

# 2023

ANNUAL REPORT

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# Dear Fellow Shareholders,

Applied Materials delivered record revenue, earnings and cash flow in fiscal 2023 and is outgrowing the wafer fabrication equipment market for the fifth consecutive year. This record performance is underpinned by the strength and breadth of our product portfolio as well as the central role we play in enabling major industry inflections. We have leadership positions in the key transistor, wiring and heterogeneous integration technologies that are critical to our customers' roadmaps and shaping the future of the semiconductor industry.

At no time in our history have we been closer to our customers, and we are taking steps to create even greater levels of collaboration that enable Applied and our partners to 'innovate the way we innovate'. In May, we announced our new Equipment and Process Innovation and Commercialization (EPIC) Center in Silicon Valley which will be the heart of a high-velocity innovation platform designed to accelerate development and commercialization of next-generation technologies. Working collaboratively is also key to reducing the semiconductor supply chain's carbon emissions, and we are expanding our sustainability programs and partnerships as detailed in the Applied Materials Net Zero 2040 Playbook that we launched in July.

## **POSITIONED FOR SUSTAINABLE OUTPERFORMANCE**

Across the company, we are in a great position to enable our customers' success and profitably grow Applied Materials as the next era of industry expansion takes shape. Our growth thesis has four key components. First, we believe that semiconductors will outgrow GDP as the digital transformation of the global economy progresses. Second, we expect the market for wafer fab equipment to grow as fast, or faster, than the market for semiconductors. This is because the industry roadmap is becoming more complex and chipmakers need to deploy more technology to move from one generation of chips to the next. Third, we believe that Applied will outperform the wafer fab equipment market because the key technology inflections are enabled by materials engineering, where

Applied has the broadest and most connected portfolio of solutions. And fourth, we believe we can grow our service business as fast, or faster, than our equipment business by providing customers with advanced service solutions that accelerate technology transfer from R&D to high-volume manufacturing and optimize device performance, yield and cost in their fabs. In March, we signaled our confidence in our growth thesis by increasing Applied's quarterly dividend by 23.1 percent, our largest increase in five years, and supplementing our share buyback program with a new \$10 billion repurchase authorization.

## **LEADERSHIP IN HOW CHIPS ARE MADE**

Semiconductors are more strategically important to the world than at any time in history. Everything that generates, transmits, stores, displays or processes data requires chips. But the world doesn't just need more chips, it needs better chips that are faster, smaller, use less power and are even more affordable. Semiconductor leadership is about 'where chips are made' and, more importantly, 'how chips are made' – the foundational technologies that define the next generation of semiconductors. In May, we convened senior-level government officials along with global industry executives from semiconductor design, manufacturing and equipment companies, as well as academic leaders from top engineering universities to explore new collaboration opportunities. The gathering took place at the future site of Applied's EPIC Center, which will become the world's largest and most advanced facility for collaborative semiconductor process technology and manufacturing equipment R&D. Our aim with the EPIC Center is to reduce the time it takes the industry to bring new technology from concept to commercialization, while simultaneously increasing the commercial success rate of new innovations and the return on R&D investments for the entire semiconductor ecosystem.

Over the past 12 months, we launched exciting new products and secured customer wins in key technology areas including Gate-All-Around transistors, backside power delivery, patterning, advanced DRAM and

high-bandwidth memory, and heterogeneous integration. Among the innovative products introduced in 2023 was the Centura™ Sculpta™ system featuring a breakthrough pattern-shaping technology that allows chipmakers to create high-performance transistors and interconnect wiring with fewer EUV lithography steps, thereby lowering the cost, complexity and environmental impact of advanced chipmaking. We also introduced the Vistara™ platform which is purpose-built to help customers meet sustainability goals by reducing fab energy, chemicals and cleanroom footprint requirements. Along with these innovations, we broadened our ICAPS business which serves the Internet of Things (IoT), communications, auto, power and sensor customers with new products and application wins.

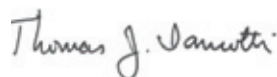
### **A COLLABORATIVE PATHWAY TO NET ZERO**

We are also driving a collaborative approach to reduce carbon emissions as the industry grows. For Applied, 99 percent of our carbon emissions are Scope 3, meaning they are generated upstream and downstream in our value chain. As a result, our path to Net Zero depends heavily on close partnerships with our customers and supply chain. Applied's Net Zero 2040 Playbook provides a comprehensive framework for doing this. Since launching the Playbook, Applied's Scope 1, 2 and 3 emissions reduction targets have received validation from the Science Based Targets initiative (SBTi). By setting a 1.5°C-aligned target, currently the most ambitious designation available through the SBTi process, Applied is aligning its emissions reduction program to the latest climate science, and we will report our progress annually.

In 2023, we furthered our commitment to upholding a culture of inclusion rooted in the belief that a workforce representing different perspectives, backgrounds and experiences is essential to delivering world-class innovations. Over the past year, we worked to instill best practices across the company, made progress towards our goals, and set new 2030 targets to further increase the representation of women globally and underrepresented minorities in our U.S. workforce.

Looking ahead, we see a bright future for the semiconductor industry and for Applied Materials. Chips are essential to the digital transformation of the global economy, and as the IoT-AI era takes shape, it's driving a new wave of growth for semiconductors. By identifying major industry inflections early and making strategic multiyear investments in our product portfolio and capabilities, Applied is best positioned to benefit from this exciting period of industry innovation and growth. We are changing the collaboration model with our customers and ecosystem partners to help the semiconductor industry overcome increasingly complex challenges to how chips are made and to bring game-changing new technology to the world faster.

Sincerely,



Thomas J. Iannotti  
Chairman of the Board



Gary E. Dickerson  
President and  
Chief Executive Officer

December 31, 2023

This Annual Report contains forward-looking statements, including those regarding anticipated growth and trends in our businesses and markets, industry outlooks and demand drivers, technology transitions, our business and financial performance and market share positions, our capital allocation and cash deployment strategies, our investment and growth strategies, our development of new products and technologies, our business outlook, and other statements that are not historical facts. Factors that could cause actual results to differ materially from those expressed or implied by such statements are set forth in the “Risk Factors” section of, and elsewhere, in our 2023 Annual Report on Form 10-K included in this report and other filings with the Securities and Exchange Commission. All forward-looking statements are based on management’s estimates, projections and assumptions as of the date hereof, and Applied Materials undertakes no obligation to update any such statements.

## SHAREHOLDERS’ INFORMATION

### INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

KPMG LLP  
Santa Clara, California

### NUMBER OF REGISTERED SHAREHOLDERS

2,755 (as of December 8, 2023)

### STOCK LISTING

Applied Materials, Inc. is traded on  
The Nasdaq Global Select Market®  
Nasdaq Symbol: AMAT

### TRANSFER AGENT

*Mail correspondence to:*  
Computershare Trust Company, N.A.  
Stockholder Services  
P.O. Box 43078  
Providence, RI 02940-3078

*Send overnight correspondence to:*

Computershare  
150 Royall St., Suite 101  
Canton, MA 02021

*Online inquiries:*

[www-us.computershare.com/investor/Contact](http://www-us.computershare.com/investor/Contact)

*Tel:* (312) 360-5186 or (877) 388-5186

*Fax:* (312) 601-4348

### INVESTOR CONTACT

Investor Relations  
Applied Materials, Inc.  
3050 Bowers Avenue  
P.O. Box 58039, M/S 1261  
Santa Clara, California 95054-3229  
*Tel:* (408) 748-5227  
*Fax:* (408) 986-2862  
*Email:* [investor\\_relations@amat.com](mailto:investor_relations@amat.com)

### CORPORATE HEADQUARTERS

Applied Materials, Inc.  
3050 Bowers Avenue  
Santa Clara, California 95054-3299

### MAILING ADDRESS AND TELEPHONE

Applied Materials, Inc.  
3050 Bowers Avenue  
P.O. Box 58039  
Santa Clara, California 95054-3299  
*Tel:* (408) 727-5555

### CORPORATE WEB SITE

Additional information can be found at  
[www.appliedmaterials.com](http://www.appliedmaterials.com)

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# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## Form 10-K

(Mark one)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended October 29, 2023**

**or**

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from** \_\_\_\_\_ **to** \_\_\_\_\_

**Commission file number 000-06920**



**Applied Materials, Inc.**

*(Exact name of registrant as specified in its charter)*

**Delaware**

**94-1655526**

*(State or other jurisdiction of incorporation or organization)*

*(I.R.S. Employer Identification No.)*

**3050 Bowers Avenue, P.O. Box 58039, Santa Clara, California**

**95052-8039**

*(Address of principal executive offices)*

*(Zip Code)*

*Registrant's telephone number, including area code: (408) 727-5555*

### **Securities registered pursuant to Section 12(b) of the Act:**

<b>Title of Each Class</b>	<b>Trading Symbol</b>	<b>Name of Each Exchange on Which Registered</b>
Common Stock, par value \$.01 per share	AMAT	The NASDAQ Stock Market LLC

### **Securities registered pursuant to Section 12(g) of the Act: None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Smaller reporting company ☐ Non-accelerated filer ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

Aggregate market value of the voting stock held by non-affiliates of the registrant as of April 30, 2023, based upon the closing sale price reported by the NASDAQ Global Select Market on that date: \$94,685,528,382

Number of shares outstanding of the registrant's Common Stock, \$.01 par value, as of December 8, 2023: 831,067,105

### **DOCUMENTS INCORPORATED BY REFERENCE:**

Portions of Part III will be provided in accordance with Instruction G(3) to Form 10-K no later than February 26, 2024.

## Caution Regarding Forward-Looking Statements

This Annual Report on Form 10-K of Applied Materials, Inc. and its subsidiaries, including “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Item 7, contains forward-looking statements that involve a number of risks and uncertainties.

As used herein, the terms “we,” “us,” and “our” refer to Applied Materials, Inc. and its subsidiaries.

This report contains forward-looking statements that involve a number of risks and uncertainties. Examples of forward-looking statements include those regarding our future financial or operating results, customer demand and spending, end-user demand, our and market and industry trends and outlooks, cash flows and cash deployment strategies, declaration of dividends, share repurchases, business strategies and priorities, costs and cost controls, products, competitive positions, management’s plans and objectives for future operations, research and development, acquisitions, investments and divestitures, growth opportunities, restructuring and severance activities, backlog, working capital, liquidity, investment portfolio and policies, taxes, supply chain, manufacturing, properties, legal matters, claims and proceedings, and other statements that are not historical facts, as well as their underlying assumptions. Forward-looking statements may contain words such as “may,” “will,” “should,” “could,” “would,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “intend,” “potential” and “continue,” the negative of these terms, or other comparable terminology. All forward-looking statements are subject to risks and uncertainties and other important factors, including those discussed in Part I, Item 1A, “Risk Factors,” below and elsewhere in this report. These and many other factors could affect our future financial condition and operating results and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere by us or on our behalf. Forward-looking statements are based on management’s estimates, projections and expectations as of the date hereof, and we undertake no obligation to revise or update any such statements.

The following information should be read in conjunction with the Consolidated Financial Statements and the accompanying Notes to Consolidated Financial Statements included in this report.



**APPLIED MATERIALS, INC.**  
**FORM 10-K FOR THE FISCAL YEAR ENDED OCTOBER 29, 2023**  
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## PART I

### Item 1: *Business*

Incorporated in 1967, Applied Materials, Inc. (Applied, we, us and our) is a Delaware corporation. A global company with a broad set of capabilities in materials engineering, we provide manufacturing equipment, services and software to the semiconductor, display and related industries. With our diverse technology capabilities, we deliver products and services that improve device performance, power, yield and cost. Our customers include manufacturers of semiconductor chips, liquid crystal and organic light-emitting diode (OLED) displays, and other electronic devices. These customers may use what they manufacture in their own end products or sell the items to other companies for use in electronic products. Our fiscal year ends on the last Sunday in October.

