks and opportunities as well as the impact of other ESG issues on the Company.

In addition, our leadership approach is based on our commitment to conduct business with the highest standards of integrity. Our Code of Business Conduct and Ethics and our Human Rights and Labor Standards Policy are designed to ensure that we deliver on this commitment every day.

Human Capital Management

In order to compete and succeed in highly competitive markets and industries that are subject to rapid technological change, we believe it is critical to attract, motivate, and retain a dedicated, talented, and innovative team of employees. As part of these efforts, we strive to foster a diverse, equitable, and inclusive community, invest in continuous learning and development, engage meaningfully with employees, offer a competitive compensation and benefits program, and provide a safe and healthy workplace. Our commitment is to cultivate an inclusive environment where every team member feels valued and empowered to bring their authentic selves to their work. This dedication stems from our belief that diverse viewpoints not only spur innovation but also fuel exceptional performance and sustainable progress. The composition of our Company’s leadership reflects this commitment. Our executive team is comprised of 30% women and 30% people of color, our Board of Directors is comprised of 38% women, 25% people of color, and 13% LGBTQ+ members, and our Lead Director is a woman.

In 2023, we continued to offer diversity, equity, and inclusion, or DE&I, training for all employees and bias awareness sessions for our global talent acquisition and management teams. We have also bolstered our recruitment and selection procedures by introducing our MKS Hiring Guide & Toolkit, which is designed to attract top talent while mitigating bias. Consistent with our Corporate Governance Guidelines, we seek diverse candidates for the pool from which our Board of Director nominees are chosen. We also routinely conduct comprehensive analyses of pay practices across gender and other diversity dimensions in our major regions of operations to identify and rectify any disparities promptly and effectively. Our recent global compensation analysis, spanning several years, has resulted in equitable pay for our workforce with minimal adjustments.

MKS remains steadfast in its dedication to fostering learning and professional growth. We offer our employees a diverse array of programs, classes, and resources aimed at enhancing their career trajectories and fostering knowledge-sharing among peers. Our performance management framework is designed to provide ongoing, actionable feedback and facilitate dynamic career development conversations throughout the year. In 2023, we expanded our course offerings to encompass areas such as employee engagement, change management, and leadership excellence, underscoring our commitment to continuous improvement. Furthermore, since 2020, approximately 320 of our leaders around the world completed a six-week DE&I program led by a renowned consulting firm. In addition, we extend financial assistance for higher education to eligible employees, including support for college and graduate studies. We also ensure accessibility to online learning resources in local languages for all staff, bolstering professional growth opportunities for our entire workforce.

In 2023, we conducted our third annual global employee engagement survey, which, for the first time since the closing of the Atotech Acquisition, included Atotech employees. The results of the survey were analyzed and shared with our President and CEO, the executive leadership team, and our Board of Directors. Comprehensive communication of the results was extended to all employees and supplemented with executive videos and both in-person and virtual focus groups to pinpoint prevailing themes. Leveraging these themes and data points, tailored action items were created to encourage meaningful change.

MKS is also committed to providing total compensation packages that attract, motivate, and retain our employees, as well as recognizing and rewarding our employees' sustained performance and results. In addition, we are committed to ensuring that our total compensation packages are externally competitive while supporting our business plans and strategies. As employee turnover is an indicator of employee satisfaction, we monitor turnover globally. MKS has a very stable and committed workforce, as evidenced by low voluntary turnover. Our voluntary turnover in 2023 was below 8%. Our employee average tenure is more than nine years.

Health & Safety

MKS is committed to providing a safe and healthy workplace for all employees. We accomplish this through compliance with applicable laws and regulations regarding workplace safety, including recognition and control of workplace hazards, tracking injury and illness rates, utilizing a global travel health program, and maintaining detailed emergency and business continuity plans. We also provide mandatory environmental, health, and safety training to ensure all employees are provided with the education to perform their jobs safely and to protect the environment. In addition, we offer employees and eligible family members a full range of health and wellness programs, as well as many clinical and administrative services.

In 2022, we instituted MEHS, a formal Global MKS Management System for Environmental, Health, and Safety, to protect our employees, other stakeholders, and the environment. We continue to implement this strong foundation across our organization in a stepwise process.

Environmental Management

We play an integral part in delivering enabling solutions in an increasingly connected world. This position provides us with an opportunity to make an outsized impact in furthering not just our own sustainability goals but also those of our customers. We are committed to operating our business in an environmentally and socially responsible manner, in tandem with our employees, customers, suppliers, and communities.

Our products are used in a broad range of industries and applications. Our ability to innovate is critical to achieving and sustaining product differentiation as well as establishing and deepening customer relationships. These innovations have accelerated roadmaps for customers in our primary markets and contributed to driving

positive environmental impact and progress, including with respect to clean energy, renewable energy, and other sustainable, ethical applications.

As reported in our 2023 Environmental, Social, Governance Report, after completing the Atotech Acquisition, we developed a combined company baseline for our Scope 1 and 2 emissions and have begun the process of evaluating and calculating Scope 3 emissions. In September 2023, we submitted a letter to the Science Based Targets initiative, or SBTi, stating our commitment to set near-term emission reduction targets aligned with the SBTi's criteria. In addition, in December 2023, we committed to reduce our combined Scope 1 and 2 emissions by 42% by 2030 from our 2022 baseline. Once we determine our Scope 3 emissions targets, we will submit all of these climate goals to SBTi to be validated against SBTi guidance.

Additional information regarding MKS' activities related to its people and sustainability can be found in our 2023 Environmental, Social, Governance Report, which is accessible through the ESG section of our website at www.mks.com/environmental-social-governance. Our Environmental, Social, Governance Report is updated periodically.

DIRECTOR COMPENSATION

Cash Compensation

The following table summarizes the cash compensation payable by us to non-employee directors in 2023:

	Annual Retainer
Base Retainer for All Non-Employee Board Members	\$ 85,000
<i>Additional Retainers for Services:</i>	
Chair	\$ 105,000
Lead Director	\$ 30,000
Audit Committee Chair	\$ 25,000
Other Audit Committee Members	\$ 12,500
Compensation Committee Chair	\$ 20,000
Other Compensation Committee Members	\$ 10,000
Nominating and Corporate Governance Committee Chair	\$ 15,000
Other Nominating and Corporate Governance Committee Members	\$ 7,500

Retainers are pro-rated based on the time a director serves in the capacities listed. In addition, from time to time, the Board of Directors may form special committees related to specific matters and may elect to compensate directors for their service on such committees on a fee-per-meeting basis or with a retainer.

Equity Compensation

Non-employee directors are eligible for awards under our 2022 Stock Incentive Plan, which is administered by the Compensation Committee. In 2023, under our director compensation program, non-employee directors received automatic grants of restricted stock units, or RSUs, on the date of the 2023 Annual Meeting of Shareholders, with a grant date value of \$200,000, which RSUs shall vest in full on the day prior to the 2024 Annual Meeting.

If a new non-employee director joins our Board of Directors after our annual meeting of shareholders but before January 1st of the following year, he or she will be entitled to an initial RSU grant with a value equal to the annual RSU grant. In the event a non-employee director joins our Board of Directors during the period from January 1st through the date of that year's annual meeting of shareholders, he or she will not be entitled to an initial RSU grant but will be entitled to the annual RSU grant on the date of the annual meeting of shareholders.

Director Compensation Table for 2023

The following table summarizes compensation earned by or paid to non-employee directors in 2023. Dr. Lee is excluded from the table because he was an executive officer in 2023 and his compensation is set forth in the Executive Compensation section below, under the heading "Executive Compensation Tables — Summary Compensation Table for 2023."

Name	Fees Earned or Paid in Cash (\$)	Stock Awards \$(1)	All Other Compensation (\$)	Total (\$)
Rajeev Batra	\$ 112,500	\$ 200,000	—	\$ 312,500
Peter J. Cannone III	\$ 115,500(2)(3)	\$ 200,000	—	\$ 315,500
Gerald G. Colella	\$ 193,000(2)	\$ 200,000	\$ 24,505(4)	\$ 417,505
Joseph B. Donahue	\$ 115,500(2)(3)	\$ 200,000	—	\$ 315,500
Jacqueline F. Moloney	\$ 140,000	\$ 200,000	—	\$ 340,000
Elizabeth A. Mora	\$ 135,000(3)	\$ 200,000	—	\$ 335,000
Michelle M. Warner	\$ 95,500(2)	\$ 200,000	—	\$ 295,500
Geoffrey Wild(5)	\$ 36,833	\$ —	—	\$ 36,833

(1) Represents the aggregate grant date fair value for each RSU granted during the year, calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification 718, or 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 were included in our Annual Report on Form 10-K that was filed with the SEC on February 27, 2024. The outstanding stock awards held as of December 31, 2023 by each of the non-employee directors consisted of 2,369 RSUs.

- (2) Includes consideration for services on a special committee of the Board of Directors for mergers and acquisitions, which compensation consisted of a flat fee of \$3,000 for up to five meetings and \$1,000 per meeting thereafter up to a maximum of \$10,000. In connection with their service on this special committee, Mr. Colella, Mr. Cannone, Mr. Donahue, and Ms. Warner each received \$3,000.
- (3) Includes consideration for services on a special committee of the Board of Directors for cybersecurity, which compensation consisted of a one-time fee of \$15,000. Mr. Colella did not receive any consideration for his service on this special committee.
- (4) In connection with his retirement as Chief Executive Officer in January 2020, Mr. Colella receives retiree medical benefits for life for himself and his spouse. In addition, Mr. Colella is reimbursed for certain out-of-pocket health care costs capped at \$4,500 annually. The net present value of these benefits was \$497,501 as of December 31, 2023 and we paid \$24,505 for these benefits in 2023. Mr. Colella receives no other retirement benefits.
- (5) Mr. Wild served as a director until May 2023.

AUDIT AND FINANCIAL ACCOUNTING OVERSIGHT

Audit Committee Report

The Audit Committee of our Board of Directors has reviewed our audited financial statements for the year ended December 31, 2023 and discussed them with our management.

The Audit Committee discussed with PricewaterhouseCoopers LLP, or PwC, our independent registered public accounting firm, the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board and the SEC.

The Audit Committee has received the written disclosures and the letter from our independent registered public accounting firm required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the Audit Committee concerning independence, and has discussed with the independent accountant the independent accountant's 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, 2023.

Respectfully submitted,

Elizabeth A. Mora, Chair
Peter J. Cannone III
Joseph B. Donahue

Principal Accountant Fees and Services

For the years ended December 31, 2023 and 2022, aggregate fees for professional services rendered by our independent registered public accounting firm, PwC, in the following categories were as follows:

	<u>2023</u>	<u>2022</u>
Audit Fees	\$ 9,375,200	\$ 8,158,897
Audit-Related Fees	—	—
Tax Fees	2,502,320	756,377
All Other Fees	3,000	4,500
Total	<u>\$ 11,880,520</u>	<u>\$ 8,919,774</u>

Audit Fees

Audit fees billed for both years consisted of fees for professional services rendered for: (i) the audit of our annual consolidated financial statements, (ii) statutory audits, (iii) the review of our consolidated financial statements included in our quarterly reports on Form 10-Q, (iv) audit services related to other reports filed with the SEC, and (v) the audit of our internal controls over financial reporting as required by the rules and regulations promulgated under Section 404 of the Sarbanes-Oxley Act of 2002.

Audit-Related Fees

There were no audit-related fees for the years ended December 31, 2023 and 2022.

Tax Fees

Tax fees for the years ended December 31, 2023 and December 31, 2022 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, 2023 included additional tax research and development compliance services and tax planning strategies compared to the year ended December 31, 2022.

All Other Fees

All other fees for the years ended December 31, 2023 and December 31, 2022 were for accounting research software.

In 2023 and 2022, all fees for professional services rendered by our independent registered public accounting firm were pre-approved pursuant to the Audit Committee's 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. It is the Audit Committee's policy that with respect to services performed or to be performed by PwC in connection with each fiscal year of the Company, 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.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information with respect to the beneficial ownership of our Common Stock by (i) each shareholder known to us to be the beneficial owner of more than 5% of the outstanding shares of our Common Stock; (ii) the Named 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 February 28, 2024. 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 Owner	Number of Shares Beneficially Owned(1)	Percentage of Common Stock Beneficially Owned
<i>5% Shareholders</i>		
T. Rowe Price Associates, Inc.	8,085,882(2)	12.06%
The Vanguard Group	6,892,941(3)	10.28%
BlackRock, Inc.	6,178,625(4)	9.21%
Victory Capital Management Inc.	4,490,779(5)	6.70%
FMR LLC	4,051,183(6)	6.04%
Capital International Investors	3,669,257(7)	5.47%
<i>Named Executive Officers</i>		
John T.C. Lee	112,441	*
Seth H. Bagshaw	1	*
Kathleen F. Burke	50,410	*
David P. Henry	16,530	*
James A. Schreiner	16,468	*
<i>Non-Employee Directors</i>		
Rajeev Batra	8,975	*
Peter J. Cannone III	3,142	*
Gerald G. Colella	69,764(8)	*
Joseph B. Donahue	4,881	*
Jacqueline F. Moloney	7,042	*
Elizabeth A. Mora	14,743	*
Michelle M. Warner	6,861	*
All directors and executive officers as a group (14 persons)	340,447	*

* 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 February 28, 2024, subject to the vesting of 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 67,055,476 shares of Common Stock outstanding as of February 28, 2024. Shares of Common Stock which an individual or entity has a right to acquire within the 60-day period following February 28, 2024, 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 a Schedule 13G filed by T. Rowe Price & Associates, Inc. on January 10, 2024, reporting stock ownership as of December 31, 2023. T. Rowe Price & Associates, Inc. has sole voting power with respect to 2,793,543 shares and sole investment power with respect to 8,085,822 shares. T. Rowe Price & Associates, Inc.'s address is 100 E. Pratt Street, Baltimore, MD 21202.
- (3) Based on information set forth in a Schedule 13G/A filed by The Vanguard Group on February 13, 2024, reporting stock ownership as of December 29, 2023. The Vanguard Group has shared voting power with respect to 20,184 shares, sole investment power with respect to 6,802,390 shares and shared investment power with respect to 90,551 shares. The Vanguard Group's address is 100 Vanguard Blvd., Malvern, PA 19355.
- (4) Based on information set forth in a Schedule 13G/A filed by BlackRock, Inc. on January 24, 2024, reporting stock ownership as of December 31, 2023. BlackRock, Inc. has sole voting power with respect to 6,018,871 shares and sole investment power with respect to 6,178,625 shares. BlackRock, Inc.'s address is 50 Hudson Yards, New York, NY 10001.
- (5) Based on information set forth in a Schedule 13G/A filed by Victory Capital Management Inc. on February 7, 2024, reporting stock ownership as of December 31, 2023. Victory Capital Management Inc. has sole voting power with respect to 4,409,420 shares and sole investment power with respect to 4,490,779 shares. Victory Capital Management Inc.'s address is 4900 Tiedeman Rd. 4th Floor, Brooklyn, OH 44144.
- (6) Based on information set forth in a Schedule 13G filed by FMR LLC on February 9, 2024, reporting stock ownership as of December 29, 2023. FMR LLC has sole voting power with respect to 4,049,577 shares and sole investment power with respect to 4,051,183 shares. FMR LLC's address is 245 Summer Street, Boston, MA 02210.
- (7) Based on information set forth in a Schedule 13G/A filed by Capital International Investors, a division of Capital Research and Management Company, on February 9, 2024, reporting stock ownership as of December 29, 2023. Capital International Investors has sole voting power and sole investment power with respect to 3,669,257 shares. Capital International Investors' address is 333 South Hope Street, 55th Fl, Los Angeles, CA 90071.
- (8) Consists of 1,747 shares held directly by Mr. Colella and 68,017 shares held in the name of The Gerald G. Colella Living Trust.