We operate in three reportable segments: Semiconductor Systems, Applied Global Services, and Display and Adjacent Markets. A summary of financial information for each reportable segment is found in Note 16 of Notes to Consolidated Financial Statements. A discussion of factors that could affect operations is set forth under “Risk Factors” in Item 1A, which is incorporated herein by reference.

#### *Semiconductor Systems*

Our Semiconductor Systems segment develops, manufactures and sells a wide range of manufacturing equipment used to fabricate semiconductor chips, also referred to as integrated circuits (ICs). The Semiconductor Systems segment includes semiconductor capital equipment used for many steps of the chip making process including the transfer of patterns into device structures, transistor and interconnect fabrication, metrology, inspection and review, and packaging technologies for connecting finished IC die. Our patterning systems and technologies address challenges resulting from shrinking pattern dimensions and the growing complexity in vertical stacking found in today’s most advanced semiconductor devices. Our transistor and interconnect products and technologies enable continued power and performance improvements of 3D transistors. Our metrology, inspection and review systems’ imaging capabilities and algorithms employ optical and e-beam technologies to meet the most advanced technical demands in areas including self-aligned double and quad patterning, extreme ultraviolet layers, measurement-intensive optimal proximity correction mask qualification, and new 3D architectures. Our packaging technologies address challenges resulting from the increasing heterogeneous integration of multiple IC dies in a single package. We deliver leading-edge capabilities that enable chipmakers to establish accurate statistical process control, ramp up production runs rapidly, and achieve consistently high production yields. We also provide manufacturing equipment that helps improve performance, power, yield and cost of semiconductor devices that use mature process technologies and serve specialty markets such as the Internet of Things, Communications, Automotive, Power and Sensors. Our Semiconductor Systems equipment is sold to integrated device manufacturers and foundries worldwide.

<b>Semiconductor Systems Technologies</b>	<b>Product(s)</b>
<b>Epitaxy</b> Epitaxy (or epi) is a technique for growing silicon (e.g. silicon with another element) as a uniform crystalline structure on a wafer to form high quality material for the device circuitry. Epi technology is used in device transistors to enhance chip speed.	Centura RP Epi
<b>Ion Implant</b> Ion implantation is a key technology for forming transistors and is used many times during chip fabrication. During ion implantation, wafers are bombarded by a beam of electrically-charged ions, called dopants, which can change the electrical properties of the exposed semiconductor material.	VISta Systems
<b>Oxidation/Nitridation</b> These systems provide critical oxidation steps - like memory gate oxide, shallow trench isolation and liner oxide - for advanced device scaling.	Vantage, Radiance and Centura Systems
<b>Rapid Thermal Processing (RTP)</b> RTP is used primarily for annealing, which modifies the properties of deposited films. Single-wafer RTP systems are also used for growing high-quality oxide and oxynitride films.	Vantage Systems
<b>Physical Vapor Deposition (PVD)</b> PVD is used to deposit high quality metal films. Applications include metal gate, silicides, contact liner/barrier, interconnect copper barrier seed and metal hard mask.	Endura, Charger and Axcela Systems
<b>Chemical Vapor Deposition (CVD)</b> CVD is used to deposit dielectric and metal films on a wafer. During the CVD process, gases that contain atoms of the material to be deposited react on the wafer surface, forming a thin film of solid material.	Endura, Centura and Producer Systems
<b>Chemical Mechanical Planarization (CMP)</b> CMP is used to planarize a wafer surface, a process that allows subsequent photolithography patterning and material deposition steps to occur with greater accuracy, resulting in more uniform film layers with minimal thickness variations.	Reflexion and Mirra Systems
<b>Electrochemical Deposition (ECD)</b> ECD is a process by which metal atoms from a chemical fluid (an electrolyte) are deposited on the surface of an immersed object.	Raider and Nokota Platforms
<b>Atomic Layer Deposition (ALD)</b> ALD technology enables ultra thin film growth of either a conducting or insulating material with uniform coverage in nanometer-sized structures.	Olympia, Sprinter, Morpher and P-300BV Systems
<b>Etch</b> Etching is used many times throughout the IC manufacturing process to selectively remove material from the surface of a wafer. We offer systems for etching dielectric, metal, and silicon films to meet the requirements of advanced processing.	Centris, Centura, Producer and Vistara Systems
<b>Selective Processing (Deposition and Removal)</b> Selective processing uses specially co-designed chemical and materials interactions to enable delicate and precise deposition and removal of target materials.	Endura and Producer Systems
<b>Metrology and Inspection</b> Metrology and inspection tools are used to locate, measure, and analyze defects and features on the wafer during various stages of the fabrication processes. We enable customers to characterize and control critical dimension (CD) and defect issues, especially at advanced generation technology nodes.	SEMVision eBeam Review PROVision eBeam Metrology PrimeVision eBeam Inspection Enlight Optical Inspection UVision Optical Inspection VeritySEM CD-SEM Metrology Aera Mask Inspection

## ***Applied Global Services***

The Applied Global Services® (AGS) segment provides integrated solutions to optimize equipment and fab performance and productivity, including spares, upgrades, services, remanufactured earlier generation equipment and factory automation software for semiconductor, display and other products. Customer demand for products and services is fulfilled through a global distribution system in more than 195 locations and trained service engineers located in close proximity to customer sites to support over 52,000 installed Applied semiconductor, display and other manufacturing systems worldwide. We offer the following general types of services and products under the Applied Global Services segment.

### **AGS Solutions and Technology**

#### **Technology-Enabled Services®**

A comprehensive service product portfolio that combines service technology and tool specific performance commitments in order to optimize customer factory productivity.

#### **Fab Consulting**

Experts using advanced analytical tools to solve production problems that have the greatest impact on customer fab productivity.

#### **Supply Chain Assurance Programs**

Spare parts product portfolio offers options to balance inventory, cost and risk to efficiently meet fab requirements.

#### **Subfab Equipment**

These solutions lower costs, save energy, reduce environmental impact, and meet Environmental Protection Agency reporting regulations for greenhouse gas emissions.

#### **Legacy Equipment and Upgrades**

Comprehensive 200mm equipment and upgrades portfolio to address a full spectrum of production needs and extend tool lifetime. Our 200mm equipment supports market inflections and new technology for a broad variety of devices including analog, power, and MEMS.

#### **Automation Software**

Our SmartFactory® automation software portfolio coordinates and streamlines every aspect of a factory (the processes, equipment and people) to provide competitive advantage to customers.

## Display and Adjacent Markets

The Display and Adjacent Markets segment is comprised primarily of products for manufacturing liquid crystal displays (LCDs), organic light-emitting diodes (OLEDs), and other display technologies for TVs, monitors, laptops, personal computers (PCs), electronic tablets, smart phones, and other consumer-oriented devices. While similarities exist between the technologies utilized in semiconductor and display fabrication, the most significant differences are in the size and composition of the substrate. Substrates used to manufacture display panels and other devices are typically glass, although newer flexible materials are entering the market. Display and Adjacent Markets segment growth depends primarily on consumer demand for increasingly larger and more advanced TVs and high-resolution displays for mobile devices as well as new form factors, including thin, light, curved and flexible displays, and new applications such as augmented and virtual reality. In addition to display applications, the segment's Chemical Vapor Deposition (CVD) technology is used to manufacture solar energy cells. The Display and Adjacent Markets segment offers a variety of technologies and products, including:

Display and Adjacent Markets Technologies	Product(s)
<b>Array Test</b> LCD display substrates are inspected at many stages of production to maximize yield, minimize scrap, optimize equipment utilization, and monitor manufacturing processes. At the completion of the array stage, the performance of the millions of individual pixels on each display is tested.	Electron Beam Array Tester
<b>Defect Review</b> Defects are identified during inspection steps and reviewed by a scanning electron microscope and other analyses to determine defect root cause and composition.	Electron Beam Review (EBR)
<b>Chemical Vapor Deposition (CVD)</b> During CVD processing, gases containing atoms or molecules are introduced into the process chamber. The gases form reactive radicals or ions, which undergo chemical reactions to form thin films on the heated substrate.	AKT PECVD Systems
<b>Physical Vapor Deposition (PVD)</b> PVD is used to deposit high quality films of metals, alloys, transparent conductors and semiconductors. In Display, these films are used for contact, interconnect, transparent electrodes and transistor materials in TFT-LCD and OLED display backplanes, as well as for transparent electrodes in color filters and touch panels.	AKT Aristo and PiVot Systems

## Backlog

We manufacture systems to meet demand represented by order backlog and customer commitments. Backlog consisted of: (1) orders for which written authorizations have been accepted, or shipment has occurred but revenue has not been recognized; and (2) contractual service revenue and maintenance fees.

Backlog by reportable segment as of October 29, 2023 and October 30, 2022 was as follows:

	2023		2022	
	(In millions, except percentages)			
Semiconductor Systems	\$	11,127	65 %	\$ 12,691 67 %
Applied Global Services		5,162	30 %	5,643 30 %
Display and Adjacent Markets		833	5 %	581 3 %
Corporate and Other		49	— %	96 — %
Total	\$	17,171	100 %	\$ 19,011 100 %

Of the total backlog as of October 29, 2023, approximately 30% is not reasonably expected to be filled within the next 12 months.

Our backlog on any particular date is not necessarily indicative of actual sales for any future periods, due to the potential for customer changes such as new orders or cancellations. Customers may delay delivery of products or cancel orders prior to shipment, subject to possible cancellation penalties. Delays in delivery schedules or a reduction of backlog during any particular period could have a material adverse effect on our business and results of operations.

## Manufacturing, Raw Materials and Supplies

Our worldwide manufacturing activities consist primarily of assembly, integration and test of various proprietary and commercial parts, components and subassemblies that are used to manufacture systems. We utilize a distributed manufacturing model under which manufacturing and supply chain activities are conducted in various countries, primarily including China, Israel, Japan, Korea, Singapore, Taiwan, the United States and other countries in Asia and Europe. We use qualified vendors, including contract manufacturers, to supply parts, services and product support. Our supply chain strategy commits to adhere to ethical labor practices, responsible minerals sourcing, Responsible Business Alliance and SEMI guidelines, and the Applied Materials Standards of Business Conduct as defined in our Environmental, Social and Governance (ESG) commitment.

Although we make reasonable efforts to assure that parts are available from multiple qualified suppliers, this is not always possible. Accordingly, some key parts may be obtained from only a qualified single supplier or a limited group of qualified suppliers. We seek to reduce costs and to lower the risks of manufacturing and service interruptions by selecting and qualifying alternate suppliers for parts; monitoring the financial condition of key suppliers; maintaining appropriate inventories of parts; qualifying new parts on a timely basis; and ensuring quality and performance of parts.

## Research, Development and Engineering

Our long-term growth strategy requires continued development of new materials engineering capabilities, including products and platforms that enable expansion into new and adjacent markets. Our significant investments in research, development and engineering (RD&E) must generally enable us to deliver new products and technologies before the emergence of strong demand, thus allowing customers to incorporate these products into their manufacturing plans during early-stage technology selection. We work closely with our global customers and ecosystem partners to design systems and processes that meet planned technical and production requirements.

Our product development and engineering organizations are located primarily in the United States, as well as in China, Europe, India, Israel, Korea, Singapore and Taiwan. In addition, certain outsourced RD&E activities, process support and customer demonstrations are performed in China, India, Singapore, Taiwan and the United States.

## Marketing and Sales

Because of the highly technical nature of our products, we market and sell products worldwide almost entirely through a direct sales force.