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.

EXECUTIVE OFFICERS

The following is a brief summary of the background of each of our current executive officers, other than Dr. Lee, whose background is described under the heading “Directors” above. As previously announced, Seth H. Bagshaw intends to retire as Executive Vice President, Chief Financial Officer, and Treasurer, effective April 1, 2024, following 18 years of service with our Company. Mr. Bagshaw will remain employed in the role of special advisor from April 1, 2024 until May 1, 2024.

Executive Officer

Background and Qualifications



Seth H. Bagshaw, 64

**Executive Vice President,
Chief Financial Officer,
and Treasurer**

Mr. Bagshaw has served as Executive Vice President, Chief Financial Officer and Treasurer since February 2023. From May 2017 to February 2023, he served as Senior Vice President, Chief Financial Officer and Treasurer. From January 2010 to May 2017, he served as Vice President and Chief Financial Officer, becoming Treasurer in March 2011. From March 2006 until January 2010, Mr. Bagshaw served as 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 was a member of the Board of Directors of Associated Industries of Massachusetts, a non-profit state-wide employer advocacy and service organization, from 2010 to 2024 and served on its Audit Committee from 2015 to 2024. 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.



Kathleen F. Burke, 59

**Executive Vice President,
General Counsel, and
Secretary**

Ms. Burke has served as Executive Vice President, General Counsel, and Secretary since February 2023. From May 2017 to February 2023, she served as Senior Vice President and General Counsel, becoming Secretary in May 2019. From April 2011 to May 2017, she served as Vice President and General Counsel, and from January 2005 to May 2019, she served as Assistant Secretary. From January 2005 to April 2011, Ms. Burke served as General Counsel, and from February 2004 to January 2005, she served as Corporate Counsel. Prior to joining MKS, Ms. Burke was a corporate attorney at Wilmer Cutler Pickering Hale and Dorr LLP (formerly Hale and Dorr LLP), a full-service international law firm, from 1994 to 2004. Ms. Burke served as a member of the Board of Directors of the Northeast Chapter of the Association of Corporate Counsel, a global legal association, from 2009 to 2020 and served as the Chapter's President from 2011 to 2013, its Vice President from 2010 to 2011 and its Treasurer from 2009 to 2011. Ms. Burke holds a B.A. from Boston College and a J.D. from Boston College Law School.

**Mark M. Gitin, 57****Executive Vice President
and General Manager,
Photonics Solutions
Division**

Dr. Gitin has served as an Executive Vice President since February 2023 and General Manager, Photonics Solutions Division since January 2019. From January 2019 to February 2023, he served as a Senior Vice President. From June 2018 to December 2018, he served as Vice President and General Manager of the Photonics Business Unit and Instruments and Motion Business Unit, and from September 2017 to December 2018, he served as Vice President and General Manager of the Photonics Business Unit. Prior to joining MKS, from March 1995 to September 2017, Dr. Gitin held various management positions covering a wide range of technologies at Coherent, Inc., a leading provider of laser solutions and optics for microelectronics, life sciences, industrial manufacturing and scientific markets, including Vice President of Strategic Marketing, Vice President of Business Development and Vice President and General Manager of the Diodes, Fibers and Systems Business Unit. Dr. Gitin holds a B.S. in Electrical Engineering from University of California, Davis and an M.Eng. and Ph.D. in Electrical Engineering from Cornell University.

**David P. Henry, 52****Executive Vice President,
Operations and
Corporate Marketing**

Mr. Henry has served as Executive Vice President, Operations and Corporate Marketing since February 2023, where he leads global operations for the Vacuum Solutions Division and Photonics Solutions Division, including manufacturing, supply chain, quality, reliability, and environmental, health, and safety functions, and oversees global corporate marketing and the global service business. From August 2022 to February 2023, he served as Senior Vice President, Operations and Corporate Marketing. From November 2020 to August 2022, he served as Senior Vice President, Corporate Marketing, Project Management Office and Global Service. From January 2020 to November 2020, he served as Senior Vice President of Corporate Marketing and Project Management Office. From July 2016 to December 2019, Mr. Henry served as Vice President of Corporate Marketing. From February 2014 to July 2016, he served as Senior Director of Strategic Marketing. Prior to joining MKS, from December 1999 to February 2014, Mr. Henry served in various supply chain and marketing positions at 3M Company, a diversified technology company with a global presence in the safety and industrial, transportation and electronics, health care and consumer businesses. Mr. Henry holds a B.S. in Industrial Engineering from Worcester Polytechnic Institute and an M.B.A. from Bentley College.

Executive Officer**Background and Qualifications****James A. Schreiner, 62****Executive Vice President
and Chief Operating
Officer, Materials
Solutions Division**

Mr. Schreiner has served as an Executive Vice President since February 2023 and Chief Operating Officer, Materials Solutions Division, since August 2022, a position he assumed upon the Atotech Acquisition. From September 2019 to February 2023, he served as a Senior Vice President and from September 2019 to August 2022, he served as Chief Operating Officer. From July 2017 to September 2019, he served as the Senior Vice President of Global Operations for the Rosemount Measurement & Analytical Group of Automation Solutions at Emerson Electric Co., a multinational corporation that manufactures products and provides engineering services for a wide range of industrial, commercial, and consumer markets. Mr. Schreiner served in other senior roles at Emerson Electric, including Vice President of North America from March 2016 to July 2017, and Vice President of Europe from November 2010 to March 2016, both for the Rosemount Measurement & Analytical Group, as well as Vice President of Global Operations for the Micro Motion Division. Prior to Emerson Electric, Mr. Schreiner served in progressive leadership roles at Plexus Corp., ILX Lightwave Corporation, Tetra Pak and 3M Company. Mr. Schreiner holds a B.S. in Electrical Engineering from Montana State University, Bozeman as well as an Executive M.B.A. from the University of Colorado, Denver.

**Eric R. Taranto, 56****Executive Vice President
and General Manager,
Vacuum Solutions
Division**

Mr. Taranto has served as an Executive Vice President since February 2023 and General Manager, Vacuum Solutions Division since November 2020. From November 2020 to February 2023, he served as a Senior Vice President. From September 2014 to November 2020, he served as Vice President and General Manager of Business Units in our Vacuum & Analysis Division (now known as our Vacuum Solutions Division). From July 2014 to December 2020, he was also a member of our Office of the Chief Technology Officer (OCTO), and he chaired the OCTO from January 2018 to December 2020. From September 2000 to September 2014, Mr. Taranto served in a range of managerial and senior engineering positions at MKS. From December 1997 to September 2000, he served as a senior engineer for D.I.P. Inc., a digital-control network supplier, until it was acquired by MKS in September 2000.

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 “Named Executive Officers” listed below.

Name	Title
John T.C. Lee	President and Chief Executive Officer
Seth H. Bagshaw	Executive Vice President, Chief Financial Officer, and Treasurer
Kathleen F. Burke	Executive Vice President, General Counsel, and Secretary
David P. Henry	Executive Vice President, Operations and Corporate Marketing
James A. Schreiner	Executive Vice President and Chief Operating Officer, Materials Solutions Division

As previously announced, Seth H. Bagshaw intends to retire as Executive Vice President, Chief Financial Officer, and Treasurer, effective April 1, 2024, following 18 years of service with our Company. Mr. Bagshaw will remain employed in the role of special advisor from April 1, 2024 until May 1, 2024.

Following this Compensation Discussion and Analysis, you will find a series of tables containing specific information about the compensation earned by or paid to our Named Executive Officers in 2023.

Executive Summary

Our Business

We enable technologies that transform our world. We deliver foundational technology solutions to leading edge semiconductor manufacturing, electronics and packaging, and specialty industrial applications. We apply our broad science and engineering capabilities to create instruments, subsystems, systems, process control solutions, and specialty chemicals technology that improve process performance, optimize productivity, and enable unique innovations for many of the world's leading technology and industrial companies. Our solutions are critical to addressing the challenges of miniaturization and complexity in advanced device manufacturing by enabling increased power, speed, feature enhancement, and optimized connectivity. Our solutions are also critical to addressing ever-increasing performance requirements across a wide array of specialty industrial applications.

Company Performance in 2023

We executed well in 2023, navigating a weaker demand environment across our end-markets while successfully restoring global operations following the ransomware incident in the first quarter, including recovering nearly all of the impacted revenue over the balance of the calendar year. We also delivered cost synergies from the Atotech Acquisition, which closed in August 2022, that were in-line with our targets.

In our Semiconductor market, revenue declined in 2023 due to a softening of semiconductor capital equipment spending, particularly for advanced memory applications, such as DRAM and NAND. We responded by managing factory output efficiently while maintaining a strong focus on innovation for customers' next-generation roadmaps. We believe this dual focus positions MKS to emerge from the capital equipment downturn in a stronger position.

Revenue in our Electronics & Packaging market increased in 2023, reflecting the full-year impact of the Atotech Acquisition. We are focused on driving revenue synergies from the Atotech Acquisition through joint customer engagement, emphasizing our unique combination of laser drilling systems, proprietary chemistry, and plating equipment. A key driver of the Atotech Acquisition was the trend of increasing complexity and miniaturization in the printed circuit board, or PCB, and package substrate markets. Intensifying design and

manufacturing requirements for advanced devices that address applications such as artificial intelligence present escalating challenges to the semiconductor and electronics industries. We believe our combined capabilities position us to address these challenges, enabling customers to scale production and accelerate their time to market. Similar trends have played out in the semiconductor industry, where we have proven our leadership as one of the largest critical subsystem suppliers. While demand was notably softer in 2023 due to significant year-over-year declines in personal computers, or PCs, data center servers, and smartphones, we are actively marketing our capabilities and believe customer response supports a long-term growth opportunity in our Electronics & Packaging market.

Our Specialty Industrial market produced relatively steadier performance in 2023 compared to our Semiconductor and Electronics & Packaging markets. This market is comprised of a broad array of applications across the Industrial, Life and Health Sciences, and Research and Defense sectors. Our strategy in Specialty Industrial is to leverage our technology investments in the Semiconductor and Electronics & Packaging markets into niche applications that create market leadership opportunities and generate attractive incremental cash flows for MKS.

In addition to the strong stewardship of our business in 2023, our efforts in our ESG program have culminated in MKS being recognized as one of *America's Most Responsible Companies for 2024* presented by Newsweek and Statista, as well as being recognized as a *2024 Best Company to Work For* by U.S. News & World Report. In 2023, we released our third annual ESG report and announced our commitment to reduce combined Scope 1 and 2 emissions by 42% by 2030, according to criteria established by the Science Based Targets initiative.

In 2023, key financial and operating achievements include:

- net revenues of \$3.62 billion, a slight increase from \$3.55 billion in 2022, due to the full-year impact of the Atotech Acquisition, partially offset by softer end-market demand;
- Semiconductor market net revenues of \$1.5 billion, a decrease of 28% from \$2.0 billion in 2022, led by decreased industry spending on deposition and etch equipment for memory applications, particularly NAND;
- Electronics & Packaging market net revenues of \$916 million, an increase of 69% from \$541 million in 2022, primarily due to the full-year impact of the Atotech Acquisition, partially offset by decreased end-market demand for consumer electronics and decreased industry demand for our flexible PCB via drilling systems, as customers have temporarily slowed capacity expansion;
- Specialty Industrial market net revenues of \$1.2 billion, an increase of 27% from \$964 million in 2022, primarily due to the full-year impact of the Atotech Acquisition;
- net loss of \$1.8 billion, or \$27.54 per diluted share, compared to net income of \$333 million, or \$5.56 per diluted share, in 2022, reflecting total goodwill and intangible asset impairment charges of \$1.9 billion in 2023 in our Electronics and General Metal Finishing reporting units, which together constitute our Materials Solutions Division, and the Equipment Solutions Business reporting unit of our Photonics Solutions Division. The soft end-market environment, particularly softer demand in the PC and smartphone markets, was the primary driver of both write-downs, with higher market interest rates playing a significant role as well;
- operating cash flow of \$319 million, compared to \$529 million in 2022;
- successful repricing of our \$3.6 billion tranche B term loan, which reduced the interest rate from SOFR plus a credit spread adjustment plus 275 basis points to SOFR plus 250 basis points, and also eliminated the credit spread adjustment;
- reduction in secured term loan principal outstanding of \$188 million, consistent with our strategy to de-lever our balance sheet following the Atotech Acquisition;
- continued execution on the Atotech Acquisition integration, targeting cost synergies; and
- the return of \$59 million to MKS shareholders in cash dividends.

2023 Compensation Outcomes

Our executive compensation program is designed to reward our Named Executive Officers for performance and to align their interests with those of our shareholders. As a result of our financial performance in 2023, our

Named Executive Officers received 86% of their target variable cash compensation under our Management Incentive Plan, which was measured against non-GAAP operating income after bonus and was paid in February 2024, and 193% of their target performance-based equity compensation, which was measured against Adjusted EBITDA and vests in equal annual installments over three years beginning in February 2024 (each financial metric as further described under “Elements of Compensation” below). We believe these financial metrics are important to our shareholders because each is an indicator of how well we manage the operations and profitability of our Company. The alignment of our financial performance goals with our incentive payout opportunities for 2023 is evidenced by the fact that our Management Incentive Plan paid out below target achievement in a year marked by cyclical softness in our Semiconductor and Electronics & Packaging markets and our performance-based equity awards paid out above target achievement in a year where we were still able to deliver strong non-GAAP profitability by successfully navigating continued headwinds from the decline in industry semiconductor capital equipment spending and significant year-over-year declines in PCs, data center servers, and smartphones, as well as successfully restoring global operations following the ransomware incident, including recovering nearly all of the impacted revenue over the balance of the calendar year.