We have operations in many countries, with some of our business activities concentrated in certain geographic areas, and global and regional economic and political conditions can impact our business and financial results. Our business is based on capital equipment investments by major semiconductor, display and other manufacturers, and is subject to significant variability in customer demand for our products. Customers' expenditures depend on many factors, including: general economic conditions; anticipated market demand and pricing for semiconductors, display technologies and other electronic devices; the development of new technologies; customers' factory utilization; capital resources and financing; trade policies and export regulations; and government incentives. In addition, a significant driver in the semiconductor and display industries has been end-demand for mobile consumer products, which has been characterized by seasonality that impacts the timing of customer investments in manufacturing equipment and, in turn, our business.

Information on net sales to unaffiliated customers and long-lived assets attributable to our geographic regions is included in Note 16 of Notes to Consolidated Financial Statements. The following companies accounted for at least 10 percent of our net sales in each fiscal year, which were for products and services in multiple reportable segments.

	2023	2022	2021
Samsung Electronics Co., Ltd.	15%	12%	20%
Taiwan Semiconductor Manufacturing Company Limited	19%	20%	15%
Intel Corporation	*	10%	*

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\* Less than 10%

## Competition

The industries in which we operate are highly competitive and characterized by rapid technological change. Our ability to compete generally depends on our ability to commercialize our technology in a timely manner, continually improve our products, and develop new products that meet constantly evolving customer requirements. Significant competitive factors include technical capability and differentiation, productivity, cost-effectiveness and the ability to support a global customer base. The importance of these factors varies according to customers' needs, including product mix and respective product requirements, applications, and the timing and circumstances of purchasing decisions. Substantial competition exists in all areas of our business. Competitors range from small companies that compete in a single region, which may benefit from policies and regulations that favor domestic companies, to global, diversified companies, which operate in more complex global economic and regulatory environments. Our ability to compete requires a high level of investment in RD&E, marketing and sales, and global customer support activities. We believe that many of our products have strong competitive positions.

The competitive environment for each segment is described below.

The semiconductor industry is driven by demand for advanced electronic products, including smartphones and other mobile devices, servers, personal computers, automotive electronics, storage, and other products. The growth of data and emerging end-market drivers such as artificial intelligence, the Internet of Things, 5G networks, smart vehicles and augmented and virtual reality are also creating the next wave of growth for the industry. As a result, products within the Semiconductor Systems segment are subject to significant changes in customer requirements, including transitions to smaller dimensions, increasingly complex chip architectures, new materials and an increasing number of applications. While certain existing technologies may be adapted to new requirements, some applications create the need for an entirely different technological approach. The rapid pace of technological change can quickly diminish the value of current technologies and products and create opportunities for existing and new competitors. Our broad portfolio offers a variety of differentiated products, including co-optimized and integrated materials solutions that enable unique films, structures and devices. Our products must continuously evolve to satisfy customers' requirements to compete effectively in the marketplace. We allocate resources among our numerous product offerings and therefore may decide not to invest in an individual product depending on market requirements. There are a number of competitors serving the semiconductor manufacturing equipment industry. Some of these competitors offer a single product line and others offer multiple product lines, and range from serving a single region to global, diversified companies.

Products and services within the Applied Global Services segment complement the Semiconductor Systems and Display and Adjacent Markets segments' products in markets that are characterized by demanding worldwide service requirements. Competition in the Applied Global Services segment includes a diverse group of numerous third-party service providers and customers that perform their own service.

To compete effectively, we offer products and services to improve tool performance, lower overall cost of ownership, and increase yields and productivity of customers' fab operations. Significant competitive factors include productivity, cost-effectiveness, and the level of technical service and support. The importance of these factors varies according to customers' needs and the type of products or services offered.

Products in the Display and Adjacent Markets segment are generally subject to strong competition from a number of major competitors primarily in Asia. We hold established market positions with our technically-differentiated LCD and OLED manufacturing solutions for PECVD, color filter PVD, PVD array, PVD touch panel, and TFT array testing, although our market position could change quickly due to customers' evolving requirements. Important factors affecting the competitive position of our Display and Adjacent Markets products include: industry trends, our ability to innovate and develop new products, and the extent to which our products are technically-differentiated, as well as which customers within a highly concentrated customer base are making capital equipment investments and our existing position at these customers.



## Patents and Licenses

Protection of our technology assets through enforcement of our intellectual property rights, including patents, is important for our competitive position. Our practice is to file patent applications in the United States and other countries for inventions that we consider significant. We have more than 19,600 active patents in the United States and other countries, and additional applications are pending for new inventions. Although we do not consider our business materially dependent upon any one patent, our rights and the products made and sold under our patents, taken as a whole, are a significant element of our business. In addition to our patents, we possess other intellectual property, including trademarks, know-how, trade secrets, and copyrights.

We enter into patent and technology licensing agreements with other companies when it is determined to be in our best interest. We pay royalties under existing patent license agreements for the use, in several of our products, of certain patented technologies. We also receive royalties from licenses granted to third parties. Royalties received from or paid to third parties have not been material to our consolidated results of operations.

In the normal course of business, we periodically receive and make inquiries regarding possible patent infringement. In responding to such inquiries, it may become necessary or useful for us to obtain or grant licenses or other rights. However, there can be no assurance that such licenses or rights will be available to us on commercially reasonable terms, or at all. If we are not able to resolve or settle claims, obtain necessary licenses on commercially reasonable terms, or successfully prosecute or defend our position, our business, financial condition and results of operations could be materially and adversely affected.

## Governmental Regulation

As a public company with global operations, we are subject to the laws and regulations of the United States and multiple foreign jurisdictions. These regulations, which differ among jurisdictions, include those related to financial and other disclosures, accounting standards, corporate governance, intellectual property, tax, trade, including import, export and customs, antitrust, environment, and health and safety, climate change, employment, immigration and travel regulations, privacy, data protection and localization, and anti-corruption. *See “Risk Factors – Legal, Compliance, and Other Risks – We are exposed to risks related to the global regulatory environment” for further details.*

We are regulated under various international laws regarding the purchase and sale of goods and related items, including but not limited to those related to trade policies and export regulations, and limitations on transfer of intellectual property. *See “Risk Factors – Business and Industry Risks – Global trade issues and changes in and uncertainties with respect to trade policies and export regulations, including import and export license requirements, trade sanctions, tariffs and international trade disputes, have adversely impacted and could further adversely impact our business and operations, and reduce the competitiveness of our products relative to local and global competitors” for further details.*

With respect to environmental, health and safety regulations, we maintain a number of programs that are primarily preventative in nature and regularly monitors ongoing compliance with applicable laws and regulations. In addition, we have trained personnel to conduct investigations of any environmental, health, or safety incidents, including, but not limited to, spills, releases, or possible contamination. *See also “Risk Factors – Risks Related to Legal, Compliance, and Other Risks – We are subject to risks associated with environmental, health and safety regulations” for further details.*

We are subject to income taxes in the United States and foreign jurisdictions. Our provision for income taxes, effective tax rate and financial results could be affected by numerous factors, including changes in applicable tax laws, interpretations of applicable tax laws, amount and composition of pre-tax income in jurisdictions with differing tax rates, and valuation of deferred tax assets. There have been a number of proposed changes in the tax laws that could increase our tax liability. *See “Risk Factors – Operational and Financial Risks – We operate in jurisdictions with complex and changing tax laws” for further details.* For additional discussions regarding the impact of compliance with income tax laws and regulations on our business and operations, *see also “Management’s Discussion and Analysis of Financial Condition and Results of Operations–Results of Operations – Income Taxes” and Note 14 of the Notes to the Consolidated Financial Statements.*

## **Our People**

Our commitment to innovation begins with the commitment to creating an environment in which our employees can do their best work. Our ability to create differentiated value in the marketplace is driven by the capability of our people to anticipate technology inflections and integrate customer requirements. To achieve this level of value creation, we believe we must attract, hire, develop and retain a world-class global workforce. We invest in our employees by providing quality training and learning opportunities; promoting inclusion, equity and diversity; and upholding a high standard of ethics and respect for human rights.

As of October 29, 2023, we employed approximately 34,000 regular full-time employees, of whom approximately 44%, 43% and 13% resided in the Asia-Pacific region, North America, and Europe, Middle East and Africa, respectively. Our team spans 24 countries, reflecting various cultures, backgrounds, race, color, national origin, religion, sex, sexual orientation, gender identity, ages, and disability, veteran and military status.

### ***Diversity, Equity and Inclusion***

We value great talent and different perspectives, knowing that diversity is one of our greatest strengths. We therefore strive to provide fair and equal opportunity for career development and advancement to all our employees and incorporate respect for diverse backgrounds and perspectives into our culture at every level – from strategy and policy down to everyday interactions.

We expect that our commitment to strengthening our culture of inclusion will broaden the diversity of our workplace and help us build a culture that benefits everyone. In recent years, we continued to make progress in our culture of inclusion journey, including, among other things, increasing female representation in the U.S. and global workforce, and increasing U.S. underrepresented minority representation. As of October 29, 2023, our global workforce was 79.6% male and 20.3% female, and 19.9% of our workforce in the United States was composed of underrepresented minorities.

Additionally, we are investing in inclusion learning experiences. For example, we have various initiatives to further develop our leaders to lead even more inclusively and further deepen engagement with employees.

### ***Talent Acquisition and Retention***

We believe that our future success is highly dependent upon our continued ability to attract, develop, retain and engage employees. As part of our effort to attract and retain employees, we offer competitive rewards, compensation and benefits, including an Employee Stock Incentive Plan, an Employees' Stock Purchase Plan, healthcare and retirement benefits, parental and family leave, adoption credits, holiday and paid time off, and tuition assistance.

### ***Employee Learning & Development***

We seek to create growth and development opportunities to support an engaged and inclusive workforce. We promote holistic employee learning and development based on the 70/20/10 model--70% on-the-job learning, 20% social/collaborative and 10% formal training, with a focus on advancing technical skills as well as improving general business acumen to address increasing work complexity. Also, to help expand professional breadth, we use a federated model where the segments and functions provide technical and job-specific training tied to their disciplines, while general professional, management, and leadership training is provided at the corporate level. All training is coordinated centrally and aligned with common objectives through Applied Global University. In addition to instructor-led and web-based training, we offer state-of-the-art training modalities, such as AI-based simulations and Augmented and Virtual Reality learning capabilities, to help develop our new products, train our manufacturing and field support employees, and collaborate remotely. Each fiscal year, employees are provided the opportunity to complete the required 40 hours of learning.

### ***Employee Engagement***

We have historically measured employee engagement through surveys to gain insight into employees' experiences, levels of workplace satisfaction, and key drivers for engagement, inclusion and overall well-being. In fiscal 2023, we conducted an all-employee survey anonymously through an external partner to encourage maximal participation and elicit candid responses. We also benchmarked the survey results against a large and standardized data set involving large technology companies globally. The survey results and the benchmarking data allowed us to better understand enterprise-wide trends, gauge effectiveness of interventions, and define targeted employee populations (e.g., early tenure employees). They also provided leaders and people managers with actionable insights tailored to their own groups that can further enhance employee engagement and inclusion. These actionable insights are then integrated with the people strategy process and cadence within the Company.

Additional information regarding our activities related to our people and sustainability, as well as our workforce diversity data, can be found in our latest Sustainability Report and Annex thereto, which are located on our website at <https://www.appliedmaterials.com/us/en/corporate-responsibility.html>. The Sustainability Report and the Annex thereto are updated annually. This website address is intended to be an inactive textual reference only. None of the information on, or accessible through, our website is part of this Form 10-K or is incorporated by reference herein.