Consideration of 2023 Advisory Vote on Executive Compensation

At our 2023 Annual Meeting of Shareholders, held on May 16, 2023, we submitted to our shareholders an advisory vote on executive compensation. Although annual advisory say-on-pay votes are non-binding, our Compensation Committee considers the outcome of this vote each year when making compensation decisions for our Named Executive Officers. At the 2023 Annual Meeting, our shareholders overwhelmingly approved our executive compensation, with approximately 97% of the votes cast voting in favor of the say-on-pay proposal.

The Compensation Committee considered the results of the 2023 say-on-pay vote, and based upon strong shareholder support, determined that our executive compensation program did not require any material changes in response to the 2023 say-on-pay vote. In addition to the views of our shareholders, the Compensation Committee considers evolving best practices, market compensation information, changing regulatory requirements and the overall business environment. While the Compensation Committee believes that the results of the 2023 say-on-pay vote were an endorsement of our compensation and pay decisions made in relation to our performance, the Compensation Committee made pay decisions in 2023 to address the weakening demand environment in our Semiconductor and Electronics & Packaging markets and made material changes to our executive compensation program for 2024 in recognition of our current business strategy of paying down the debt we incurred in connection with the Atotech Acquisition and to foster further alignment of executive and shareholder interests. See “Elements of Compensation — Incorporation of Adjusted Net Debt for Calendar Years Beginning in 2024” and “Elements of Compensation — Incorporation of Relative Total Shareholder Return for Calendar Years Beginning in 2024” for more information about these changes.

Compensation Philosophy and Objectives

The primary objectives of our executive compensation program are to:

- attract and retain high caliber executive talent;
- motivate and reward the attainment of short-term objectives that drive long-term value; and
- foster long-term alignment of executive and shareholder interests.

We target each of our Named Executed Officers' various compensation elements, including base salary, annual cash incentive compensation, and long-term equity incentive compensation, to be within a competitive range around median levels (plus or minus 15% of median) for each such respective position in the market. The competitive range is considered alongside other key factors when setting compensation levels, and final values for each of our Named Executive Officers may range from approximately the 25th percentile to approximately the 75th percentile. In considering the compensation of our Named Executive Officers relative to the market, we also qualitatively assess each Named Executive Officer's overall performance, tenure, and potential contributions to MKS' ongoing growth. For 2023, the total target compensation for each of Mr. Bagshaw, Mr. Henry, and Mr. Schreiner fell within the competitive range of the median of our peer group; however, the total target compensation for each of Dr. Lee and Ms. Burke fell below the competitive range of the median of our peer group but at or above the 25th percentile. This was due to the Compensation Committee's decision to refrain from

approving any increases in base salary, annual cash incentive compensation opportunity, or long-term incentive compensation in 2023 for our Named Executive Officers, given the Company's desire to cut costs during the extended downturn in our Semiconductor market and the decline in demand in our Electronics & Packaging market.

Base salaries are designed to provide executives with a level of predictability and stability with respect to a portion of their total compensation package. Base salaries are a relatively small component of the overall pay packages of our Named Executive Officers because we believe a significant majority of executive compensation should be variable and based on performance.

Our annual cash incentive compensation program is designed to reward the attainment of short-term earnings goals that drive the long-term growth of MKS. We believe that these goals are aligned with significant value creation, and that our plan creates a strong link between pay and performance while providing a meaningful incentive for our Named Executive Officers to deliver financial results that exceed our goals.

We provide our Named Executive Officers with long-term equity incentive compensation in the form of RSUs, at least half of which are performance-based, in order to:

- foster long-term alignment of executive and shareholder interests;
- balance the short-term focus on annual cash incentive compensation with creating long-term shareholder value;
- reward strong operational performance; and
- promote retention by providing equity-based compensation, the vast majority of which vests over a three-year period, with the remaining vesting in full at the end of a three-year period.

In order to further underscore our compensation values and enhance the efficacy of our pay programs, we also adhere to the following practices:

What We Do

- ✓ Offer a balanced compensation program designed to align with our business strategy, market practices, and shareholder interests
- ✓ Provide maximum payout caps under incentive plans
- ✓ Conduct robust annual reviews and validation of our peer group
- ✓ Conduct annually a comprehensive risk assessment of all compensation programs
- ✓ Maintain a clawback policy for incentive-based compensation that goes beyond the requirements of the Nasdaq rules
- ✓ Provide change-in-control benefits only upon a qualified double-trigger termination of employment
- ✓ Review prior levels of compensation when making executive compensation decisions
- ✓ Maintain stock ownership guidelines
- ✓ Maintain a fully independent Compensation Committee
- ✓ Utilize an independent compensation consultant

What We Do Not Do

- x No repricing of underwater options without shareholder approval
- x No hedging or pledging of MKS shares
- x No incentives for excessive risk taking
- x No perquisites

The following charts show the components of total target compensation on a percentage basis for our Chief Executive Officer and our other Named Executive Officers as a group for 2023.



When the Compensation Committee met in May 2022 to review the peer companies to be used to determine 2023 executive compensation, the Committee considered two sets of peer groups: (i) a “pre-Atotech” peer group if the Atotech Acquisition had not been completed by the time 2023 executive compensation was determined and (ii) a “post-Atotech” peer group if the Atotech Acquisition had been completed by the time 2023 executive compensation was determined. The Compensation Committee considered two sets of peer groups because the Atotech Acquisition would significantly increase our size and expand the industries we serve. In determining the composition of the “post-Atotech” peer group, the Compensation Committee considered whether peer companies had (i) a revenue range relative to our projected 2022 revenue (which was calculated on a combined company basis to include Atotech) between approximately 0.5 to 2.5 times and (ii) a market capitalization range relative to our market capitalization as of March 31, 2022 between approximately 0.3 and 3.0 times. The Compensation Committee also considered secondary factors, including other relevant peer groups, other performance considerations, and whether a company is a competitor for talent. This analysis resulted in the removal of four companies from the peer group we used to determine 2022 executive compensation and the addition of five companies to our “post-Atotech” peer group. As we completed the Atotech Acquisition in August 2022, publicly available compensation data from the following 18 “post-Atotech” peer companies was used in determining executive compensation for 2023:

Agilent Technologies, Inc.	Lumentum Holdings Inc.
AMETEK, Inc.	National Instruments Corporation*
Ciena Corporation	Revvity, Inc.*
Coherent Corp.*	Sensata Technologies Holding plc
Entegris, Inc.	Skyworks Solutions, Inc.
IDEX Corporation	Teledyne Technologies Incorporated
IPG Photonics Corporation	Teradyne, Inc.
Keysight Technologies, Inc.	Trimble Inc.
KLA Corporation	Zebra Technologies Corporation

* II-VI Incorporated changed its name to Coherent Corp. in September 2022. PerkinElmer, Inc. changed its name to Revvity, Inc. in May 2023. National Instruments Corporation was acquired by Emerson Electric Co. in October 2023.

In certain instances where robust peer group benchmark data was not available, our Compensation Committee utilized size and industry-appropriate broad survey data from Radford Data & Analytics, a third-party provider of compensation data and analytics.

Elements of Compensation

The following summarizes the compensation elements for our Named Executive Officers:

Base Salary

When our Compensation Committee set 2023 annual executive compensation in February 2023, the Compensation Committee did not approve any annual salary increases for our Named Executive Officers, consistent with our Company-wide initiative to control costs in response to the decline in spending in our Semiconductor and Electronics & Packaging markets. However, in May 2023, the Compensation Committee approved modest adjustments to Mr. Bagshaw and Mr. Schreiner's base salaries to recognize the elimination of their only remaining perquisites, company-leased cars, which Mr. Bagshaw and Mr. Schreiner had been permitted to retain until the expiration of their respective leases to avoid lease cancellation costs. The adjustments for Mr. Bagshaw and Mr. Schreiner were effective upon the expiration of their respective leases in May 2023 and November 2023, respectively, when Mr. Bagshaw's base salary was increased by \$6,320, a 1.0% increase, and Mr. Schreiner's base salary was increased by \$7,275, a 1.6% increase.

Listed below is the base salary our Compensation Committee approved for Dr. Lee, our President and Chief Executive Officer, in 2022 and 2023.

Chief Executive Officer	2022 Base Salary	2023 Base Salary	Percentage Increase
John T.C. Lee	\$950,000	\$950,000	0%

Listed below are the base salaries our Compensation Committee approved for our other Named Executive Officers in 2022 and 2023.

Named Executive Officer	2022 Base Salary	2023 Base Salary	Percentage Increase
Seth H. Bagshaw	\$ 620,000	\$ 620,000(1)	0%
Kathleen F. Burke	\$ 504,000	\$ 504,000	0%
David P. Henry	\$ 450,000	\$ 450,000	0%
James A. Schreiner	\$ 465,000	\$ 465,000(1)	0%

- (1) Does not include modest adjustments our Compensation Committee approved in recognition of the elimination of Mr. Bagshaw and Mr. Schreiner's only remaining perquisites, as described above.

Annual Cash Incentive Compensation

For 2023, the Compensation Committee modified our annual cash incentive program to improve the alignment between cash bonus payouts and strong operational performance. In 2022, cash bonus payouts under the Management Incentive Plan were based on two performance metrics, (i) non-GAAP operating income after bonus, which excludes any charges or income not related to our operating performance, and (ii) annualized cost savings, defined as profit enhancements or cost reductions approved by the Chief Executive Officer that result, on an annualized basis, in quantified and measured benefits to our financial performance. Although we continued to prioritize prudent cost control for 2023, the Compensation Committee elected to eliminate annualized cost savings as a separate performance metric because it is indirectly reflected in the calculation of non-GAAP operating income and could have an outsized effect on overall achievement, in particular during down years for the Company.

Under the Management Incentive Plan, each Named Executive Officer was eligible to receive a performance bonus based on a specified percentage of base salary earned during the 2023 calendar year. As described above, cash bonus payouts for 2023 under the Management Incentive Plan were based on non-GAAP operating income after bonus. Any payout under the Management Incentive Plan was capped such that the payout would not exceed an amount equal to 200% of the Named Executive Officer's Target Bonus Amount (defined below).

In 2023, payouts under the Management Incentive Plan were determined by multiplying each Named Executive Officer's "Target Bonus Amount" by the Company's percentage achievement of non-GAAP operating

income. Target Bonus Amount consists of each Named Executive Officer's base salary earned in 2023, multiplied by his or her "Target Bonus Percentage," as determined by our Compensation Committee. If a Named Executive Officer's base salary and/or Target Bonus Percentage changed during 2023, the Named Executive Officer's Target Bonus Amount was pro-rated based on the number of days in 2023 that the Named Executive Officer received such base salary and/or Target Bonus Percentage. When the Compensation Committee met in February 2023, it did not approve any Target Bonus Percentage increases for our Named Executive Officers, consistent with our Company-wide initiative to control costs in response to the decline in spending in our Semiconductor and Electronics & Packaging markets.

Listed below is the Target Bonus Percentage for each Named Executive Officer in 2022 and 2023.

Named Executive Officer	2022 Target Bonus Percentage	2023 Target Bonus Percentage
John T.C. Lee	125%	125%
Seth H. Bagshaw	90%	90%
Kathleen F. Burke	70%	70%
David P. Henry	65%	65%
James A. Schreiner	65%	65%

In 2023, our Compensation Committee approved goals and associated incentive payout opportunities related to our 2023 non-GAAP operating income. Due to the cyclical nature and volatility of the markets in which we operate, including the consumer electronics market and semiconductor market, our Compensation Committee views it of paramount importance to set financial performance goals that are rigorous but attainable given the outlook for these markets for the coming year. For 2023, our Compensation Committee set target achievement for non-GAAP operating income at an amount that was greater than actual achievement in 2022 but less than target achievement in 2022, in consideration of the extended semiconductor downturn and the softening in our Electronics & Packaging market.

The successful alignment of our financial performance goals with our incentive payout opportunities for 2023 is evidenced by the fact that our Management Incentive Plan paid out at 86% achievement in a year marked by cyclical softness in our Semiconductor market as well as softness in our Electronics & Packaging market.

In 2023, Named Executive Officers would receive the following percentage of their Target Bonus Amount under the Management Incentive Plan, with proportional payments for achievement in between the Threshold Bonus Amount and the Maximum Bonus Amount.

Non-GAAP Operating Income	% of Target Bonus Amount
<\$438.37 million	0%
\$438.37 million (Threshold Bonus Amount)	50%
\$813.78 million (Target Bonus Amount)	100%
≥\$1.14 billion (Maximum Bonus Amount)	200%

If non-GAAP operating income before the calculation of bonus was greater than the Threshold Bonus Amount, but the inclusion of the bonus would result in an amount lower than the Threshold Bonus Amount, then only the portion of pre-bonus operating income above the Threshold Bonus Amount would be payable to Named Executive Officers on a pro rata basis. In 2023, for purposes of the Management Incentive Plan, non-GAAP operating income was \$707 million. As a result, Named Executive Officers were eligible to receive 86% of their Target Bonus Amounts under this formula. For a reconciliation of 2023 loss from operations to 2023 non-GAAP operating income, see Appendix A to this proxy statement.

Listed below are our Named Executive Officers' earned cash bonus payouts for 2023.

Named Executive Officer	Cash Payout	Payment as a Percentage of Target
John T.C. Lee	\$ 1,021,250	86%
Seth H. Bagshaw	\$ 482,802	86%
Kathleen F. Burke	\$ 303,408	86%
David P. Henry	\$ 251,550	86%
James A. Schreiner	\$ 260,337	86%

Incorporation of Adjusted Net Debt for Calendar Years Beginning in 2024

In February 2024, our Compensation Committee modified our annual cash incentive program to better align with our current business strategy of paying down the debt we incurred in connection with the Atotech Acquisition. As described above, in 2023, cash bonus payouts were made to our Named Executive Officers based on one performance metric, non-GAAP operating income. Although the Compensation Committee continues to believe non-GAAP operating income serves as a barometer of our success, non-GAAP operating income does not directly account for our debt levels, which increased substantially as a result of the Atotech Acquisition and may adversely affect us by increasing our interest expense and decreasing our business flexibility, among other things. Following discussions with management about the importance of generating strong cash flow to reduce our debt, the Compensation Committee determined that a portion of future cash bonus payouts to our Named Executive Officers should be based on a second performance metric, adjusted net debt, defined as our gross debt, less cash and short-term investments, adjusted for the impact of foreign currency changes and certain items that the Compensation Committee considers to be outside the ordinary course of operations.

Beginning in 2024, each of our Named Executive Officers will be eligible to receive a cash bonus payout based on two performance metrics, non-GAAP operating income, which will account for 70% of his or her Target Bonus Amount, and adjusted net debt, which will account for 30% of his or her Target Bonus Amount. The Compensation Committee believes the addition of adjusted net debt as a performance metric under the annual cash incentive program provides management with appropriate incentives to improve our financial position in furtherance of our current business strategy.

Long-Term Equity Incentive Compensation

When our Compensation Committee set 2023 annual executive compensation in February 2023, the Compensation Committee did not approve any increases in equity awards for our Named Executive Officers, consistent with our Company-wide initiative to control costs in response to the decline in spending in our Semiconductor and Electronics & Packaging markets. The Compensation Committee awarded the following time-based and performance-based RSUs to our Named Executive Officers. These RSUs vest in three equal annual installments from the original date of grant. The performance-based RSUs are subject to a one-year performance metric described below.

Named Executive Officer	Grant Date Value of Performance-Based RSUs(1)	Number of Performance-Based RSUs(1)	Grant Date Value of Time-Based RSUs	Number of Time-Based RSUs
John T.C. Lee	\$ 3,600,000	35,895.90	\$ 2,400,000	23,930.60
Seth H. Bagshaw	\$ 1,058,750	10,556.89	\$ 866,250	8,637.45
Kathleen F. Burke	\$ 562,500	5,608.74	\$ 562,500	5,608.74
David P. Henry	\$ 375,000	3,739.16	\$ 375,000	3,739.16
James A. Schreiner	\$ 400,000	3,988.43	\$ 400,000	3,988.43

(1) Grant date value of performance-based RSUs and corresponding number of performance-based RSUs assuming 100% achievement. Achievement is capped at 200%.

With respect to performance-based RSUs, our goal is to select a Company financial metric that best aligns with our Company objectives. Since 2020, we have used Adjusted EBITDA, defined as the Company's GAAP

operating income excluding any charges or income not related to the operating performance of the Company plus depreciation and stock compensation expense. We believe Adjusted EBITDA provides a clear indication of how effectively we manage the operations of our Company, while continuing to recognize the cyclical nature and volatility of the markets we serve, as well as to drive continued improvement in our Company's operating model independent of revenue levels.

Further, we choose to measure Adjusted EBITDA over a one-year performance period because of the cyclical nature and volatility of our markets, making it challenging to set multi-year performance targets, as evidenced by the current extended semiconductor downturn, with global semiconductor sales down approximately 10% in 2023. To ensure our executive officers are focused on our Company's long-term performance, the performance-based RSUs vest in equal annual installments over three years from the original date of grant.

We use RSUs as our form of equity incentive compensation because we believe RSUs help to ensure that our executive officers' interests are aligned with our shareholders' interests in both a rising and a declining stock market. We believe RSUs are preferable to stock options, which have a relatively high accounting cost as compared to their potential value to the executive officer, and restricted stock, which gives the executive officer voting and dividend rights prior to full vesting. Also, because RSUs are worth more than stock options on the date of grant, we are able to grant fewer RSUs as compared to stock options, resulting in less dilution to shareholders' holdings.

In 2023, our Named Executive Officers would have forfeited all of their performance-based RSUs if our Adjusted EBITDA was less than \$661.64 million at a revenue level of \$3.60 billion or if our Adjusted EBITDA was less than \$915.94 million at a revenue level of \$4.30 billion (with intermediate Adjusted EBITDA minimum thresholds at different revenue levels in between). However, if we did achieve these Adjusted EBITDA threshold levels at the respective revenue levels identified, then our Named Executive Officers would receive 50% of their target performance-based RSUs. If our Adjusted EBITDA was \$827.29 million at a revenue level of \$3.70 billion or was \$1.08 billion at a revenue level of \$4.30 billion (with proportional thresholds in between), then our Named Executive Officers would receive 100% of their target performance-based RSUs. If our Adjusted EBITDA was at or above \$910.02 million at a revenue level of \$3.70 billion or was at or above \$1.19 billion at a revenue level of \$4.30 billion (with proportional thresholds in between), then our Named Executive Officers would receive the maximum of 200% of their target performance-based RSUs. If revenue was outside the range of \$3.70 billion and \$4.30 billion, then the performance target and payout would be calculated using the same payout formula. Proportional achievement levels would be made for Adjusted EBITDA between the minimum and maximum levels.

In 2023, because our revenue was \$3.62 billion and our Adjusted EBITDA was \$863 million, our Named Executive Officers received 193% of their target performance-based RSUs. Our performance-based equity awards paid out above target achievement because we were still able to deliver strong non-GAAP profitability by successfully navigating continued headwinds from the decline in industry semiconductor capital equipment spending and significant year-over-year declines in PCs, data center servers, and smartphones, as well as successfully restoring global operations following the ransomware incident in the first quarter, including recovering nearly all of the impacted revenue over the balance of the calendar year. These performance-based RSUs, along with the time-based RSUs granted to our Named Executive Officers, vest in equal annual installments over three years from the original date of grant. For a reconciliation of 2023 net loss to 2023 Adjusted EBITDA, see Appendix A to this proxy statement.

It is our practice to make an initial equity-based grant to all of our Named Executive Officers at the time they commence employment in an amount that is consistent with amounts granted to other executive officers in the industry at similar levels of seniority. We also may make equity-based grants to a Named Executed Officer in connection with a promotion or other change in position. In addition, we typically make an annual grant of equity-based compensation to our Named Executive Officers during the first fiscal quarter of each year. Discretionary equity-based awards may also be made during the year to provide an incentive to achieve a specific goal or to reward a significant achievement or for other reasons that the Compensation Committee determines. Our Compensation Committee did not make any discretionary equity-based awards to our Named Executive Officers in 2023.

Incorporation of Relative Total Shareholder Return for Calendar Years Beginning in 2024

In February 2024, our Compensation Committee modified our long-term equity incentive compensation program to further align executive and shareholder interests. As described above, from 2020 to 2023,

performance-based RSUs were awarded to our Named Executive Officers based on one performance metric, Adjusted EBITDA. Following a review of market practice, the Compensation Committee determined that a portion of future performance-based RSUs awarded to our Named Executive Officers should be based on a second performance metric, relative total shareholder return, or rTSR, defined as our annualized rate of return (including appreciation in stock price and reinvestment of dividends) compared to the S&P 1500 Composite Electronic Equipment, Instruments & Components Index. Our Compensation Committee believes measuring performance-based RSU achievement using rTSR reinforces alignment between executive and shareholder interests.

Beginning in 2024, each of our Named Executive Officers will receive two performance-based awards, one of which will be subject to Adjusted EBITDA and account for 70% of his or her target performance-based RSUs and the other of which will be subject to rTSR and account for 30% of his or her target performance-based RSUs. Awards subject to Adjusted EBITDA will continue to be measured over one year and vest in equal annual installments over three years. In contrast to the awards subject to Adjusted EBITDA, awards subject to rTSR will be measured over a three-year period and will vest in full on or about the third anniversary of the date of grant. In addition, the awards subject to rTSR will have the following limitations: (i) in the event our total shareholder return is negative but above the 50% percentile relative to the S&P 1500 Composite Electronic Equipment, Instruments & Components Index, payouts will be capped at 100%; and (ii) the total value of the awards at the vest date may not exceed 8x the value of the awards at the grant date, reducing the accounting cost of the awards. Our Compensation Committee views these two limitations as prudent governance features.

Our Compensation Committee believes the addition of the rTSR metric, including the three-year performance measurement period, strengthens long-term alignment between executive and shareholder interests and elevates the performance orientation of our executive compensation program.

Perquisites

Our Compensation Committee elected to discontinue perquisites effective December 31, 2020, with the exception that Mr. Bagshaw and Mr. Schreiner were permitted to retain their company-leased cars until the expiration of their leases in May 2023 and November 2023, respectively, to avoid lease cancellation costs. Our Compensation Committee believes the discontinuation of perquisites allows us to simplify and more consistently align our compensation and benefits offerings with other employees, while placing greater focus on performance-based compensation.

Severance and Change-in-Control Provisions

Each of our Named Executive Officers is entitled to certain payments and benefits in the event his or her employment terminates under specified circumstances as described in the applicable agreement and subject to his or her entry into a release of claims. In exchange for these payments and benefits, each of these officers has agreed to be restricted from competing with the Company during and following his or her termination of employment for a twelve-month period. In addition, RSU agreements with our Named Executive Officers with time-based vesting generally 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 event. RSU agreements with our Named Executive Officers with performance-based vesting based on Adjusted EBITDA provide for acceleration of vesting at target-level achievement 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 event. RSU agreements with our Named Executive Officers with performance-based vesting based on rTSR provide that the performance period for such shares shall end on the day prior to the closing date of a change in control, with the number of shares, if any, that would have vested on such date, as determined in accordance with the terms of such agreements, converting into time-based vesting RSUs subject to 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 event. The severance and change-in-control provisions are designed to be competitive in the marketplace, to provide security for each of our Named Executive Officers in the event that we are acquired and his or her respective position is impacted and to provide an incentive for our Named Executive Officers 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 Tables — Potential Payments Upon Termination or Change-in-Control" for more information about these agreements.

Compensation of our Chief Executive Officer

We entered into an employment agreement with Dr. Lee in November 2019 in connection with his promotion to Chief Executive Officer, effective as of January 1, 2020. The terms of Dr. Lee's employment agreement reflected his role as the leader of our Company and the experience he brought to the position. For a detailed discussion of the material compensation terms of Dr. Lee's employment agreement, including all amendments to this employment agreement, see "Executive Compensation Tables — 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 compensation terms of these executive employment agreements, including all amendments to these employment agreements, see "Executive Compensation Tables — Potential Payments Upon Termination or Change-in-Control."

Compensation Consultant

We 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 with occasional consultation regarding compensation strategies and programs;
- to review our peer group to determine the appropriateness of its composition;
- to conduct 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;
- to assess the rigor of proposed performance goals on the basis of a probability analysis, a year-over-year growth analysis and a historical payout versus our peer group analysis; and
- to assist the Compensation Committee with conducting a risk assessment of all of the Company's compensation policies and practices.

Since May 2019, the Compensation Committee has engaged Pearl Meyer as its compensation consultant. The Compensation Committee has determined that the engagement of Pearl Meyer as a compensation consultant does not raise any conflicts of interest with MKS.

Role of our Chief Executive Officer

Our Chief Executive Officer reviews with the Compensation Committee the performance of all other Named Executive Officers and makes recommendations relating to compensation of such executive officers. Management develops proposed company 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. Our Chief Executive Officer does not participate in discussions regarding his own compensation.

Governance Policies

Stock Ownership Guidelines

Our Stock Ownership Guidelines, which apply to members of the Board of Directors, the Chief Executive Officer and our other Named Executive Officers in their capacities as Executive Vice Presidents, provide that:

- Non-employee members of the Board of Directors shall own at least the number of shares of our Common Stock equal in value to five 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 at least the number of shares of our Common Stock with a value equal to five times his or her annual base salary (excluding any bonus, award, or special compensation).
- Our other Named Executive Officers, in their capacities as Executive Vice Presidents, shall own at least the number of shares of our Common Stock with a value equal to three times his or her annual base salary (excluding any bonus, award, or special compensation).

Share ownership is measured as of December 31 of each year. The Stock Ownership Guidelines count shares of common stock and restricted stock units toward share ownership, except that restricted stock units subject to performance conditions are not counted. The Stock Ownership Guidelines provide for a phase-in period over five years to achieve compliance. Our directors, CEO and other Named Executive Officers were all in compliance with the Stock Ownership Guidelines as of December 31, 2023.

Clawback Policy

Our Compensation Committee adopted an updated clawback policy, effective October 2, 2023, in accordance with Rule 10D-1 of the Exchange Act, or Rule 10D-1, and Nasdaq listing standards. The clawback policy applies to our current and former executive officers, as defined in Rule 10D-1, as well as other current executives who report to our Chief Executive Officer and other former executives who reported to our Chief Executive Officer. The clawback policy is administered by our Compensation Committee. In the event we are required to prepare an accounting restatement due to material noncompliance with any financial reporting requirement under U.S. federal securities laws, including any required restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period, it is our policy to recover reasonably promptly the amount of erroneously awarded incentive-based compensation received by our executives. The recovery of such compensation applies regardless of whether an executive engaged in misconduct or otherwise cause or contributed to the requirement for a restatement, although the Compensation Committee is authorized to recover additional incentive-based compensation in situations where an executive engaged in intentional misconduct or fraud. Our current clawback policy is substantially similar to our prior clawback policy, except that it (i) applies to not only executive officers but also other executives who report to our Chief Executive Officer and other former executives who reported to our Chief Executive Officer and (ii) mandates recovery of incentive-based compensation except in specific situations. Our prior clawback policy only required us to take reasonable efforts to recover incentive-based compensation.