## Information about our executive officers

The following table and notes set forth information about our executive officers:

<u>Name of Individual</u>	<u>Position</u>
Gary E. Dickerson(1)	President, Chief Executive Officer
Brice Hill(2)	Senior Vice President, Chief Financial Officer and Global Information Services
Prabu Raja(3)	President, Semiconductor Products Group
Teri Little(4)	Senior Vice President, Chief Legal Officer and Corporate Secretary
Omkaram Nalamasu(5)	Senior Vice President, Chief Technology Officer
Timothy M. Deane(6)	Group Vice President, Applied Global Services
Charles W. Read(7)	Corporate Vice President, Business Units and Operations Chief Financial Officer

- (1) Mr. Dickerson, age 66, was named President of Applied in June 2012 and appointed Chief Executive Officer and a member of the Board of Directors in September 2013. Before joining Applied, he served as Chief Executive Officer and a director of Varian Semiconductor Equipment Associates, Inc. (Varian) from 2004 until its acquisition by us in November 2011. Prior to Varian, Mr. Dickerson served 18 years with KLA-Tencor Corporation (KLA-Tencor), a supplier of process control and yield management solutions for the semiconductor and related industries, where he held a variety of operations and product development roles, including President and Chief Operating Officer. Mr. Dickerson started his semiconductor career in manufacturing and engineering management at General Motors' Delco Electronics Division and then AT&T Technologies.
- (2) Mr. Hill, age 57, has been Senior Vice President and Chief Financial Officer since March 2022. He also oversees Global Information Services for Applied. Prior to joining Applied, Mr. Hill was Executive Vice President and Chief Financial Officer of Xilinx, Inc., a company that designed and developed programmable devices and associated technologies, from April 2020 until its acquisition by Advanced Micro Devices, Inc. in February 2022. Prior to Xilinx, Mr. Hill served in various finance positions with Intel Corporation for 25 years, most recently as Corporate Vice President and Chief Financial Officer and Chief Operating Officer, Technology, Systems and Core Engineering Group.
- (3) Dr. Raja, age 61, has been President, Semiconductor Products Group since March 2023. He previously served as Senior Vice President, Semiconductor Products Group of Applied from November 2017 to March 2023, and before that served in various senior management, product development and operational roles since joining Applied in 1995, including Group Vice President and General Manager of the Patterning and Packaging Group.
- (4) Ms. Little, age 59, joined Applied as Senior Vice President, Chief Legal Officer and Corporate Secretary in June 2020. Prior to joining Applied, Ms. Little served as Executive Vice President, Chief Legal Officer and Corporate Secretary at KLA Corporation from August 2017 to June 2020. Prior to that she was Senior Vice President, General Counsel and Corporate Secretary of KLA Corporation from October 2015 until August 2017, and prior to that she held various other positions at KLA Corporation since 2002. Prior to joining KLA Corporation, she was a Senior Corporate Associate at Wilson Sonsini Goodrich & Rosati, and a Litigation Associate at Heller Ehrman White & McAuliffe.
- (5) Dr. Nalamasu, age 65, has been Senior Vice President, Chief Technology Officer since June 2013, and President of Applied Ventures, LLC, Applied's venture capital arm, since November 2013. He had served as Group Vice President, Chief Technology Officer from January 2012 to June 2013, and as Corporate Vice President, Chief Technology Officer from January 2011 to January 2012. Upon joining Applied in June 2006 until January 2011, Dr. Nalamasu was an Appointed Vice President of Research and served as Deputy Chief Technology Officer and General Manager for the Advanced Technologies Group. From 2002 to 2006, Dr. Nalamasu was a NYSTAR distinguished professor of Materials Science and Engineering at Rensselaer Polytechnic Institute, where he also served as Vice President of Research from 2005 to 2006. Prior to Rensselaer, Dr. Nalamasu served in several leadership roles at Bell Laboratories.
- (6) Mr. Deane, age 58, has been Group Vice President, Applied Global Services since September 2022. He joined Applied in 1995 and previously served in various senior management and field operations roles, including head of Field Operations and Business Management for the Semiconductor Products Group, Account General Manager and Region General Manager.
- (7) Mr. Read, age 57, has been Corporate Vice President, Business Units and Operations Chief Financial Officer since September 2022. Prior to that role, he was Corporate Vice President, Corporate Controller and Chief Accounting Officer since joining Applied in September 2013. Prior to Applied, Mr. Read worked at Brocade Communications Systems, Inc., a provider of semiconductor and software-based network solutions, since October 2002, where he most recently served as Vice President, Corporate Controller. Prior to Brocade, Mr. Read worked at KPMG LLP, an audit, tax and advisory firm, from 1996 to 2002.

**Available Information**

Our website is <http://www.appliedmaterials.com>. We make available free of charge, on or through our website, our annual, quarterly and current reports, and any amendments to those reports, as soon as reasonably practicable after electronically filing such reports with, or furnishing them to, the SEC. The SEC's website, [www.sec.gov](http://www.sec.gov), contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. These website addresses are intended to be an inactive textual references only. None of the information on, or accessible through, these websites is part of this Form 10-K or is incorporated by reference herein.

## **Item 1A: Risk Factors**

The following risk factors could materially and adversely affect our business, financial condition or results of operations and cause reputational harm, and should be carefully considered in evaluating our business, in addition to other information presented elsewhere in this report.

### **Business and Industry Risks**

#### ***The industries we serve can be volatile and difficult to predict.***

We are a supplier to the global semiconductor and display and related industries, which historically have been cyclical and are subject to volatility and sudden changes in customer demand. Factors that impact demand for our products and services include technology inflections and advances in fabrication processes, new and emerging technologies and market drivers, production capacity relative to demand for chips and display technologies, end-user demand, customers' capacity utilization, production volumes, access to affordable capital, business and consumer buying patterns and general economic and political conditions. Changes in demand can affect the timing and amounts of customer investments in technology and manufacturing equipment and can significantly impact our operating results. The amount and mix of our customers' capital equipment spending between different products and technologies can also significantly impact our operating results.

To meet rapidly changing demand, we must accurately forecast demand and effectively manage our resources, investments, production capacity, supply chain, workforce, inventory, and other components of our business. We may incur unexpected or additional costs to align our business operations with changes in demand. If we do not effectively manage these challenges, our business performance and operating results may be adversely impacted. Even with effective allocation of resources and management of costs, our gross and operating margins, cash flows and earnings may be adversely impacted during periods of changing demand.

#### ***We are exposed to risks associated with an uncertain global economy.***

Uncertain or adverse economic and business conditions, including uncertainties and volatility in the financial markets, national debt, fiscal or monetary concerns, rising inflation and interest rates, bank failures, and economic recession, could materially and adversely impact our operating results. Markets for semiconductors and displays depend largely on business and consumer spending and demand for electronic products. Uncertain or adverse economic and business conditions could result in decreases in consumer spending and demand. Decreases in spending and demand have caused, and may in the future cause, our customers to push out, cancel or refrain from purchasing our equipment or services, which could negatively impact demand for our products and services, reduce our backlog, increase our inventory, and materially and adversely impact our operating results.

Sudden increases in demand for electronic products have caused, and may in the future cause, a shortage of parts and materials needed to manufacture our products. Such shortages, and shipment delays due to transportation capacity and interruptions, have adversely impacted, and may in the future adversely impact, our suppliers' ability to meet our requirements. Accelerated digital transformation may further increase demand and exacerbate shortages and strain our manufacturing capacity, which may adversely impact our ability to meet customer demand and have an adverse impact on our revenues, operating results and financial condition.

Uncertain or adverse economic and market conditions, difficulties in obtaining capital, increased costs or reduced profitability may cause some customers to scale back operations, exit businesses, merge with other manufacturers, or file for bankruptcy protection and potentially cease operations, which can result in lower sales, additional inventory or bad debt expense. Economic and industry uncertainty may impair the ability of suppliers to deliver parts and negatively affect our ability to manage operations and deliver our products. These conditions may also lead to consolidation or strategic alliances among other equipment manufacturers, which could adversely affect our ability to compete effectively.

Uncertain economic and industry conditions and supply chain challenges make it more difficult to accurately forecast operating results, make business decisions, and identify and prioritize the risks that may affect our businesses, sources and uses of cash, financial condition and results of operations. If we do not appropriately manage our business operations in response to changing economic and industry conditions, it could have a material and adverse impact on our business performance and financial condition. We may be required to implement additional cost reduction efforts, including restructuring activities, which may adversely impact our ability to capitalize on opportunities. Even during periods of economic uncertainty or lower demand, we must continue to invest in research and development and maintain a global business infrastructure to compete effectively and support our customers, which can have a negative impact on our operating results.

We maintain an investment portfolio that is subject to general credit, liquidity, market and interest rate risks. The risks to our investment portfolio may be exacerbated if financial market conditions deteriorate due to rising inflation, rising interest rates, bank failures or economic recession and, as a result, the value and liquidity of the investment portfolio and returns on pension assets, could be negatively impacted and lead to impairment charges. We also maintain cash balances in various bank



accounts globally in order to fund normal operations. If any of these financial institutions become insolvent, it could limit our ability to access cash in the affected accounts, which could affect our ability to manage our operations.

***We are exposed to the risks of operating a global business.***

We have product development, engineering, manufacturing, sales and other operations in many countries, and some of our business activities are concentrated in certain geographic areas. In fiscal 2023, approximately 85% of our net sales were to customers in regions outside the United States. As a result of the global nature of our operations, our business performance and results of operations may be adversely affected by a number of factors, including:

- uncertain global economic, political and business conditions and demand;
- global trade issues and changes in and uncertainties with respect to trade and export regulations, trade policies and sanctions, tariffs, and international trade disputes, including new and changing export regulations and their impact on our ability to export products and provide services to customers;
- positions taken by governmental agencies regarding possible national, commercial or security issues posed by the development, sale or export of certain raw materials, products and technologies;
- political instability, natural disasters, regional or global health epidemics, social unrest, terrorism, acts of war or other geopolitical turmoil, or cybersecurity incidents in locations where we have operations, suppliers or sales, or that may influence the value chain of the industries we serve;
- political and social attitudes, laws, rules, regulations and policies within countries, including in China, the United States, and countries in Europe and Asia, that favor domestic companies over non-domestic companies, including efforts to promote the development and growth of local competitors and reduce dependence on foreign semiconductor equipment and manufacturing capabilities through policies and financial incentives;
- efforts to influence us to conduct more or less of our operations and sourcing in a particular country;
- different and changing local, regional, national or international laws and regulations, including contract, intellectual property, cybersecurity, data privacy, labor, tax, and import/export laws, and the interpretation and application of laws and regulations;
- ineffective or inadequate legal protection of intellectual property rights in certain countries;
- interruptions to our or our suppliers' supply chain;
- the availability of, and increases and volatility of, raw materials, commodity, energy and shipping costs;
- delays or restrictions on personnel travel and in shipping materials or products;
- geographically diverse operations and projects, and our ability to maintain appropriate business processes, procedures and internal controls, and comply with environmental, health and safety, anti-corruption and other regulatory requirements;
- challenges in hiring and integrating workers in different countries, and in effectively managing a diverse workforce with different experience levels, languages, cultures, customs, business practices and worker expectations, and differing employment practices and labor issues;
- the ability to develop relationships with local customers, suppliers and governments;
- fluctuations in interest rates and currency exchange rates, including the relative strength or weakness of the U.S. dollar against the Japanese yen, Israeli shekel, euro, Taiwanese dollar, Singapore dollar, Chinese yuan or Korean won;
- the need to provide technical support in different locations around the world;
- performance of geographically diverse third-party providers, including certain engineering, software development, manufacturing, information technology and other functions;
- service interruptions from utilities, transportation, data hosting or telecommunications providers;
- impacts of climate change on our operations and those of our customers and suppliers;
- the increasing need for a mobile workforce and travel to different regions; and
- uncertainties with respect to economic growth rates in various countries, including for the manufacture and sale of semiconductors and displays in the developing economies of certain countries.

***Global trade issues and changes in and uncertainties with respect to trade policies and export regulations, including import and export license requirements, trade sanctions, tariffs and international trade disputes, have adversely impacted and could further adversely impact our business and operations, and reduce the competitiveness of our products relative to local and global competitors.***

We sell a significant majority of our products into jurisdictions outside of the United States, including China, Taiwan, Korea and Japan. We also purchase a significant portion of equipment and supplies from suppliers outside of the United States. There is inherent risk, based on the complex relationships among the United States and the countries in which we conduct our business, that political, diplomatic, and national security factors can lead to global trade restrictions and changes in trade policies and export regulations, in particular, with respect to those affecting the semiconductor industry. The United States and other countries have imposed and may continue to impose new trade restrictions and export regulations, and have levied tariffs and taxes on certain goods. Trade restrictions and export regulations, or increases in tariffs and additional taxes, including any retaliatory measures, can negatively impact end-user demand and customer investment in manufacturing equipment, increase our supply chain complexity and our manufacturing costs, decrease margins, reduce the competitiveness of our products, or restrict our ability to sell products, provide services or purchase necessary equipment and supplies, any or all of which could have a material and adverse effect on our business, results of operations, or financial condition.

For example, certain international sales depend on our ability to obtain export licenses, and our inability to obtain such licenses has limited and could further limit our markets and negatively impact our business. In the past two years, the U.S. government announced new export regulations for U.S. semiconductor technology sold in China, including wafer fabrication equipment and related parts and services, which have limited the market for certain of our products, adversely impacted our revenues, and increased our exposure to foreign competition. The U.S. Department of Commerce has promulgated rules and regulations expanding export license requirements for U.S. companies that sell certain products to entities in China whose actions or functions are intended to support military end uses, eliminated certain export license exceptions that applied to exports of certain items to China, added certain Chinese companies to its “Entity List” and “Unverified List,” making those companies subject to additional licensing requirements, and expanded licensing requirements for exports to China of items for use in the development or production of integrated circuits and certain technologies. These rules and regulations require us to obtain additional export licenses to supply certain of our products or provide services to certain customers in China. Obtaining export licenses may be difficult, costly and time-consuming, and there is no assurance we will be issued licenses on a timely basis or at all. Our inability to obtain such licenses could limit our markets in China, may cause us to be displaced by foreign businesses and competitors and adversely affect our results of operations. The implementation and interpretation of these complex rules and other regulatory actions taken by the U.S. government is uncertain and evolving, and may make it more challenging for us to manage our operations and forecast our operating results. The U.S. and other government agencies may promulgate new or additional export licensing or other requirements that have the effect of further limiting our ability to provide certain products and services to customers outside the U.S., including China. The U.S. government may also revise or expand existing requirements or issue guidance clarifying the scope and application of these requirements, which could change the impact of these rules on our business and manufacturing operations. The U.S. government may also continue to add customers to its “Entity List” and “Unverified List,” or take measures that could disrupt our product shipments to certain customers. These and other potential future regulatory changes could materially and adversely affect our business, results of operations or financial condition.

As a global business with customers, suppliers and operations in many countries around the world, from time to time we may receive inquiries from government authorities about transactions between us and certain foreign entities. In August 2022, we received a subpoena from the U.S. Attorney’s Office for the District of Massachusetts requesting information relating to certain China customer shipments. In November 2023, we received a subpoena from the U.S. Commerce Department’s Bureau of Industry and Security requesting the same information. We are cooperating fully with the government in these matters. These inquiries are subject to uncertainties, and we cannot predict the outcome of these inquiries, or any other governmental inquiries or proceedings that may occur. Any violation or alleged violation of law or regulations could result in significant legal costs or in legal proceedings in which we or our employees could be subjected to fines and penalties and could result in restrictions on our business and damage to our global brand and reputation, and could have a material and adverse impact on our business operations, financial condition and results of operations.

Furthermore, government authorities may take retaliatory actions, impose conditions that require the use of local suppliers or partnerships with local companies, require the license or other transfer of sensitive data or intellectual property, or engage in other efforts to promote local businesses and local competitors, which could have a material and adverse impact on our business. Many of these challenges are present in China and Korea, markets that represent a significant portion of our business.

***We are exposed to risks associated with a highly concentrated customer base.***

A relatively limited number of customers account for a substantial portion of our business. Our customer base is geographically concentrated, particularly in China, Taiwan, Korea and Japan. As a result, the actions of even a single customer or export regulations that apply to customers in certain countries, such as those in China, have exposed and can further expose



our business and operating results to greater volatility. The geographic concentration of our customer base could shift over time as a result of government policy and incentives to develop regional semiconductor industries. The mix and type of customers, and sales to any single customer, including as a result of changes in government policy, have varied and may vary significantly from quarter to quarter and from year to year, and have had, and may continue to have, a significant impact on our operating results. Our products are configured to customer specifications, and changing, rescheduling or canceling orders may result in significant, non-recoverable costs. If customers do not place orders, or they substantially reduce, delay or cancel orders (including as a result of uncertain or adverse economic conditions, our inability to fulfill orders due to export regulations, shortage of parts, transportation capacity/interruptions or any other reason), we may not be able to replace the business, which may have a material and adverse impact on our results of operations and financial condition. The concentration of our customer base increases our risks related to the financial condition of our customers, and the deterioration in financial condition of a single customer or the failure of a single customer to perform its obligations could have a material and adverse effect on our results of operations and cash flow. To the extent our customers experience liquidity constraints, we may incur bad debt expense, which may have a significant impact on our results of operations. Major customers may seek pricing, payment, intellectual property-related, or other commercial terms that are less favorable to us, which may have a negative impact on our business, cash flow, revenue and gross margins.

***Supply chain disruptions, manufacturing interruptions or delays, or the failure to accurately forecast customer demand, could affect our ability to meet customer demand, lead to higher costs, or result in excess or obsolete inventory.***

Our business depends on our timely supply of equipment, services and related products to meet the changing requirements of our customers, which depends in part on the timely delivery of parts, materials and services from suppliers and contract manufacturers. Increases in demand for our products and worldwide demand for electronic products can impact our suppliers' ability to meet our demand requirements, and have resulted in, and may continue to result in, a shortage of parts, materials and services needed to manufacture our products. Such shortages, as well as delays in and unpredictability of shipments due to transportation interruptions, have adversely impacted, and may continue to adversely impact, our manufacturing operations and our ability to meet customer demand. Volatility of demand for manufacturing equipment can also increase our and our suppliers' capital, technical, operational and other risks, and may cause some suppliers to exit businesses, or scale back or cease operations, which could impact our ability to meet customer demand. Ongoing supply chain constraints may continue to increase costs of logistics and parts for our products and may cause us to pass on increased costs to our customers, which may lead to reduced demand for our products and materially and adversely impact our operating results. Supply chain disruptions have caused and may continue to cause delays in our equipment production and delivery schedules, which can lead to our business performance becoming significantly dependent on quarter-end production and delivery schedules, and could have an adverse impact on our operating and financial results.

Cybersecurity incidents affecting our suppliers could impact our supply chain and may also cause difficulties and delays in our ability to obtain parts, materials and services needed to manufacture our products and provide services, and may adversely impact our manufacturing operations, our ability to meet customer demand, and our operating results. Failure to timely recover from such delays could materially and adversely affect our business, financial condition and results of operations, and may also cause our business and financial outlook to be inaccurate.

We may experience supply chain disruptions, significant interruptions of our manufacturing operations, delays in our ability to deliver or install products or services, increased costs, customer order cancellations or reduced demand for our products as a result of:

- global trade issues and changes in and uncertainties with respect to trade and export regulations, trade policies and sanctions, tariffs, international trade disputes, and new and changing regulations for exports of certain technologies to China, where a significant portion of our supply chain is located, and any retaliatory measures, that adversely impact us or our direct or sub-tier suppliers;
- the failure or inability to accurately forecast demand and obtain quality parts on a cost-effective basis;
- volatility in the availability and cost of parts, commodities, energy and shipping related to our products, including increased costs due to rising inflation or interest rates or other market conditions;
- difficulties or delays in obtaining required import or export licenses and approvals;
- shipment delays due to transportation interruptions or capacity constraints;
- a worldwide shortage of semiconductor components as a result of sharp increases in demand for semiconductor products in general;
- limited availability of feasible alternatives to per- and polyfluoroalkyl substances, which are found in parts, components, process chemicals and other materials supplied to us or used in the operations of our products;

- cybersecurity incidents or information technology or infrastructure failures, including those of a third-party supplier or service provider; and
- natural disasters, the impacts of climate change, or other events beyond our control (such as earthquakes, utility interruptions, tsunamis, hurricanes, typhoons, floods, storms or extreme weather conditions, fires, regional economic downturns, regional or global health epidemics, geopolitical turmoil, increased trade restrictions between the U.S. and China and other countries, social unrest, political instability, terrorism, or acts of war) in locations where we or our customers or suppliers have manufacturing, research, engineering or other operations.

If a supplier fails to meet our requirements concerning quality, cost, intellectual property protection, socially-responsible business practices, or other performance factors, we may transfer our business to alternative sources. Transferring business to alternative suppliers could result in manufacturing delays, additional costs or other difficulties, and may impair our ability to protect, enforce and extract the full value of our intellectual property rights, and the intellectual property rights of our customers and other third parties. These outcomes could have a material and adverse impact on our business and competitive position and subject us to legal proceedings and claims. If we are unable to meet our customers' demand for a prolonged period due to our inability to obtain certain parts or components from suppliers on a timely basis or at all, our business, results of operations and customer relationships could be adversely impacted.

If we need to rapidly increase our business and manufacturing capacity to meet increases in demand or expedited shipment schedules, this may strain our manufacturing and supply chain operations, and negatively impact our working capital. If we are unable to accurately forecast demand for our products, we may purchase more or fewer parts than necessary or incur costs for canceling, postponing or expediting delivery of parts. If we purchase or commit to purchase inventory in anticipation of customer demand that does not materialize, or such inventory is rendered obsolete by the rapid pace of technological change, or if customers reduce, delay or cancel orders, we may incur excess or obsolete inventory charges.

***We are exposed to ongoing changes in the various industries in which we operate.***

The global semiconductor, display and related industries are characterized by ongoing changes that impact demand for and the profitability of our products and services and our operating results, including:

- the nature, timing and degree of visibility of changes in end-user demand for electronic products, including those related to fluctuations in consumer buying patterns tied to general economic conditions, seasonality or the introduction of new products, and the effects of these changes on customers' businesses and on demand for our products;
- increasing capital requirements for building and operating new fabrication plants and customers' ability to raise the necessary capital;
- trade, regulatory, tax or government incentives impacting the timing of customers' investment in new or expanded fabrication plants;
- differences in growth rates among the semiconductor, display and other industries in which we operate;
- the importance of establishing, improving and maintaining strong relationships with customers;
- the cost and complexity for customers to move from product design to volume manufacturing, which may slow the adoption rate of new manufacturing technology;
- the importance of reducing the total cost of manufacturing system ownership;
- the importance to customers of system reliability and productivity and the effect on demand for fabrication systems as a result of their increasing productivity, device yield and reliability;
- manufacturers' ability to reconfigure and re-use fabrication systems which can reduce demand for new equipment;
- the importance of developing products with sufficient differentiation to influence customers' purchasing decisions;
- requirements for shorter cycle times for the development, manufacture and installation of manufacturing equipment;
- price and performance trends for semiconductor devices and displays, and the impact on demand for such products;
- the importance of the availability of spare parts to maximize the time that customers' systems are available for production;
- government incentives for local suppliers and domestic semiconductor research, development and manufacturing capabilities;
- the increasing role for and complexity of software in our products;
- the increasing role of machine learning and artificial intelligence with respect to semiconductor equipment and related services; and

- the focus on reducing energy usage and improving the environmental impact and sustainability associated with manufacturing operations.