Prohibition on Hedging and Pledging

Our Insider Trading Policy prohibits any of our directors or employees from engaging in purchases of financial instruments or other transactions that hedge or offset, or 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 on Executive Compensation

We account for stock-based compensation in accordance with the requirements of 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 incentives, 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,

Rajeev Batra, Chair
Jacqueline F. Moloney
Elizabeth A. Mora

EXECUTIVE COMPENSATION TABLES

Summary Compensation Table for 2023

The following table sets forth the aggregate amounts of compensation earned by our Named Executive Officers in the years ended December 31, 2023, 2022, and 2021.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$) (1)	Non-Equity Incentive Plan Compensation (\$)(2)	All Other Compensation (\$)(3)	Total (\$)
John T.C. Lee, President and CEO (principal executive officer)	2023	\$ 950,000	\$ -	\$ 6,000,000	\$ 1,021,250	\$ 35,288	\$ 8,006,538
	2022	\$ 944,727	\$ -	\$ 6,000,000	\$ 1,170,939	\$ 32,732	\$ 8,148,398
	2021	\$ 908,863	\$ -	\$ 4,520,000	\$ 2,178,466	\$ 31,026	\$ 7,638,355
Seth H. Bagshaw, EVP, CFO, and Treasurer (principal financial officer)	2023	\$ 623,775	\$ -	\$ 1,925,000	\$ 482,802	\$ 40,546	\$ 3,072,123
	2022	\$ 615,774	\$ -	\$ 1,925,000	\$ 554,154	\$ 44,042	\$ 3,138,970
	2021	\$ 592,075	\$ 50,000(4)	\$ 1,825,000	\$ 1,064,683	\$ 35,155	\$ 3,566,913
Kathleen F. Burke, EVP, General Counsel, and Secretary	2023	\$ 504,000	\$ -	\$ 1,125,000	\$ 303,408	\$ 35,288	\$ 1,967,696
	2022	\$ 499,773	\$ -	\$ 1,125,000	\$ 349,809	\$ 32,725	\$ 2,007,307
	2021	\$ 475,885	\$ 50,000(4)	\$ 1,050,000	\$ 665,404	\$ 30,979	\$ 2,272,268
David P. Henry, EVP, Operations and Corporate Marketing	2023	\$ 450,000	\$ -	\$ 750,000	\$ 251,550	\$ 35,403	\$ 1,486,953
	2022	\$ 442,604	\$ -	\$ 750,000	\$ 283,116	\$ 33,047	\$ 1,508,767
	2021	\$ 411,006	\$ 50,000(4)	\$ 600,000	\$ 492,001	\$ 32,952	\$ 1,585,959
James A. Schreiner, EVP and COO, Materials Solutions Division	2023	\$ 465,718	\$ -	\$ 800,000	\$ 260,337	\$ 494,827	\$ 2,020,882
	2022	\$ 457,598	\$ -	\$ 800,000	\$ 297,407	\$ 45,389	\$ 1,600,394
	2021	\$ 433,543	\$ 50,000(4)	\$ 675,000	\$ 563,001	\$ 88,221	\$ 1,809,765

- (1) Represents the aggregate 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 aggregate grant date fair values of awards are set forth in Note 18 to our consolidated financial statements, which were included in our Annual Report on Form 10-K that was filed with the SEC on February 27, 2024. The amounts under the "Stock Awards" column do not reflect the amount of compensation actually received by the Named Executive Officers during the fiscal year. At least 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. The following table sets forth (i) the maximum value of the RSUs, assuming the highest level of performance is achieved for the performance-based portion of the RSUs, and (ii) the fair value of the RSUs, based on actual achievement of the performance condition as described above under "CD&A — Elements of Compensation — Long-Term Equity Incentive Compensation":

Named Executive Officer	2023		2022		2021	
	Maximum	Actual	Maximum	Actual	Maximum	Actual
Dr. Lee	\$ 9,600,000	\$ 9,348,000	\$ 9,600,000	\$ 7,404,000	\$ 7,006,000	\$ 7,006,000
Mr. Bagshaw	\$ 2,983,750	\$ 2,909,637	\$ 2,983,750	\$ 2,337,913	\$ 2,828,750	\$ 2,828,750
Ms. Burke	\$ 1,687,500	\$ 1,648,125	\$ 1,687,500	\$ 1,344,375	\$ 1,575,000	\$ 1,575,000
Mr. Henry	\$ 1,125,000	\$ 1,098,750	\$ 1,125,000	\$ 896,250	\$ 900,000	\$ 900,000
Mr. Schreiner	\$ 1,200,000	\$ 1,172,000	\$ 1,200,000	\$ 956,000	\$ 1,012,500	\$ 1,012,500

- (2) Each Named Executive Officer's annual cash performance bonus for 2023, 2022, and 2021 was calculated based on a specified target percentage of his or her eligible earnings for the relevant plan year. The threshold bonus payout was 50% of this individual target bonus percentage and the maximum payout was 200% of this individual target bonus percentage, with proportional payouts for performance between these levels. Bonus payments in 2023 were based on the achievement of non-GAAP operating income (defined as GAAP operating income after bonus and excluding any charges or income not related to the operating performance)

of the Company) for 2023. Bonus payments in 2022 were based on the achievement of two financial metrics: (i) non-GAAP operating income (defined as GAAP operating income after bonus and excluding any charges or income not related to the operating performance of the Company) for 2022, excluding the results of Atotech, which we acquired in 2022, and (ii) annualized cost savings (defined as profit enhancements or cost reductions approved by the Chief Executive Officer that result, on an annualized basis, in quantified and measured benefits to the Company's financial performance) for 2022. Bonus payments in 2021 were based on the achievement of non-GAAP operating income for 2021, excluding the results of Photon Control Inc., or Photon Control, which we acquired in July 2021. The individual target bonus percentage and the actual bonus achieved for each of the Named Executive Officers were as follows:

Named Executive Officer	2023		2022		2021	
	Individual Target Bonus %	Annual Bonus Plan Achievement	Individual Target Bonus %	Annual Bonus Plan Achievement	Individual Target Bonus %	Annual Bonus Plan Achievement
Dr. Lee	125%	86%	125%	100%	120%	200%
Mr. Bagshaw	90%	86%	90%	100%	90%	200%
Ms. Burke	70%	86%	70%	100%	70%	200%
Mr. Henry	65%	86%	65%	100%	60%	200%
Mr. Schreiner	65%	86%	65%	100%	65%	200%

- (3) Our Compensation Committee elected to discontinue perquisites effective December 31, 2020, with the exception that Mr. Bagshaw and Mr. Schreiner were permitted to retain their company-leased cars until the expiration of their leases in May 2023 and November 2023, respectively, to avoid lease cancellation costs, as described under "Executive Compensation — Compensation Discussion and Analysis — Elements of Compensation — Perquisites." The amounts paid for such perquisites and the amount of all other compensation consisted of the following:

Named Executive Officer	Year	Auto	Health & Disability	401(k) Match	Global Mobility	Relocation
Dr. Lee	2023	\$ -	\$ 25,388	\$9,900	\$ -	\$ -
	2022	\$ -	\$ 23,582	\$9,150	\$ -	\$ -
	2021	\$ -	\$ 22,326	\$8,700	\$ -	\$ -
Mr. Bagshaw	2023	\$ 5,258	\$ 25,388	\$9,900	\$ -	\$ -
	2022	\$ 11,310	\$ 23,582	\$9,150	\$ -	\$ -
	2021	\$ 4,129	\$ 22,326	\$8,700	\$ -	\$ -
Ms. Burke	2023	\$ -	\$ 25,388	\$9,900	\$ -	\$ -
	2022	\$ -	\$ 23,575	\$9,150	\$ -	\$ -
	2021	\$ -	\$ 22,279	\$8,700	\$ -	\$ -
Mr. Henry	2023	\$ -	\$ 25,503	\$9,900	\$ -	\$ -
	2022	\$ -	\$ 23,897	\$9,150	\$ -	\$ -
	2021	\$ -	\$ 24,252	\$8,700	\$ -	\$ -
Mr. Schreiner	2023	\$ 11,323	\$ 25,629	\$9,900	\$ 447,976	\$ -
	2022	\$ 12,280	\$ 23,959	\$9,150	\$ -	\$ -
	2021	\$ 11,579	\$ 17,520	\$8,700	\$ -	\$ 50,422

Health & Disability benefits for 2023 included partial payment of premiums for medical, dental, vision, short-term and long-term disability, and life insurance. Global Mobility benefits included benefits provided to Mr. Schreiner as a result of his expatriate service in Germany, including housing and utilities, auto, home leave, work permit assistance, local country unemployment insurance, foreign language classes, and tax equalization payments. The tax equalization payments, which amount to \$359,167, reflect the estimated total net amount of tax equalization designed to cover taxes on Mr. Schreiner's compensation in excess of the taxes he would have incurred in the United States, in accordance with our global mobility program.

- (4) Represents a discretionary cash bonus made in recognition of outstanding leadership of and attention to multiple strategic transactions.

CEO Pay Ratio

We disclose the ratio of our median employee's annual total compensation to our principal executive officer's annual total compensation to provide a measure of equitability of pay within our Company. We believe our compensation philosophy and process yield an equitable result for all of our employees. During 2023, our principal executive officer was our Chief Executive Officer, John T.C. Lee. For 2023, the annual total compensation for Dr. Lee was \$8,006,538 and the annual total compensation for our median employee was \$70,497, resulting in a pay ratio of approximately 114:1.

In accordance with applicable SEC rules, we identified the median employee as of December 18, 2022 (the median employee determination date) by (i) aggregating for each applicable employee (A) annual base salary for salaried employees (or hourly rate multiplied by expected annual work schedule for hourly employees), (B) target bonus and commissions (or local country equivalent), (C) actual overtime and double-time received for 2022, and (D) the accounting value of any equity granted during 2022, and (ii) ranking this compensation measure for our employees from lowest to highest. This calculation was performed for all employees, excluding Dr. Lee, whether employed on a full-time, part-time, or seasonal basis. For purposes of identifying the median employee, we converted amounts paid in foreign currencies to U.S. Dollars based on the applicable average exchange rates for December 2022. For 2023, we continued to use our 2022 median employee for our pay ratio analysis, as there have been no changes to our employee population or employee compensation arrangements that we reasonably believed would significantly affect our pay ratio disclosure.

The pay ratio reported above is a reasonable estimate calculated in a manner consistent with SEC rules based on our internal records and the methodology described above. Because the SEC rules for identifying the median compensated employee and calculating the pay ratio based on that employee's annual total compensation allow companies to adopt a variety of methodologies, apply certain exclusions, and make reasonable estimates and assumptions that reflect their employee populations and compensation practices, the pay ratio reported by other companies may not be comparable to the pay ratio reported above, as other companies have different employee populations and compensation practices and may utilize different methodologies, exclusions, estimates, and assumptions in calculating their own pay ratios.

Pay Versus Performance

Tabular Disclosure of Compensation Actually Paid versus Performance

The following table discloses information on “compensation actually paid,” or CAP, to our principal executive officers, or PEOs, and, the average CAP, to our other Named Executive Officers, or non-PEO NEOs, during the previous four fiscal years, alongside Company total shareholder return, or TSR, peer group TSR, net (loss) income, and the Company-selected financial performance measure of Adjusted EBITDA.

Year	Summary Compensation Table Total for PEO(1)		CAP to PEO(2)		Average Summary Compensation Table Total for Non-PEO NEOs(3)	Average CAP to Non-PEO NEOs(4)	Value of Initial Fixed \$100 Investment Based On:		Net (Loss) Income (\$ millions)	Adjusted EBITDA (\$ millions) (6)
	Lee	Colella	Lee	Colella			TSR	Peer Group TSR(5)		
2023	\$8,006,538	N/A	\$13,215,067	N/A	\$ 2,136,914	\$ 3,083,750	\$ 96.33	\$150.70	\$ (1,841)	\$ 863
2022	\$8,148,398	N/A	\$ 3,494,929	N/A	\$ 2,063,860	\$ 759,709	\$ 78.58	\$125.15	\$ 333	\$ 854
2021	\$7,638,355	N/A	\$11,383,747	N/A	\$ 2,320,658	\$ 3,336,104	\$160.26	\$160.00	\$ 551	\$ 868
2020	\$6,127,026	\$423,777	\$ 8,922,167	\$838,753	\$ 2,284,429	\$ 3,494,613	\$137.71	\$123.86	\$ 350	\$ 601

(1) These amounts reflect the total compensation of Dr. Lee for the previous four years and the total compensation of Mr. Colella for 2020, each as calculated in accordance with the requirements of Item 402(c) of Regulation S-K, or Item 402(c). Dr. Lee succeeded Mr. Colella as our Chief Executive Officer on January 1, 2020.

(2) These amounts reflect CAP for Dr. Lee for the previous four years and for Mr. Colella for 2020, each as calculated in accordance with Item 402(v) of Regulation, S-K, or Item 402(v). The table below summarizes the adjustments required to reconcile total compensation from the summary compensation table to CAP for Dr. Lee in 2023.

Adjustment	2023 Lee
Total Compensation from Summary Compensation Table	\$ 8,006,538
Less Fair Value of Equity Awards Reported in the Summary Compensation Table in the Covered Year	\$ (6,000,000)
Plus Fair Value of Covered Year Equity Awards Unvested at Fiscal Year-End	\$ 9,488,697
Year-Over-Year Change in Fair Value of Prior Years' Equity Awards Unvested at Fiscal Year-End	\$ 989,809
Change as of the Vesting Date (From the End of the Prior Fiscal Year) in Fair Value of Prior Years' Equity Awards Vested in the Covered Year	\$ 730,023
Compensation Actually Paid	\$ 13,215,067

(3) Reflects the average total compensation of Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner for 2023 and 2022, the average total compensation of Mr. Bagshaw, Ms. Burke, Dr. Gitin, and Mr. Schreiner for 2021, and the average total compensation of Mr. Bagshaw, Ms. Burke, and Mr. Schreiner for 2020, each as calculated in accordance with the requirements of Item 402(c).

[Table of Contents](#)

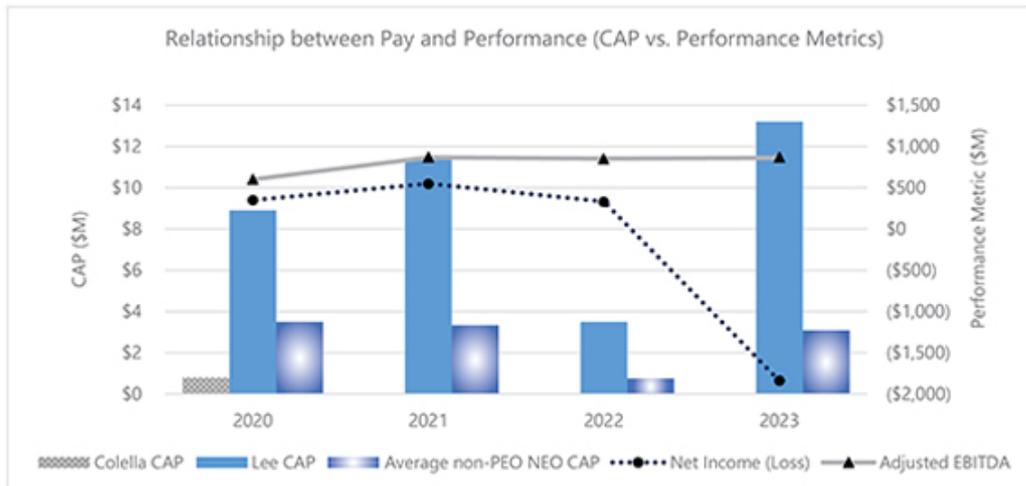
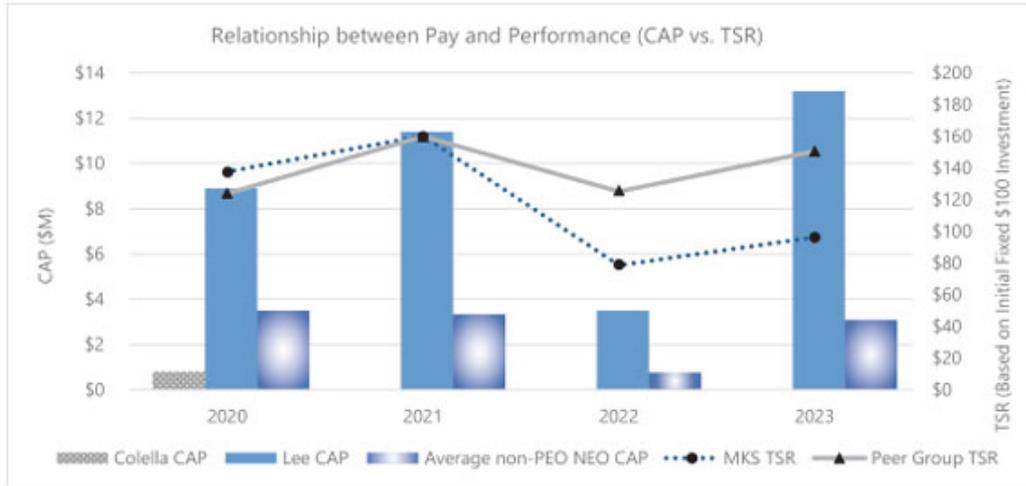
- (4) These amounts reflect the average CAP for our non-PEO NEOs for the previous four years, each as calculated in accordance with the requirements of Item 402(v). The table below summarizes the adjustments required to reconcile average total compensation from the summary compensation table to average CAP for our non-PEO NEOs in 2023.