***We are exposed to ongoing changes specific to the semiconductor industry.***

The largest proportion of our consolidated net sales and profitability is derived from sales of manufacturing equipment in the Semiconductor Systems segment to the global semiconductor industry, and a majority of the revenues of Applied Global Services is from sales to semiconductor manufacturers. The semiconductor industry is characterized by ongoing changes particular to this industry that impact demand for and the profitability of our semiconductor manufacturing equipment and service products, including:

- the frequency and complexity of technology transitions and inflections, and our ability to timely and effectively anticipate and adapt to these changes;
- the cost of research and development due to many factors, including shrinking geometries, the use of new materials, new and more complex device structures, more applications and process steps, increasing chip design costs, and the cost and complexity of integrated manufacturing processes;
- the need to reduce product development time and meet technical challenges;
- the number of types and varieties of semiconductors and number of applications;
- the cost and complexity for semiconductor manufacturers to move more technically advanced capability and smaller geometries to volume manufacturing, and the impact on investment in capital equipment;
- semiconductor manufacturers' levels of capital expenditures and the allocation of capital investment to market segments that we do not serve, such as lithography, or segments where our products have lower relative market presence;
- delays in installation of manufacturing equipment delivered to customers;
- the importance of increasing market positions in segments with growing demand;
- semiconductor manufacturers' ability to reconfigure and re-use equipment, resulting in diminished need to purchase new equipment and services from us, and challenges in providing parts for reused equipment;
- shorter cycle times between order placements by customers and product shipment require greater reliance on forecasting of customer investment, which may lead to inventory write-offs and manufacturing inefficiencies that decrease gross margin;
- competitive factors that make it difficult to enhance position, including challenges in securing development-tool-of-record (DTOR) and production-tool-of-record (PTOR) positions with customers;
- consolidation in the semiconductor industry, including among semiconductor manufacturers and among manufacturing equipment suppliers;
- shifts in sourcing strategies by computer and electronics companies, and manufacturing processes for advanced circuit technologies, that impact the equipment requirements of our foundry customers;
- the concentration of new wafer starts in Korea and Taiwan, where our service penetration and service-revenue-per-wafer-start have been lower than in other regions;
- the increasing fragmentation of semiconductor markets, leading certain markets to become too small to support the cost of a new fabrication plant, while others require less technologically advanced products; and
- the growing importance of specialty markets (such as Internet of Things, communications, automotive, power and sensors) that use mature process technologies and have a low barrier to entry.

If we do not accurately forecast and allocate appropriate resources and investment towards addressing key technology changes and inflections, successfully develop and commercialize products to meet demand for new technologies, and effectively address industry trends, our business and results of operations may be materially and adversely impacted.

***We are exposed to ongoing changes specific to the display industry.***

The global display industry has experienced considerable volatility in capital equipment investment levels, due in part to the limited number of display manufacturers, the concentrated nature of end-use applications, production capacity relative to end-use demand, and panel manufacturer profitability. Industry growth depends primarily on consumer demand for increasingly larger and more advanced TVs, and on demand for advanced smartphones and mobile device displays, which demand is highly sensitive to cost and improvements in technologies and features. The display industry is characterized by ongoing changes particular to this industry that impact demand for and the profitability of our display products and services, including:

- the importance of new types of display technologies, such as organic light-emitting diode (OLED), low temperature polysilicon (LTPS) and metal oxide transistor backplanes, flexible displays, and new touch panel films;
- the increasing cost of research and development, and complexity of technology transitions and inflections, and our ability to timely and effectively anticipate and adapt to these changes;
- the timing and extent of an expansion of manufacturing facilities in China, which may be affected by changes in economic conditions and governmental regulations, including trade policies and export regulations;
- the importance of increasing market positions in products and technologies with growing demand;
- the rate of transition to new display technologies for TVs, information technology products and mobile applications, and augmented and virtual reality applications, and the resulting effect on capital intensity in the industry and on our product differentiation, gross margin and return on investment;
- the concentration of display manufacturer customers, and fluctuations in customer spending quarter over quarter and year over year for display manufacturing equipment; and
- the dependence on a limited number of display manufacturer customers' selection of new technologies, and their ability to successfully commercialize new products and technologies, and uncertainty with respect to future display technology end-use applications and growth drivers.

The display industry has experienced decreased levels of investment in manufacturing equipment. If we do not successfully develop and commercialize products to meet demand for new and emerging display technologies, or if industry demand for display manufacturing equipment and technologies does not grow, our business and our operating results may continue to be adversely impacted.

***The industries in which we operate are highly competitive and subject to rapid technological and market changes.***

We operate in a highly competitive environment in which innovation is critical, and our future success depends on many factors, including the development of new technologies and effective commercialization and customer acceptance of our equipment, services and related products, and our ability to increase our position in our current markets, expand into adjacent and new markets, and optimize operational performance. The development, introduction and support of products in a geographically diverse and competitive environment requires collaboration with customers and other industry participants, which has grown more complex and expensive over time. New or improved products may entail higher costs, longer development cycles, lower profits and may have unforeseen product design or manufacturing defects. To compete successfully, we must:

- identify and address technology inflections, market changes, competitor innovations, new applications, customer requirements and end-use demand in a timely and effective manner;
- develop new products and disruptive technologies, improve and develop new applications for existing products, and adapt products for use by customers in different applications and markets with varying technical requirements;
- complete major infrastructure projects on schedule and on budget, and realize the anticipated benefits of those projects;
- differentiate our products from those of competitors, meet customers' performance specifications (including those related to energy consumption and environmental impact more broadly), appropriately price products, and achieve market acceptance;
- effectively and timely implement artificial intelligence strategies for our product and service offerings, which may be costly or ineffective, introduce errors, cause loss of intellectual property, and raise complex regulatory compliance, intellectual property and other issues;
- maintain operating flexibility to enable responses to changing markets, applications and customer requirements;
- enhance our worldwide operations across our businesses to reduce cycle time, enable continuous quality improvement, reduce costs, and enhance design for manufacturability and serviceability;
- focus on product development and sales and marketing strategies that address customers' high value problems and strengthen customer relationships;
- effectively allocate resources between our existing products and markets, the development of new products, and expanding into new and adjacent markets;
- improve the productivity of capital invested in R&D activities;
- accurately forecast demand, work with suppliers and meet production schedules for our products;
- improve our manufacturing processes and achieve cost efficiencies across product offerings;

- adapt to changes in value offered by companies in different parts of the supply chain;
- qualify products for evaluation and volume manufacturing with our customers; and
- implement changes in our design engineering methodology to reduce material costs and cycle time, increase commonality of platforms and types of parts used in different systems, and improve product life cycle management.

If we do not successfully anticipate technology inflections, develop and commercialize new products and technologies, and respond to changes in customer requirements and market trends, our business performance and operating results may be materially and adversely impacted.

***We are exposed to risks associated with expanding into new and related markets and industries.***

As part of our growth strategy, we seek to continue to expand into related or new markets and industries, either with our existing products or with new products developed internally, or those developed in collaboration with third parties, or obtained through acquisitions. Our ability to successfully expand our business into new and related markets and industries may be adversely affected by a number of factors, including:

- the need to devote additional resources to develop new products for, and operate in, new markets;
- the need to develop new sales and technical marketing strategies, and to develop relationships with new customers;
- differing rates of profitability and growth among multiple businesses;
- our ability to anticipate demand, capitalize on opportunities, and avoid or minimize risks;
- the complexity of managing multiple businesses with variations in production planning, execution, supply chain management and logistics;
- the adoption of new business models, business processes and systems;
- the complexity of entering into and effectively managing strategic alliances or partnering opportunities;
- new materials, processes and technologies;
- the need to attract, motivate and retain employees with skills and expertise in these new areas;
- new and more diverse customers and suppliers, including some with limited operating histories, uncertain or limited funding, evolving business models or locations in regions where we do not have, or have limited, operations;
- new or different competitors with potentially more financial or other resources, industry experience and established customer relationships;
- entry into new industries and countries, with differing levels of government involvement, laws and regulations, and business, employment and safety practices and requirements;
- third parties' intellectual property rights; and
- the need to comply with, or work to establish, industry standards and practices.

From time to time we receive funding from the United States and other government agencies for certain strategic development programs to increase our research and development resources and address new market opportunities. As a condition to this government funding, we are often subject to certain record-keeping, audit, intellectual property rights-sharing, and/or other obligations.

**Operational and Financial Risks**

***We are exposed to risks related to protection and enforcement of intellectual property rights.***

Our success depends on the protection of our technology using patents, trade secrets, copyrights and other intellectual property rights. Infringement or misappropriation of our intellectual property rights, such as the manufacture or sale of equipment or spare parts that use our technology without authorization, could result in uncompensated lost market and revenue opportunities. Monitoring and detecting any unauthorized access, use or disclosure of our intellectual property is difficult and costly and we cannot be certain that the protective measures we have implemented will completely prevent misuse. Our ability to enforce our intellectual property rights is subject to litigation risks and uncertainty as to the protection and enforceability of those rights in some countries. If we seek to enforce our intellectual property rights, we may be subject to claims that those rights are invalid or unenforceable, and others may seek counterclaims against us, which could have a negative impact on our business. If we are unable to enforce and protect intellectual property rights, or if they are circumvented, rendered obsolete, invalidated by the rapid pace of technological change, or stolen or misappropriated by employees or third parties, it could have an adverse impact on our competitive position and business. Changes in intellectual property laws or their interpretation may impact our ability to protect and assert our intellectual property rights, increase costs and uncertainties in the prosecution of



patent applications or related enforcement actions, and diminish the value and competitive advantage conferred by our intellectual property assets.

From time to time third parties have asserted, and may continue to assert, intellectual property claims against us and our products. Claims that our products infringe the rights of others, whether or not meritorious, can be expensive and time-consuming to defend and resolve, and may divert the efforts and attention of management and personnel. The inability to obtain rights to use third-party intellectual property on commercially reasonable terms could have an adverse impact on our business. We may face claims based on the theft or unauthorized use or disclosure of third-party trade secrets and other confidential business information. Any such incidents and claims could severely harm our business and reputation, result in significant expenses, harm our competitive position, and prevent us from selling certain products, all of which could have a material and adverse impact on our business and results of operations.