Adjustment	2023 Non-PEO NEOs
Average Total Compensation from Summary Compensation Table	\$ 2,136,914
Less Average Fair Value of Equity Awards Reported in the Summary Compensation Table in the Covered Year	\$ (1,150,000)
Plus Average Fair Value of Covered Year Equity Awards Unvested at Fiscal Year-End	\$ 1,742,044
Year-Over-Year Change in Average Fair Value of Prior Years' Equity Awards Unvested at Fiscal Year-End	\$ 198,872
Change as of the Vesting Date (From the End of the Prior Fiscal Year) in Average Fair Value of Prior Years' Equity Awards Vested in the Covered Year	\$ 155,920
Average Compensation Actually Paid	\$ 3,083,750

- (5) Peer Group TSR represents TSR for the S&P 1500 Composite Electronic Equipment Instruments & Components Index, which is the industry peer group used for purposes of Item 201(e) of Regulation S-K.
- (6) We selected this measure as the most important in linking 2023 NEO CAP to Company performance because long-term equity incentive compensation comprised the largest percentage of total NEO compensation and Adjusted EBITDA was the financial measure we used to determine achievement under our long-term performance-based equity compensation awards. Adjusted EBITDA is defined as the Company's GAAP operating income, excluding any charges or income not related to the operating performance of the Company, plus depreciation and stock compensation expense. For 2022, Adjusted EBITDA excludes the results of Atotech, which we acquired in August 2022. For 2021, Adjusted EBITDA excludes the results of Photon Control, which we acquired in July 2021. For further information regarding Adjusted EBITDA and its function in our executive compensation program, see "Executive Compensation — Compensation Discussion and Analysis — Elements of Compensation — Long-Term Equity Incentive Compensation" above.

Disclosure of the Relationship Between Compensation Actually Paid and Financial Performance Measures

The following two graphs further illustrate the relationship between the pay and performance figures that are included in the pay versus performance tabular disclosure above. The first graph below illustrates the relationship among PEO CAP, Average Non-PEO CAP, Company total shareholder return (MKS TSR), and S&P 1500 Composite Electronic Equipment Instruments & Components Index total shareholder return (Peer Group TSR). The second graph below illustrates the relationship among PEO CAP, Average Non-PEO CAP, Company Net (Loss) Income, and Company Adjusted EBITDA.



Tabular Disclosure of Most Important Measures Linking Compensation Actually Paid During 2023 to Company Performance

We disclose below the most important measures we used to link 2023 NEO CAP to Company performance. Named Executive Officers' performance-based equity compensation was determined based on achievement of Adjusted EBITDA at different revenue levels. Named Executive Officers' variable cash compensation was determined based on achievement of non-GAAP operating income. For further information regarding these measures and their function in our executive compensation program, see "Executive Compensation — Compensation Discussion and Analysis" above.

2023 Most Important Measures

Adjusted EBITDA
Non-GAAP Operating Income
Revenue

Grants of Plan-Based Awards in Fiscal Year 2023 Table

Name	Grant Date(1)	Approval Date(2)	Estimated Future Payouts Under Non-Equity Incentive Plan Awards(3)			Estimated Future Payouts Under Equity Incentive Plan Awards(4)			All Other Stock Awards: Number of Shares of Stock or Units (#)(5)	Grant Date Fair Value of Stock Awards (\$)(6)
			Threshold (\$)	Target (\$)	Maximum (\$)	Threshold (#)	Target (#)	Maximum (#)		
John T.C. Lee	N/A	N/A	\$ 593,750	\$ 1,187,500	\$ 2,375,000					
	2/15/2023	2/4/2023				17,948	35,896	71,792	23,931	\$ 6,000,000
Seth H. Bagshaw	N/A	N/A	\$ 280,699	\$ 561,398	\$ 1,122,795					
	2/15/2023	2/4/2023				5,278	10,557	21,114	8,367	\$ 1,925,000
Kathleen F. Burke	N/A	N/A	\$ 176,400	\$ 352,800	\$ 705,600					
	2/15/2023	2/4/2023				2,804	5,609	11,217	5,609	\$ 1,125,000
David P. Henry	N/A	N/A	\$ 146,250	\$ 292,500	\$ 585,000					
	2/15/2023	2/4/2023				1,870	3,739	7,478	3,739	\$ 750,000
James A. Schreiner	N/A	N/A	\$ 151,358	\$ 302,717	\$ 605,433					
	2/15/2023	2/4/2023				1,944	3,988	7,977	3,988	\$ 800,000

- (1) This column shows the date of grant for equity awards granted in 2023, all of which were made under the 2022 Stock Incentive Plan.
- (2) This column shows the date on which the Compensation Committee approved the grant of equity awards. The performance metrics underlying such awards were established on the approval date.
- (3) Represents aggregate threshold, target, and maximum payout levels under the annual cash incentive plan. The actual amount of annual cash incentive compensation earned by each Named Executive Officer in 2023 is reported under the Non-Equity Incentive Plan Compensation column in the Summary Compensation Table for 2023. See Footnote 2 to the Summary Compensation Table for 2023 for details on the terms of the annual cash incentive plan.
- (4) These RSUs vest in equal annual installments over three years beginning in February 2024, subject to achievement of performance metrics established in 2023 and determined in February 2024.
- (5) These RSUs vest in equal annual installments over three years beginning in February 2024.
- (6) Reflects the combined grant date fair value of performance-based RSUs at the target achievement level and time-based RSUs. The fair value was \$100.29 per share for RSUs awarded on February 15, 2023.

Outstanding Equity Awards at 2023 Fiscal Year-End Table

Name	Stock Awards(1)			
	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested(2)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested(2) (\$)
John T.C. Lee	13,013(3)	\$ 1,338,673	71,792(5)	\$ 7,385,223
	41,552(4)	\$ 4,274,430		
	22,961(5)	\$ 2,361,957		
Seth H. Bagshaw	5,254(3)	\$ 540,491	21,114(5)	\$ 2,171,974
	13,121(4)	\$ 1,349,716		
	8,287(5)	\$ 852,530		
Kathleen F. Burke	3,049(3)	\$ 313,686	11,217(5)	\$ 1,153,941
	7,864(4)	\$ 808,952		
	5,609(5)	\$ 576,971		
David P. Henry	1,743(3)	\$ 179,352	7,478(5)	\$ 769,294
	4,894(4)	\$ 503,446		
	362(6)	\$ 37,209		
	3,739(5)	\$ 384,647		
James A. Schreiner	1,961(3)	\$ 201,707	7,977(5)	\$ 820,580
	5,243(4)	\$ 539,370		
	362(6)	\$ 37,209		
	3,988(5)	\$ 410,290		

- (1) All stock awards in the above table are RSUs. All RSUs vest in three equal annual installments, with an annual vesting date of February 15th or the next business day if February 15th is not a business day. RSUs listed in the "Equity Incentive Plan Awards" column were subject to the achievement of performance criteria. The amounts listed in such column assume maximum achievement of such performance criteria. None of the Named Executive Officers had any outstanding option awards.
- (2) The values were calculated based on the closing price of our Common Stock on December 29, 2023 of \$102.87 per share.
- (3) Grant date is February 16, 2021.
- (4) Grant date is April 29, 2022.
- (5) Grant date is February 15, 2023.
- (6) Grant date is August 17, 2022.

Option Exercises and Stock Vested in Fiscal Year 2023 Table

Name	Stock Awards*	
	Number of Shares Acquired on Vesting (#)(1)	Value Realized on Vesting (\$)(2)
John T.C. Lee	50,305(3)	\$ 4,992,393
Seth H. Bagshaw	18,704(3)	\$ 1,864,558
Kathleen F. Burke	10,106	\$ 1,013,503
David P. Henry	5,539	\$ 555,484
James A. Schreiner	6,457	\$ 647,586

- (1) Reflects the number of shares vested before the surrender of shares in satisfaction of tax withholding obligations.
- (2) Reflects the value realized before satisfaction of tax withholding obligations.

(3) Includes partial vesting of certain awards to cover U.S. Federal Insurance Contribution Act (FICA) tax withholding obligations, as Dr. Lee and Mr. Bagshaw are retirement eligible.

* There were no option exercises in 2023.

Potential Payments Upon Termination or Change-in-Control

Pursuant to applicable rules of the SEC, this section, including the tables below, summarizes the estimated payments and other benefits that each Named Executive Officer would be eligible to receive if his or her employment had terminated on December 31, 2023, under the circumstances set forth below.

John T.C. Lee

Pursuant to the terms of Dr. Lee's employment agreement dated as of November 18, 2019, Dr. Lee is entitled to receive a base salary and to participate in the Company's annual cash incentive program and long-term equity incentive plan. From time to time in its sole discretion, our Compensation Committee may review and adjust Dr. Lee's base salary, target compensation goal for the annual cash incentive program, and target award for the long-term equity incentive plan.

Dr. Lee's employment agreement provides for a term that is at-will, with termination upon death or disability or at the election of Dr. Lee or the Company. Under the employment agreement, and consistent with applicable law, on any termination of employment, Dr. Lee is entitled to: (i) any unpaid base salary through the employment end date, (ii) accrued, vested benefits under the Company's benefit plans and programs and pursuant to any equity award agreements relating to awards under the current or any future Company equity incentive plan, (iii) any accrued but unused vacation, and (iv) any unreimbursed expenses incurred through the employment end date in accordance with the Company's expense reimbursement policies.

In the event that Dr. Lee's employment is terminated by the Company without cause (as defined below) or is terminated by Dr. Lee for good reason (as defined below), he is entitled to: (i) continuation of base salary for 18 months, (ii) a lump sum equal to 1.5 times the annual amount of his target cash incentive compensation for which he is eligible, (iii) any cash incentive compensation earned for the calendar year preceding his termination but not yet paid, and (iv) to the extent that he elects to continue coverage, payment by the Company of premiums for medical, vision, and dental insurance coverage under COBRA for a period of 18 months, less the premium contribution paid by similarly situated employees.

In the event that Dr. Lee's employment is terminated by the Company without cause, or is terminated by Dr. Lee for good reason, within 24 months after a change-in-control (as defined in his employment agreement), he is entitled to: (i) a lump sum payment equal to three times his annual base salary, (ii) a lump sum payment equal to three times the annual amount of his target cash incentive compensation, (iii) any cash incentive compensation earned for the calendar year preceding his termination but not yet paid, (iv) a prorated portion of his then-current year's target cash incentive compensation, and (v) to the extent that he elects to continue coverage, payment by the Company of its usual share of premiums for medical, vision, and dental insurance coverage under COBRA during the period of time Dr. Lee is entitled to elect such coverage under COBRA, and after the end of the COBRA continuation period, if Dr. Lee continues to pay the premium that would be charged for COBRA coverage, he may continue such insurance coverage until the end of the 36 month period following his employment termination date on the same terms as if COBRA coverage were still in effect and the Company will continue to pay the Company's usual share of such premiums. In the event such payments are determined to be subject to an excise tax imposed by Section 4999 of the Internal Revenue Code, 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 Dr. Lee on an after-tax basis of the greater amount, taking into account all applicable taxes, including the penalty tax. Dr. Lee is not entitled to any gross-up payment for any such excise tax due.

In the event Dr. Lee's employment is terminated due to death or disability, he (or his estate) is entitled to: (i) any cash incentive compensation earned for the calendar year preceding his termination but not yet paid and (ii) a prorated portion of his then-current year's target cash incentive compensation.

Dr. Lee's employment agreement contains non-competition provisions that provide that he 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, he may not, during the term of employment and for two years after the termination of employment: (i) solicit, hire or otherwise induce any Company employee to terminate his or her employment with the Company, (ii) solicit or hire any of our suppliers, joint ventures, research partners or customers for the purpose of competing with the Company, (iii) encourage any of such persons or entities not to enter into a business relationship with the Company or interfere with the relationship between the Company and such persons or entities, or (iv) sell to any of the Company's customers any products of the types sold by the Company with respect to which products he had material dealings in the performance of his duties within the period two years prior to his termination.

Any equity awarded to Dr. Lee under the current or any future Company equity incentive plan that is unvested as of Dr. Lee's termination of employment date will be subject to accelerated vesting if and to the extent provided in the equity award agreements governing the award.

Dr. Lee has entered into time-based RSU agreements; performance-based RSU agreements subject to Adjusted EBITDA, which we refer to as Adjusted EBITDA RSU agreements; and a performance-based RSU agreement subject to rTSR, which we refer to as the rTSR RSU agreement. In the case of the time-based RSU agreements and the Adjusted EBITDA RSU agreements, if Dr. Lee is terminated without cause or resigns with good reason within 24 months following a change-in-control (as defined in the applicable RSU agreements), the RSU agreements provide for full acceleration of vesting of all RSUs, provided, that, in the case of the Adjusted EBITDA RSU Agreements, if the RSUs are still subject to performance criteria, only the target number of RSUs will vest. In the case of the rTSR RSU agreement, if the RSUs are still subject to performance criteria at the time of the change-in-control, the RSUs will be converted into time-based RSUs, which we refer to as Converted RSUs, based on actual performance, using the per share price paid to holders of our Common Stock in connection with the change-in-control as the "end price" for purposes of determining rTSR. If the acquiring entity refuses to assume the Converted RSUs, the rTSR RSU agreement provides for full acceleration of vesting of all Converted RSUs. If the acquiring entity assumes the Converted RSUs and Dr. Lee is terminated without cause or resigns with good reason within 24 months following the change-in-control, the rTSR RSU Agreement provides for full acceleration of vesting of all RSUs.

The RSU agreements for Dr. Lee also provide for full acceleration of vesting of all shares (or, in the case of performance-based RSUs that are still subject to performance criteria, the actual number of RSUs to vest based upon satisfaction of performance criteria) upon retirement, death or disability, or a pro rata portion of such shares and performance-based RSUs upon early retirement. Retirement, in this context, means a voluntary termination of employment by Dr. Lee after he is at least age 65 and has at least 10 years of service with us, and early retirement, in this context, means a voluntary termination of employment by Dr. Lee after he is at least age 60 and has at least 15 years of service with us.