***We are exposed to cybersecurity threats and incidents.***

In the conduct of our business, we collect, use, transmit, store, and otherwise process data using information technology systems, including systems owned and maintained by us or our third-party providers. These data include confidential information and intellectual property belonging to us or our customers or other business partners, and personal information of individuals. All information technology systems are subject to disruptions, outages, failures, and security breaches or incidents. We and our third-party providers have experienced, and expect to continue to experience, cybersecurity incidents. Cybersecurity incidents may range from employee or contractor error or misuse or unauthorized use of information technology systems or confidential information, to individual attempts to gain unauthorized access to these information systems, to sophisticated cybersecurity attacks, known as advanced persistent threats, any of which may target us directly or indirectly through our third-party providers and global supply chain. Cybersecurity attacks are increasing in number and the attackers are increasingly organized and well-financed, or at times supported by state actors. Geopolitical tensions or conflicts, such as Russia's invasion of Ukraine or increasing tension with China, may create a heightened risk of cybersecurity attacks. To the extent artificial intelligence capabilities improve and are increasingly adopted, they may be used to identify vulnerabilities and craft increasingly sophisticated cybersecurity attacks. Vulnerabilities may be introduced from the use of artificial intelligence by us, our customers, suppliers and other business partners and third-party providers. Although we are not aware of any cybersecurity incidents impacting us directly that have been material to us to date, we continue to devote significant resources to network security, data encryption, and other measures to protect our systems and data from unauthorized access or misuse, and we may be required to expend greater resources in the future, especially in the face of evolving and increasingly sophisticated cybersecurity threats and laws, regulations, and other actual and asserted obligations to which we are or may become subject relating to privacy, data protection, and cybersecurity. We may be unable to anticipate, prevent, or remediate future attacks, vulnerabilities, breaches, or incidents, and in some instances we may be unaware of vulnerabilities or cybersecurity breaches or incidents or their magnitude and effects, particularly as attackers are becoming increasingly able to circumvent controls and remove forensic evidence. Cybersecurity incidents may result in business disruption; delay in the development and delivery of our products; disruption of our manufacturing processes, internal communications, interactions with customers and suppliers and processing and reporting financial results; the theft or misappropriation of intellectual property; corruption, loss of, or inability to access (e.g., through ransomware or denial of service) confidential information and critical data (i.e., that of our company and our third-party providers and customers); reputational damage; private claims, demands, and litigation or regulatory investigations, enforcement actions, or other proceedings related to contractual or regulatory privacy, cybersecurity, data protection, or other confidentiality obligations; diminution in the value of our investment in research, development and engineering; and increased costs associated with the implementation of cybersecurity measures to detect, deter, protect against, and recover from such incidents. Our efforts to comply with, and changes to, laws, regulations, and contractual and other actual and asserted obligations concerning privacy, cybersecurity, and data protection, including developing restrictions on cross-border data transfer and data localization, could result in significant expense, and any actual or alleged failure to comply could result in inquiries, investigations, and other proceedings against us by regulatory authorities or other third parties. Customers and third-party providers increasingly demand rigorous contractual provisions regarding privacy, cybersecurity, data protection, confidentiality, and intellectual property, which may increase our overall compliance burden.

***We are exposed to risks associated with business combinations, acquisitions, strategic investments and divestitures.***

We may engage in acquisitions of or investments in companies, technologies or products in existing, related or new markets. Business combinations, acquisitions and investments involve numerous risks to our business, financial condition and operating results, including:

- inability to complete proposed transactions timely or at all due to the failure to obtain regulatory or other approvals, litigation or other disputes, and any ensuing obligation to pay a termination fee;
- diversion of management's attention and disruption of ongoing businesses;
- the failure to realize expected revenues, gross and operating margins, net income and other returns from acquired businesses;

- requirements imposed by government regulators in connection with their review of a transaction, which may include, among other things, divestitures and restrictions on the conduct of our existing business or the acquired business;
- following completion of acquisitions, ineffective integration of businesses, operations, systems, digital and physical security, technologies, products, employees, compliance programs, changes in laws or regulations, including tax laws, or other factors, may impact the ability to realize anticipated synergies or other benefits;
- failure to commercialize technologies from acquired businesses or developed through strategic investments;
- dependence on unfamiliar supply chains or relatively small supply partners;
- inability to capitalize on characteristics of new markets that may be significantly different from our existing markets and where competitors may have stronger market positions and customer relationships;
- failure to retain and motivate key employees of acquired businesses;
- the impact of the announcement or consummation of a proposed transaction on relationships with third parties;
- changes in our credit rating, which could adversely impact our access to and cost of capital;
- increases in debt obligations to finance activities associated with a transaction, which increase interest expense, and reductions in cash balances, which reduce the availability of cash flow for general corporate or other purposes, including share repurchases and dividends;
- exposure to new operational risks, rules, regulations, worker expectations, customs and practices to the extent acquired businesses are located in regions where we have not historically conducted business;
- challenges associated with managing new, more diverse and more widespread operations, projects and people;
- inability to obtain and protect intellectual property rights in key technologies;
- inadequacy or ineffectiveness of an acquired company's internal financial controls, disclosure controls and procedures, cybersecurity, privacy policies and compliance programs, or environmental, health and safety, anti-corruption, human resource, or other policies or practices;
- impairment of acquired intangible assets and goodwill as a result of changing business conditions, technological advancements or worse-than-expected performance of the segment;
- the risk of litigation or claims associated with a proposed or completed transaction;
- unknown, underestimated, undisclosed or undetected commitments or liabilities, including potential intellectual property infringement claims, or non-compliance with laws, regulations or policies; and
- the inappropriate scale of acquired entities' critical resources or facilities for business needs.

We make investments in other companies, including companies formed as joint ventures, which may decline in value or not meet desired objectives. The success of these investments depends on various factors over which we may have limited or no control and, particularly with respect to joint ventures, requires ongoing and effective cooperation with partners. In addition, new legislation, additional regulations or global economic or political conditions may affect or impair our ability to invest in certain countries or require us to obtain regulatory approvals to do so. We may not receive the necessary regulatory approvals or the approvals may come with significant conditions or obligations. The risks to our investment portfolio may be exacerbated by unfavorable financial market and macroeconomic conditions and, as a result, the value of the investment portfolio could be negatively impacted and lead to impairment charges.

We may seek to divest portions of our business that are not deemed to fit with our strategic plan. Divestitures involve additional risks and uncertainties, such as ability to sell such businesses on satisfactory price and terms and in a timely manner, or at all, disruption to other parts of the businesses and distraction of management, allocation of internal resources that would otherwise be devoted to completing strategic acquisitions, loss of key employees or customers, exposure to unanticipated liabilities or ongoing obligations to support the businesses following such divestitures, and other adverse financial impacts.

***The ability to attract, retain and motivate key employees is vital to our success.***

Our success depends in large part on our ability to attract, retain and motivate qualified employees and leaders with the necessary expertise and capabilities, representing diverse backgrounds and experiences. Achieving this objective may be difficult due to many factors, including fluctuations in global economic and industry conditions, management or organizational changes, ongoing competition for talent, the availability of qualified employees, the ability to obtain necessary authorizations for workers to provide services outside their home countries, the attractiveness of our compensation and benefit programs, our career growth and development opportunities, and our employment policies. If we are unable to attract, retain and motivate qualified employees and leaders, we may be unable to fully capitalize on current and new market opportunities, which could

adversely impact our business and results of operations. The loss of knowledgeable and experienced employees may result in unexpected costs, reduced productivity, or difficulties with respect to internal processes and controls.

***We operate in jurisdictions with complex and changing tax laws.***

We are subject to income taxes in the United States and foreign jurisdictions. Significant judgment is required to determine and estimate worldwide tax liabilities. Our provision for income taxes and effective tax rates could be affected by numerous factors, including changes in applicable tax laws, interpretations of applicable tax laws, amount and composition of pre-tax income in jurisdictions with differing tax rates, and valuation of deferred tax assets.

There have been a number of proposed changes in the tax laws that, if enacted, would increase our tax liability. While it is too early to predict the outcome of these proposals, if enacted, they could have a material impact on our provision for income taxes and effective tax rate. An increase in our provision for income taxes and effective tax rate could, in turn, have a material and adverse impact on our results of operations and financial condition. For example, several countries where we do business have announced plans to implement global minimum tax regimes based on the Organization for Economic Cooperation and Development Base Erosion and Profit Shifting Project. If implemented, these global minimum tax regimes would change various aspects of the existing framework under which our global tax obligations are determined, which would unfavorably impact our existing tax incentives and effective tax rate. As this framework is subject to further negotiation and implementation by each member country, the timing and ultimate impact of any such changes on our tax obligations are uncertain.

Consistent with the international nature of our business, we conduct certain manufacturing, supply chain, and other operations in Asia, bringing these activities closer to customers and reducing operating costs. In some foreign jurisdictions, we must meet certain requirements to continue to qualify for tax incentives. There is no assurance we will be able to meet such requirements in the future to fully realize benefits from these incentives. Furthermore, the proposed plans to implement global minimum tax regimes could reduce or eliminate the benefits of our tax incentives.

We are subject to examination by the U.S. Internal Revenue Service and other tax authorities, and from time to time amend previously filed tax returns. We regularly assess the likelihood of favorable or unfavorable outcomes resulting from these examinations and amendments to determine the adequacy of our provision for income taxes, which requires estimates and judgments. Although we believe our tax estimates are reasonable, there can be no assurance the tax authorities will agree with such estimates. We may have to engage in litigation to achieve the results reflected in the estimates, which may be time-consuming and expensive. There can be no assurance that we will be successful or that any final determination will not be materially different from the treatment reflected in our historical income tax provisions and effective tax rates.

***Our indebtedness and debt covenants could adversely affect our financial condition and business.***

As of October 29, 2023, we had \$5.5 billion in aggregate principal amount of senior unsecured notes outstanding. Under the indenture governing the senior unsecured notes, we may be required to offer to repurchase the notes at a price equal to 101% of the principal amount, plus accrued and unpaid interest, if we experience a change of control and a contemporaneous downgrade of the notes below investment grade. We also have in place a \$1.5 billion revolving credit facility. While no amounts were outstanding under this credit facility as of October 29, 2023, we may borrow amounts in the future under this credit facility or enter into new financing arrangements. Our ability to satisfy our debt obligations is dependent upon the results of our business operations and subject to other risks discussed in this section. If we fail to satisfy our debt obligations, or comply with financial and other debt covenants, we may be in default and any borrowings may become immediately due and payable, and such default may constitute a default under our other obligations. There can be no assurance that we would have sufficient financial resources or be able to arrange financing to repay any borrowings at such time. Significant changes in our credit rating, disruptions in the global financial markets, or incurrence of new or refinancing of existing indebtedness at higher interest rates could have a material and adverse impact on our access to and cost of capital for future financings, and financial condition.

***The failure to successfully implement enterprise resource planning and other information systems changes could adversely impact our business and operating results.***

We periodically implement new or enhanced enterprise resource planning and related information systems in order to better manage our business operations, align our global organizations and enable future growth. Implementation of new business processes and information systems requires the commitment of significant personnel, training and financial resources, and entails risks to our business operations. If we do not successfully implement enterprise resource planning and related information systems improvements, or if there are delays or difficulties in implementing these systems, we may not realize anticipated productivity improvements or cost efficiencies, and may experience interruptions in service and operational difficulties, which could result in quality issues, reputational harm, lost market and revenue opportunities, and otherwise adversely affect our business, financial condition and results of operations.



***We may incur impairment charges related to goodwill or long-lived assets.***

We have a significant amount of goodwill and other acquired intangible assets related to acquisitions. Goodwill and purchased intangible assets with indefinite useful lives are not amortized, but are reviewed for impairment annually during the fourth quarter of each fiscal year, and more frequently when events or changes in circumstances indicate the carrying value of an asset may not be recoverable. The review compares the fair value for each of our reporting units to its associated carrying value, including goodwill. Factors that could lead to impairment of goodwill and intangible assets include adverse industry or economic trends, reduced estimates of future cash flows, declines in the market price of our common stock, changes in our strategies or product portfolio, and restructuring activities. Our valuation methodology for assessing impairment requires management to make judgments and assumptions based on historical experience and projections of future operating performance. We may be required to record future charges to earnings during the period in which an impairment of goodwill or intangible assets is determined to exist.

***We may not continue to declare cash dividends or repurchase our shares.***

Our ability to continue to pay quarterly dividends and to repurchase our shares is subject to capital availability and periodic determinations by our Board of Directors that cash dividends and share repurchases are in the best interest of our stockholders and are in compliance with applicable laws and agreements. Future dividends and share repurchases may be affected by, among other factors, our cash flow; potential future capital requirements for investments, acquisitions, infrastructure projects, and research and development; changes in applicable tax, corporate, or other laws; contractual restrictions, such as financial or operating covenants in our debt arrangements; and changes to our business model. Our dividend payments and share repurchases may change from time to time, and we cannot provide assurance that we will continue to declare dividends or repurchase shares in any particular amounts or at all. A reduction or suspension in our dividend payments or share repurchases could have a negative effect on the price of our common stock.