For purposes of the foregoing description of benefits under the employment agreement with Dr. Lee, "cause" will exist if Dr. Lee: (i) commits a felony or engages in fraud, misappropriation or embezzlement, (ii) knowingly fails or refuses to perform his duties in a material way and either the failure or refusal cannot reasonably be cured (as determined by the Company in its reasonable judgment) or he fails to effect a cure within 10 days after the Company notifies him in writing of the failure or refusal, (iii) knowingly causes, or knowingly creates a serious risk of causing, material harm to the Company's business or reputation or (iv) breaches, in a material way, his employment agreement, the confidential information agreement or any other material agreement between him and the Company, and either the breach cannot be cured (as determined by the Company in its reasonable judgment) or he fails to effect a cure within 10 days after the Company notifies him in writing of the breach.

For purposes of the foregoing description of benefits under the employment agreement with Dr. Lee, subject to compliance with certain procedural requirements, "good reason" for Dr. Lee to resign will exist if, without his express written consent: (i) the Company materially reduces his position, duties, title, reporting relationship, authorities or responsibilities, (ii) the Company reduces his then-current base salary or target bonus, (iii) the Company changes his principal place of work to a location more than 50 miles from his then-current principal place of work, or (iv) the Company breaches, in a material way, his employment agreement or any other material agreement between him and the Company.

Under the RSU agreements for Dr. Lee entered into prior to February 2023, "cause" means conviction for the commission of a felony, willful failure by him to perform his responsibilities to the Company, or willful misconduct

by him. Subject to compliance with certain procedural requirements, “good reason” under these RSU agreements means voluntary separation from service within 90 days following (i) a material diminution in position, duties, and responsibilities from those described in his employment agreement, (ii) a material reduction in his base salary (other than as part of a general salary reduction program affecting senior executives), (iii) a material reduction in the aggregate value of his 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 him to be based at a location causing a one-way commute in excess of 60 miles from his primary residence. Under the RSU agreements for Dr. Lee that were entered into beginning in February 2023, cause will exist if Dr. Lee (i) commits a felony or engages in fraud, misappropriation, or embezzlement, (ii) knowingly fails or refuses to perform his duties in a material way and, to the extent that the Company determines such failure or refusal can reasonably be cured, fails or refuses to effect a cure within 10 days after the Company notifies him in writing of the failure or refusal, (iii) knowingly causes, or knowingly creates a serious risk of causing, material harm to the Company’s business or reputation, or (iv) breaches, in a material way, his employment agreement, the confidential information agreement or any other agreement between him and the Company and, to the extent that the Company determines such breach can reasonably be cured, fails or refuses to effect a cure within 10 days after the Company notifies him in writing of the breach. Subject to compliance with certain procedural requirements, “good reason” for Dr. Lee to resign will exist under these RSU agreements if, without his express written consent: (i) the Company materially reduces his position, duties, or responsibilities, (ii) the Company reduces his then-current base salary, or (iii) the Company changes such his principal place of work to a location more than 50 miles from his then-current principal place of work.

Potential Payments Upon Termination or Change-in-Control Table — John T.C. Lee

The following table sets forth the estimated benefits that Dr. Lee would have been entitled to receive upon termination of his employment effective December 31, 2023:

Termination Circumstance	Cash Severance(1)	Value of Accelerated Unvested Equity	Benefits Continuation	Total
Termination by the Company Without Cause	\$ 3,531,174	\$ -	\$ 36,424(2)	\$ 3,567,598
Resignation for Good Reason	\$ 3,531,174	\$ -	\$ 36,424(2)	\$ 3,567,598
Voluntary Termination or Retirement	\$ 324,924	\$ 11,667,672(3)	\$ -	\$ 11,992,596
Death or Disability	\$ 1,512,424	\$ 11,667,672(3)	\$ -	\$ 13,180,096
Within 24 Months Following a Change-in-Control:				
• Termination by the Company Without Cause	\$ 7,924,924	\$ 11,667,672(4)	\$ 72,848(5)	\$ 19,665,444
• Resignation for Good Reason	\$ 7,924,924	\$ 11,667,672(4)	\$ 72,848(5)	\$ 19,665,444

- (1) For termination by the Company without cause or resignation for good reason, reflects continuation of base salary for 18 months, a lump sum equal to 1.5 times the annual amount of his target cash incentive compensation, and accrued but unused vacation that we would be required to pay out upon a termination under applicable law and Dr. Lee’s employment agreement. For each of voluntary termination and retirement, reflects accrued but unused vacation. For death and disability, reflects a prorated portion of his then-current year’s target cash incentive compensation and accrued but unused vacation. For termination by the Company without cause or resignation for good reason, each within 24 months following a change in control, reflects a lump sum payment equal to three times his annual base salary, a lump sum payment equal to three times the annual amount of his target cash incentive compensation, a prorated portion of his then-current year’s target cash incentive compensation, and accrued but unused vacation.
- (2) Reflects our estimated cost for continuation of medical, dental, and vision coverage for 18 months, assuming the termination or resignation occurred on December 31, 2023.
- (3) Upon retirement, death, or disability, RSUs fully vest, subject to achievement of any remaining performance criteria. The stated value assumes the retirement, death, or disability occurred on December 31, 2023 and assumes the target number of unvested performance-based RSUs vested.
- (4) The unvested time-based RSUs fully vest and the target number of unvested performance-based RSUs vest.

- (5) Reflects our estimated cost for continuation of medical, dental, and vision coverage for 36 months, assuming the termination or resignation occurred on December 31, 2023.

Other Named Executive Officers

The Company has entered into employment agreements with each of Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner. Pursuant to applicable rules of the SEC, below is a summary of the material terms of these employment agreements in place as of December 31, 2023.

The employment agreements with Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner provide for a base salary and eligibility to participate in the Company's annual cash incentive compensation program and long-term equity incentive plan. In addition, the employment agreement with Mr. Schreiner, which was amended in October 2021 in connection with Mr. Schreiner's appointment as Senior Vice President and Chief Operating Officer, Materials Solutions Division, and which became effective upon the closing of the Atotech Acquisition, provides for an expatriate service bonus equal to \$500,000. The bonus is payable in a single lump sum within thirty days following Mr. Schreiner's return to the United States following the completion of a two-year term of expatriate service (or such longer term of service as may be mutually agreed by the Company and Mr. Schreiner), which we refer to as the Expatriate Service Term.

The employment agreements with Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner provide for terms that are at-will, with termination upon death or disability or at our election if the executive fails to perform his or her duties or commits any other act constituting cause (as defined below). Under the employment agreement, and consistent with applicable law, on any termination of employment, Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner are entitled to: (i) any unpaid base salary through the employment end date, (ii) accrued, vested benefits under the Company's benefit plans and programs and pursuant to any equity award agreements relating to awards under the current or any future Company equity incentive plan, (iii) any accrued but unused vacation, and (iv) any unreimbursed expenses incurred through the employment end date in accordance with the Company's expense reimbursement policies.

In the event that the executive resigns from the Company or is terminated by the Company without cause, subject to certain procedural requirements, the Company will pay such executive his or her base salary for a period of at least 30 days after the notice of such termination or resignation is delivered. In the event that we terminate Mr. Bagshaw, Ms. Burke, Mr. Henry, or Mr. Schreiner's employment without cause, each executive is entitled to a lump sum payment equal to 12 months base salary and, to the extent that such executive elects to continue coverage, payment by the Company of premiums for medical, vision, and dental insurance coverage under COBRA for a period of 12 months, less the premium contribution paid by similarly situated employees.

In the event that Mr. Bagshaw, Ms. Burke, Mr. Henry, or Mr. Schreiner's employment is terminated without cause or is terminated by the executive for good reason (as defined below) within 24 months after a change-in-control (as defined in the applicable agreement), or, in the case of Mr. Schreiner, Mr. Schreiner resigns for expatriate service good reason (as defined below), such executive is entitled to "enhanced severance compensation," consisting of: (i) a lump sum payment equal to one and one-half times his or her annual base salary, or two times his annual base salary in the case of Mr. Bagshaw, (ii) a lump sum payment equal to one and one-half times the annual amount of his or her target cash incentive compensation for which such executive is eligible, or two times the annual amount of his target cash incentive compensation in the case of Mr. Bagshaw, (iii) a prorated portion of the then-current year's target cash incentive compensation, and (iv) to the extent that such executive elects to continue coverage, payment by the Company of its usual share of premiums for medical, vision, and dental insurance coverage under COBRA for a period of 18 months, or 24 months in the case of Mr. Bagshaw, following termination. In the event such payments are determined to be subject to an excise tax imposed by Section 4999 of the Internal Revenue Code, 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. Bagshaw, Ms. Burke, Mr. Henry, or Mr. Schreiner, as the case may be, on an after-tax basis of the greater amount, taking into account all applicable taxes, including the penalty tax. Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner are not entitled to any gross-up payment for any such excise tax due.

The employment agreements of Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner contain non-competition provisions that provide that each executive may not, during the term of his or her employment

and for one year after termination of employment, engage in any competitive business or activity. In addition, each of Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner may not, during the term of employment and for one year after the termination of employment: (i) solicit or otherwise induce any Company employee to terminate his or her employment with the Company (ii) solicit or hire any of our suppliers, joint ventures, research partners or customers for the purpose of competing with the Company, (iii) encourage any of such persons or entities not to enter into a business relationship with MKS or interfere with the relationship between the Company and such persons or entities, or (iv) sell to any of the Company's customers any products of the types sold by the Company with respect to which products the executive officer had material dealings in the performance of his or her duties within the period two years prior to his or her termination.

Any equity awarded to Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner under the current or any future Company equity incentive plan that is unvested as of the date of their respective terminations of employment will be subject to accelerated vesting if and to the extent provided in the equity award agreements governing the award.

Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner have entered into time-based RSU agreements and Adjusted EBITDA RSU agreements. In addition, Ms. Burke, Mr. Henry, and Mr. Schreiner have entered into rTSR RSU agreements. In the case of the time-based RSU agreements and the Adjusted EBITDA RSU agreements, if the executive is terminated without cause or resigns with good reason within 24 months following a change-in-control (as defined in the applicable RSU agreements), the RSU agreements provide for full acceleration of vesting of all RSUs, provided, that, in the case of the Adjusted EBITDA RSU Agreements, if the RSUs are still subject to performance criteria, only the target number of RSUs will vest. In the case of the rTSR RSU agreement, if the RSUs are still subject to performance criteria at the time of the change-in-control, the RSUs will be converted into Converted RSUs based on actual performance, using the per share price paid to holders of our Common Stock in connection with the change-in-control as the "end price" for purposes of determining rTSR. If the acquiring entity refuses to assume the Converted RSUs, the rTSR RSU agreement provides for full acceleration of vesting of all Converted RSUs. If the acquiring entity assumes the Converted RSUs and the executive is terminated without cause or resigns with good reason within 24 months following the change-in-control, the rTSR RSU Agreement provides for full acceleration of vesting of all RSUs.

The RSU agreements for Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner provide for full acceleration of vesting of all shares (or, in the case of performance-based RSUs that are still subject to performance criteria, the actual number of RSUs to vest based upon satisfaction of performance criteria) upon death or disability. The RSU agreements for Mr. Bagshaw and Ms. Burke, and the RSU agreements for Mr. Henry and Mr. Schreiner that were entered into prior to February 2023, provide for full acceleration of vesting of all shares (or, in the case of performance-based RSUs that are still subject to performance criteria, the actual number of RSUs to vest based upon satisfaction of performance criteria) upon retirement, and, for Ms. Burke, Mr. Henry, and Mr. Schreiner, a pro rata portion of such shares and performance-based RSUs upon early retirement. The RSU agreements for Mr. Henry and Mr. Schreiner that were entered into beginning in February 2023 provide for the same terms upon retirement, except that (i) any unvested RSUs shall be forfeited if such retirement occurs prior to the one-year anniversary of the date such RSUs were granted and (ii) there is no early retirement option. Retirement, in this context, for Ms. Burke, Mr. Henry, and Mr. Schreiner means a voluntary termination of employment by the executive after he or she is at least age 65 and has at least 10 years of service with us. Early retirement, in this context, for Ms. Burke, Mr. Henry, and Mr. Schreiner means a voluntary termination of employment after he or she is at least age 60 and has at least 15 years of service with us. Retirement, in this context, for Mr. Bagshaw means a voluntary termination of employment by Mr. Bagshaw after he is at least age 60 and has at least 10 years of service with us. RSUs granted to executives typically vest in three equal annual installments, and typically at least half of the target annual equity grant value is subject to performance criteria.

For purposes of the foregoing description of benefits under the employment agreements with Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner, "cause" will exist if the executive: (i) commits a felony or engages in fraud, misappropriation or embezzlement, (ii) knowingly fails or refuses to perform such executive's duties in a material way and, to the extent that the Company determines such failure or refusal can reasonably be cured, fails or refuses to effect a cure within 10 days after the Company notifies such executive in writing of the failure or refusal, (iii) knowingly causes, or knowingly creates a serious risk of causing, material harm to the Company's business or reputation, or (iv) breaches, in a material way, such executive's employment agreement, the confidential

information agreement or any other agreement between such executive and the Company and, to the extent that the Company determines such breach can reasonably be cured, fails or refuses to effect a cure within 10 days after the Company notifies such executive in writing of the breach.

For purposes of the foregoing description of benefits under the employment agreements with Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner, subject to compliance with certain procedural requirements, “good reason” for the applicable executive to resign will exist if, without such executive’s express written consent: (i) the Company materially reduces such executive’s position, duties or responsibilities, (ii) the Company reduces such executive’s then-current base salary, or (iii) the Company changes such executive’s principal place of work to a location more than 50 miles from such executive’s then-current principal place of work. In addition, for purposes of the foregoing description of benefits under the employment agreement with Mr. Schreiner, subject to compliance with certain procedural requirements, “expatriate service good reason” for Mr. Schreiner to resign will exist if, without Mr. Schreiner’s express written consent: (i) the Company fails to return Mr. Schreiner to the position of Senior Vice President and Chief Operating Officer of the Company or a position of at least substantially similar duties and authority within six months after his return to the United States following the completion of his Expatriate Service Term.

Under the RSU agreements for Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner that were entered into prior to February 2023, “cause” means conviction for the commission of a felony, willful failure by the executive to perform his or her responsibilities to the Company, or willful misconduct by the executive. Subject to compliance with certain procedural requirements, “good reason” means voluntary separation from service within 90 days following (i) a material diminution in position, duties, and responsibilities from those described in the executive’s employment agreement, (ii) a material 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. Under the RSU agreements for Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner that were entered into beginning in February 2023, the definitions of “cause” and “good reason” are substantially the same as the definitions of “cause” and “good reason” in the employment agreements for Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner discussed above.

Potential Payments Upon Termination or Change-in-Control Table — Other Named Executive Officers

The following table sets forth the estimated benefits that Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner would have been entitled to receive upon termination of his or her employment effective December 31, 2023:

Termination Circumstance	Cash Severance(1)	Value of Accelerated Unvested Equity	Benefits Continuation	Total
Termination by the Company Without Cause				
Seth H. Bagshaw	\$ 1,099,935	\$ -	\$ 24,283(2)	\$ 1,124,218
Kathleen F. Burke	\$ 687,245	\$ -	\$ 24,283(2)	\$ 711,528
David P. Henry	\$ 572,104	\$ -	\$ 23,622(2)	\$ 595,726
James A. Schreiner	\$ 546,413	\$ -	\$ 23,622(2)	\$ 570,035
Death or Disability				
Seth H. Bagshaw	\$ 473,615	\$ 3,828,725(3)	\$ -	\$ 4,302,340
Kathleen F. Burke	\$ 183,245	\$ 1,857,669(3)	\$ -	\$ 2,040,914
David P. Henry	\$ 122,104	\$ 1,489,301(3)	\$ -	\$ 1,611,405
James A. Schreiner	\$ 74,138	\$ 1,598,866(3)	\$ -	\$ 1,673,004
Voluntary Termination or Retirement				
Seth H. Bagshaw	\$ 473,615	\$ 3,828,725(4)	\$ -	\$ 4,302,340
Kathleen F. Burke	\$ 183,245	\$ -(4)	\$ -	\$ 183,245
David P. Henry	\$ 122,104	\$ -(4)	\$ -	\$ 122,104
James A. Schreiner	\$ 74,138	\$ -(4)	\$ -	\$ 74,138
Within 24 Months Following a Change-in-Control:				
• Termination by the Company Without Cause				
• Resignation for Good Reason				
Seth H. Bagshaw	\$ 3,417,319	\$ 3,828,725(5)	\$ 48,565(6)	\$ 7,294,609
Kathleen F. Burke	\$ 1,821,245	\$ 2,853,550(5)	\$ 36,424(6)	\$ 4,711,219
David P. Henry	\$ 1,528,354	\$ 1,489,301(5)	\$ 35,433(6)	\$ 3,053,088
James A. Schreiner	\$ 1,549,997	\$ 1,598,866(5)	\$ 35,433(6)	\$ 3,184,296

- (1) For termination by the Company without cause, reflects a lump sum payment equal to 12 months base salary and accrued but unused vacation that we would be required to pay out upon a termination under applicable law and the applicable employment agreement. For each of death, disability, voluntary termination, and retirement, reflects accrued but unused vacation. For termination by the Company without cause or resignation for good reason, each within 24 months following a change in control, reflects a lump sum payment equal to one and one-half times his or her annual base salary (or two times in the case of Mr. Bagshaw), a lump sum payment equal to one and one-half times the annual amount of his or her target cash incentive compensation (or two times in the case of Mr. Bagshaw), a prorated portion of the then-current year's target cash incentive compensation, and accrued but unused vacation.
- (2) Reflects our estimated cost for continuation of medical, dental, and vision coverage for 12 months, assuming the termination or resignation occurred on December 31, 2023.
- (3) Upon death or disability, RSUs fully vest, subject to achievement of any remaining performance criteria. The stated value assumes the death or disability occurred on December 31, 2023 and assumes the target number of unvested performance-based RSUs vested.
- (4) Upon retirement (as defined in the RSU agreements), RSUs that were outstanding as of December 31, 2023 for Mr. Bagshaw, Ms. Burke, Mr. Henry, and Mr. Schreiner fully vest, subject to achievement of any remaining performance criteria. However, Ms. Burke, Mr. Henry, and Mr. Schreiner did not meet the requirements for retirement as of December 31, 2023.
- (5) The unvested time-based RSUs fully vest and the target number of unvested performance-based RSUs vest.
- (6) Reflects our estimated cost for continuation of medical, dental, and vision coverage for 18 months (or 24 months in the case of Mr. Bagshaw), assuming the termination or resignation occurred on December 31, 2023.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information about the securities authorized for issuance under our equity compensation plans as of December 31, 2023:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants, and rights ⁽¹⁾ (a)	Weighted-average exercise price of outstanding options, warrants, and rights (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	1,021,751	-	5,947,317(2)
Equity compensation plans not approved by security holders	-	-	-
Total	1,021,751		5,947,317(2)

- (1) In connection with our acquisition of Newport Corporation, or Newport, in April 2016, and Electro Scientific Industries, Inc., or ESI, in February 2019, we assumed certain RSUs granted under certain Newport and ESI equity plans, which we refer to as the Newport Assumed RSUs and ESI Assumed RSUs, as applicable, and which were converted automatically into RSUs with respect to shares of our Common Stock. As of December 31, 2023, the number of shares reflected in column (a) consists of: (i) Newport Assumed RSUs with respect to 1,953 shares of our Common Stock, (ii) ESI Assumed RSUs with respect to 8,669 shares of our Common Stock, (iii) RSUs representing the right to receive an aggregate of 263,709 shares of our Common Stock upon vesting under the 2014 Stock Incentive Plan (excluding shares from accrued dividend equivalents), (iv) RSUs representing the right to receive an aggregate of 747,028 shares of our Common Stock upon vesting under the 2022 Stock Incentive Plan (excluding shares from accrued dividend equivalents), and (v) RSUs representing the right to receive an aggregate of 392 shares of our common stock upon vesting under the 2014 Stock Incentive Plan and the 2022 Stock Incentive Plan as a result of accrued dividend equivalents on the Newport Assumed RSUs and the ESI Assumed RSUs in deferred compensation plans.
- (2) This number includes 4,584,949 shares available for issuance under our 2022 Stock Incentive Plan and 1,362,368 shares reserved for issuance under our 2014 Employee Stock Purchase Plan. Shares issued under our 2022 Stock Incentive Plan in respect of RSUs, 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 1.91 shares for every share granted.

OTHER MATTERS

Our Board of Directors does not know of any other matters which may come before the 2024 Annual 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.

Expenses and Solicitation

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.

Deadline for Submission of Shareholder Proposals for the 2025 Annual Meeting

Proposals of shareholders intended to be presented at the 2025 Annual Meeting of Shareholders, or the 2025 Annual Meeting, must be received by us at our principal office in Andover, Massachusetts no later than November 27, 2024 for inclusion in the proxy statement for that meeting.

In addition, our By-Laws (which are on file with the SEC) require that we be given advance notice of matters that shareholders wish to present for action at an annual meeting of shareholders, including director nominations (other than matters included in our proxy statement in accordance with Rule 14a-8 of the Exchange Act). The required written notice must be delivered to our Secretary at our principal office 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 the annual meeting was made, whichever occurs first. Assuming that the 2025 Annual Meeting is not advanced by more than 20 days or delayed by more than 60 days from the anniversary date of the 2024 Annual Meeting, shareholders will need to give us appropriate notice at the address noted above no earlier than January 7, 2025 and no later than February 6, 2025. The advance notice provisions of our By-Laws contain the requirements of the written notice of shareholders and supersede the notice requirement contained in Rule 14a-4(c)(1) under the Exchange Act.

In addition to satisfying the advance notice provisions in our By-Laws relating to director nominations, including the earlier notice deadlines set out above, in order to comply with the SEC's universal proxy rule, shareholders who intend to solicit proxies in support of director nominees other than the Company's nominees in compliance with Rule 14a-19 under the Exchange Act must also provide notice that sets forth the information required by Rule 14a-19 no later than March 8, 2025. If the date of the 2025 Annual Meeting changes by more than 30 calendar days from the date of the 2024 Annual Meeting, such notice must instead be provided by the later of 60 calendar days prior to the date of the 2025 Annual Meeting or the 10th calendar day following our public announcement of the date of the 2025 Annual Meeting.

Householding of Annual Meeting Materials

Some banks, brokers, and other nominees may participate in the practice of "householding" notices, proxy statements, and annual reports. This means that only one copy of the Notice, this proxy statement and the 2023 Annual Report may have been sent to multiple shareholders in your household unless we have received contrary instructions from one or more shareholders. We will promptly deliver a separate copy of any such document to you if you contact us at the following address or telephone number: Investor Relations Department, MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, MA 01810, 978-557-5180. If you want to receive separate copies of notices, proxy statements, or annual reports in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker, or other nominee, or you may contact us at the above address or telephone number.

No Incorporation by Reference

As provided under SEC rules, the "Audit Committee Report," the "Compensation Committee Report," and the disclosure under the "Pay Versus Performance" heading are not incorporated by reference into any of our other filings with the SEC, except to the extent we specifically incorporate either report or such disclosure by reference into a filing. This proxy statement includes several website addresses. These website addresses are intended to be inactive textual references only. None of the information on, or accessible through, these websites is part of this proxy statement or is incorporated by reference herein.

By Order of the Board of Directors,

KATHLEEN F. BURKE
Secretary

March 27, 2024

APPENDIX A

Reconciliation of 2023 Loss from Operations to 2023 Non-GAAP Operating Income

	Twelve Months Ended December 31, 2023
<i>(amounts in millions)</i>	
Loss from operations	\$ (1,554)
Excess and obsolete charge from discontinued product line (Note 1)	13
Acquisition and integration costs (Note 2)	16
Restructuring (Note 3)	20
Amortization of intangible assets	295
Goodwill and intangible asset impairment (Note 4)	1,902
Gain on sale of long-lived assets (Note 5)	(2)
Fees and expenses related to repricing of Term Loan Facility (Note 6)	2
Ransomware incident (Note 7)	15
Non-GAAP income from operations	<u>\$ 707</u>

Reconciliation of 2023 Net Loss to 2023 Adjusted EBITDA

	Twelve Months Ended December 31, 2023
<i>(amounts in millions)</i>	
Net loss	\$ (1,841)
Interest expense, net	339
Other expense, net	27
Benefit for income taxes	(87)
Depreciation	102
Amortization	295
Excess and obsolete charge from discontinued product line (Note 1)	13
Stock-based compensation	54
Acquisition and integration costs (Note 2)	16
Restructuring (Note 3)	20
Goodwill and intangible asset impairment (Note 4)	1,902
Gain on sale of long-lived assets (Note 5)	(2)
Fees and expenses related to repricing of Term Loan Facility (Note 6)	2
Ransomware incident (Note 7)	15
Loss on debt extinguishment (Note 8)	8
Adjusted EBITDA	<u>\$ 863</u>

Note 1: We recorded an excess and obsolescence inventory charge related to a product line that is being discontinued.

Note 2: Acquisition and integration costs primarily related to the Atotech Acquisition.

Note 3: Restructuring costs primarily related to severance costs due to global cost-saving initiatives.

Note 4: During the three months ended June 30, 2023, we noted softer industry demand, particularly in the PC and smartphone markets and concluded there was a triggering event at our Materials Solutions Division, which represents the former Atotech business, and Equipment Solutions Business, which represents the former ESI business and is a reporting unit of our Photonics Solutions Division. We performed a quantitative assessment which resulted in an impairment of \$1.3 billion for our Materials Solutions Division and \$0.5 billion for our Equipment Solutions Business. In addition, during the three months ended December 31, 2023, as part of our annual goodwill and intangible asset impairment analysis, we recorded additional impairment charges of \$62 million for our Materials Solutions Division and \$13 million for our Equipment Solutions Business.

Note 5: We recorded a gain on the sale of a minority interest investment in a private company.

Note 6: We recorded fees and expenses related to the repricing of the USD term loan B under our term loan facility.

Note 7: We recorded costs, net of recoveries, associated with the ransomware incident we identified on February 3, 2023. These costs were primarily comprised of various third-party consulting services, including forensic experts, restoration experts, legal counsel, and other IT and accounting professional expenses, enhancements to our cybersecurity measures, and costs to restore our systems and access our data.

Note 8: We recorded a charge to write-off deferred financing fees and original issue discount costs related to the repricing of the USD term loan B under our term loan facility.



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



SCAN TO
VIEW MATERIALS & VOTE



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 receive 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 below to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

VOTE BY INTERNET

Go to www.proxyvote.com or scan the QR Barcode above

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time on May 6, 2024. 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.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time on May 6, 2024. Have your proxy card in hand when you call and then follow 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 INK AS FOLLOWS:

V33082-P06451

KEEP THIS PORTION FOR YOUR RECORDS

DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

MKS INSTRUMENTS, INC.

The Board of Directors recommends you vote **FOR** the following:

- The election of the three nominees listed below as Class I Directors, each to serve for a three-year term:

Nominees:

- Rajeev Batra
- Gerald G. Colella
- 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.

The Board of Directors recommends you vote **FOR** the following proposals:

- The approval, on an advisory basis, of executive compensation.
- The ratification of the selection of PricewaterhouseCoopers LLP as the Company's independent registered public accounting firm for the year ending December 31, 2024.

For **Against** **Abstain**

The Board of Directors recommends you vote **AGAINST** the following proposal:

- A shareholder proposal regarding simple majority voting, if properly presented at the meeting.

For **Against** **Abstain**

This proxy, when properly executed, will be voted in the manner directed herein. If no direction is indicated, this proxy will be voted **FOR** the election of each of the nominees, **FOR** Proposals 2 and 3, and **AGAINST** Proposal 4. In their discretion, the proxies are authorized to vote upon such other matters as may properly come before the meeting.

Please indicate if you plan to attend this meeting.

Yes **No**

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

Signature [PLEASE SIGN WITHIN BOX] Date

Signature (Joint Owners) Date

Important Notice Regarding the Availability of Proxy Materials for the 2024 Annual Meeting:
The Annual Report, Notice & Proxy Statement are available at www.proxyvote.com.

V33083-P06451

MKS INSTRUMENTS, INC.
2024 Annual Meeting of Shareholders
May 7, 2024 10:00 AM, Eastern Time
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 2024 Annual Meeting of Shareholders and Proxy Statement, each dated March 27, 2024, and hereby appoints Kathleen F. Burke and M. Kathryn Rickards, 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 2024 Annual Meeting of Shareholders of the Company to be held on May 7, 2024 at 10:00 AM, Eastern Time, at MKS Instruments, Inc., 2 Tech Drive, Suite 201, 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 attending the meeting, on the matters set forth on the reverse side, and, in their discretion, upon any other matters which may properly come before the meeting.

Your Internet or telephone vote authorizes the named proxies to vote the shares in the same manner as if you marked, signed, dated and returned your proxy card. If you vote the shares over the Internet or by telephone, please do not return your proxy card.

UNLESS VOTING THE SHARES OVER THE INTERNET OR BY TELEPHONE, PLEASE DATE, SIGN AND MAIL YOUR PROXY CARD IN THE ENVELOPE PROVIDED AS SOON AS POSSIBLE.

Continued and to be signed on reverse side