**Legal, Compliance, and Other Risks**

***We are exposed to risks related to legal proceedings, claims and investigations.***

From time to time we are, and in the future may be, involved in legal proceedings or claims regarding patent infringement, trade secret misappropriation, other intellectual property rights, trade compliance, including import, export and customs, antitrust, environmental regulations, privacy, data protection, securities, contracts, product performance, product liability, unfair competition, employment, workplace safety, and other matters. We may receive, and have received, inquiries, warrants, subpoenas, and other requests for information in connection with government investigations of potential or suspected violations of law or regulations by our company and/or our employees. We also on occasion receive notifications from customers who believe we owe them indemnification, product warranty or have other obligations related to claims made against such customers by third parties.

Legal proceedings, claims, and government investigations, whether with or without merit, and internal investigations, may be time-consuming and expensive to prosecute, defend or conduct; divert management's attention and our other resources; constrain our ability to sell our products and services; result in adverse judgments for damages, injunctive relief, penalties and fines; and negatively affect our business. We cannot predict the outcome of current or future legal proceedings, claims or investigations.

***We are exposed to risks related to the global regulatory environment.***

We are subject to the laws of the United States and multiple foreign jurisdictions and the rules and regulations of various governing bodies, which may differ among jurisdictions, including those related to financial and other disclosures, accounting standards, corporate governance, intellectual property, tax, trade (including import, export and customs), antitrust, environment, health and safety (including those relating to climate change), employment, immigration and travel regulations, human rights, privacy, data protection and localization, and anti-corruption. Changing, inconsistent or conflicting laws, rules and regulations, and ambiguities in their interpretation and application create uncertainty and challenges, and compliance with laws, rules and regulations may be onerous and expensive, divert management time and attention from revenue-generating activities, and otherwise adversely impact our business operations. Violations of law, rules and regulations, including, among others, those related to financial and other disclosures, trade, import and export regulations, antitrust, privacy, data protection, and anti-corruption, could result in fines, criminal penalties, restrictions on our business, and damage to our reputation, and could have an adverse impact on our business operations, financial condition and results of operations.

***Our environmental, social and governance strategies and targets could result in additional costs, and our inability to achieve them could have an adverse impact on our reputation and performance.***

We periodically communicate our strategies and targets related to sustainability, carbon emissions, diversity and inclusion, human rights, and other environmental, social and governance matters. These strategies and targets, and their

underlying assumptions and projections, reflect our current plans and aspirations, and we may be unable to achieve them. Changing customer and shareholder sustainability expectations and regulatory requirements, as well as our sustainability targets, could cause us to incur substantial expense and alter our manufacturing, operations or equipment designs and processes. Any failure or perceived failure to timely meet these sustainability requirements, expectations or targets, or a failure to realize the anticipated benefits of planned investments and technology innovations related to sustainability, could adversely impact the demand for our products and subject us to significant costs and liabilities and reputational risks that could in turn adversely affect our business, financial condition and results of operations. In addition, standards and processes for measuring and reporting carbon emissions and other sustainability metrics may change over time, and may result in inconsistent data, or could result in significant revisions to our strategies and targets, or our ability to achieve them. Any scrutiny of our carbon emissions or other sustainability disclosures, our failure to achieve related strategies and targets, or our failure to disclose our sustainability measures consistent with applicable laws and regulations or to the satisfaction of our stakeholders could negatively impact our reputation or performance.

***We are subject to risks associated with environmental, health and safety regulations.***

We are subject to environmental, health and safety regulations in connection with our global business operations, including but not limited to: regulations related to the design, manufacture, sale, shipping and use of our products; use, handling, discharge, recycling, transportation and disposal of hazardous materials used in our products or in producing our products; the operation of our facilities; and the use of our real property, including in connection with construction of our infrastructure projects. The failure or inability to comply with existing or future environmental, health and safety regulations could result in: significant remediation or other legal liabilities; the imposition of penalties and fines; restrictions on the development, manufacture, sale, shipping or use of certain of our products; limitations on the operation of our facilities or ability to use our real property; and a decrease in the value of our real property. We could be required to alter our product design, manufacturing, and operations, and incur substantial expense in order to comply with environmental, health and safety regulations. Any failure to comply with these regulations could subject us to significant costs and liabilities that could materially and adversely affect our business, financial condition and results of operations.

**Item 1B:    *Unresolved Staff Comments***

None.

**Item 2: Properties**

Information concerning our properties is set forth below:

(Square feet in thousands)	United States	Other Countries	Total
Owned	5,627	2,931	8,558
Leased	2,733	1,909	4,642
Total	8,360	4,840	13,200

Because of the interrelation of our operations, properties within a country may be shared by the segments operating within that country. Our headquarters offices are in Santa Clara, California. Products in Semiconductor Systems are manufactured primarily in Singapore; Austin, Texas; Gloucester, Massachusetts; and Rehovot, Israel. Remanufactured equipment products in the Applied Global Services segment are produced primarily in Austin, Texas. Products in the Display and Adjacent Markets segment are manufactured primarily in Tainan, Taiwan.

We also own and lease facilities throughout the world for use as offices, plants and warehouses, and research and development centers, primarily in the United States, Taiwan, China, Israel and Singapore.

We also own a total of approximately 279 acres of buildable land in the United States, Israel, Italy and India that could accommodate additional building space.

We consider the properties that we own or lease as adequate to meet our current and future requirements. We regularly assess the size, capability and location of our global infrastructure and periodically make adjustments based on these assessments.

**Item 3:    *Legal Proceedings***

The information set forth under “Legal Matters” in Note 15 of Notes to Consolidated Financial Statements is incorporated herein by reference. *See also “Risk Factors – Risks Related to Legal, Compliance, and Other Risks – We are exposed to risks related to legal proceedings, claims and investigations.”*

**Item 4:    *Mine Safety Disclosures***

None.

## PART II

### Item 5: *Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*

#### Market Information

Our common stock is traded on the NASDAQ Global Select Market under the symbol AMAT. As of December 8, 2023, there were 2,755 registered holders of our common stock. Information regarding quarterly cash dividends declared on our common stock during fiscal 2023, 2022 and 2021 may be found under “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Financial Condition, Liquidity and Capital Resources”.

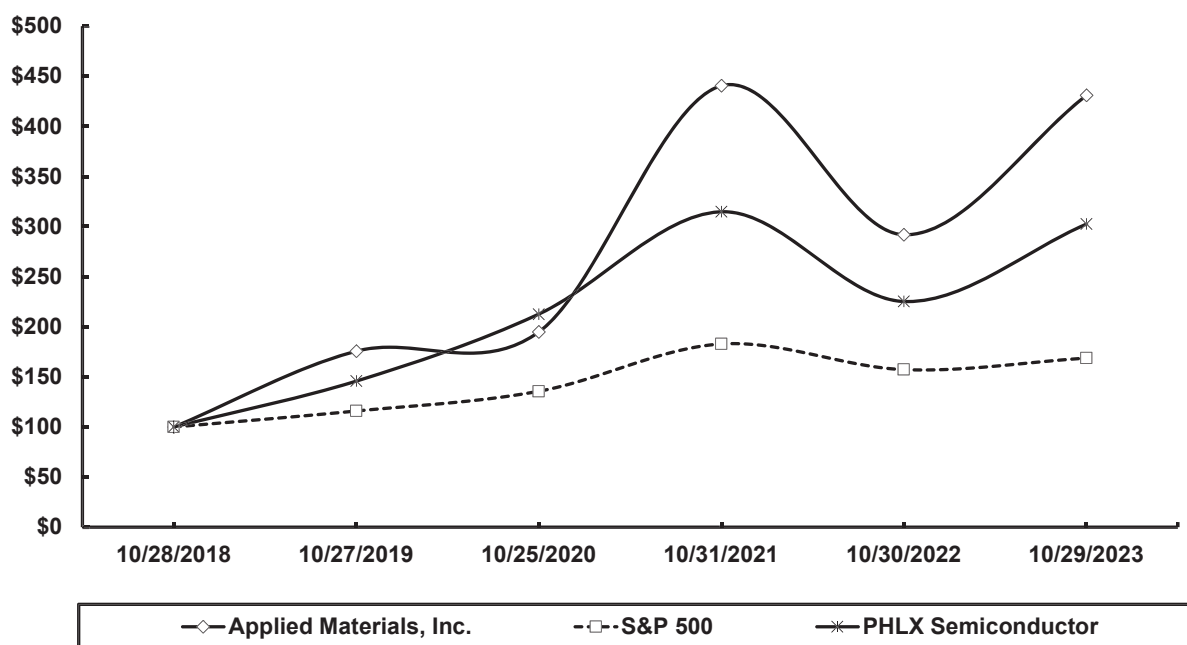
#### Performance Graph

The performance graph below shows the five-year cumulative total stockholder return on our common stock during the period from October 28, 2018 through October 29, 2023. This is compared with the cumulative total return of the Standard & Poor’s 500 Stock Index and the PHLX Semiconductor Index over the same period. The comparison assumes \$100 was invested on October 28, 2018 in our common stock and in each of the foregoing indices and assumes reinvestment of dividends, if any. Dollar amounts in the graph are rounded to the nearest whole dollar. The performance shown in the graph represents past performance and should not be considered an indication of future performance.

The graph below assumes that the value of the investment in our common stock and in each of the indexes was \$100 at October 28, 2018, and that all dividends were reinvested.

### COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN

Among Applied Materials, Inc., the S&P 500 Index,  
and the PHLX Semiconductor Index



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	10/28/2018	10/27/2019	10/25/2020	10/31/2021	10/30/2022	10/29/2023
Applied Materials	100.00	175.74	194.93	440.65	291.76	431.02
S&P 500 Index	100.00	116.03	135.57	182.86	157.30	168.81
PHLX Semiconductor Index	100.00	145.93	212.58	314.91	225.17	302.44

## Issuer Purchases of Equity Securities

In March 2023, our Board of Directors approved a common stock repurchase program authorizing \$10.0 billion in repurchases, which supplemented the previously existing \$6.0 billion authorization approved in March 2022. At October 29, 2023, approximately \$12.7 billion remained available for future stock repurchases under the repurchase program.

The following table provides information as of October 29, 2023 with respect to the shares of common stock repurchased by us during the fourth quarter of fiscal 2023 pursuant to the foregoing Board authorization.

Period	Total Number of Shares Purchased	Average Price Paid per Share*	Aggregate Price Paid*	Total Number of Shares Purchased as Part of Publicly Announced Programs	Maximum Dollar Value of Shares That May Yet be Purchased Under the Programs*
(In millions, except per share amounts)					
Month #1					
(July 31, 2023 to August 27, 2023)	0.3	\$ 147.17	\$ 50	0.3	\$ 13,375
Month #2					
(August 28, 2023 to September 24, 2023)	1.6	\$ 144.00	226	1.6	\$ 13,149
Month #3					
(September 25, 2023 to October 29, 2023)	3.2	\$ 136.43	429	3.2	\$ 12,720
Total	<u>5.1</u>	<u>\$ 139.50</u>	<u>\$ 705</u>	<u>5.1</u>	

\*Effective January 1, 2023, amounts include the 1% surcharge on stock repurchases under the Inflation Reduction Act's excise tax. This excise tax is recorded in equity and reduces the amount available under the repurchase program, as applicable.

**Item 6: [Reserved]**

## Item 7: *Management's Discussion and Analysis of Financial Condition and Results of Operations*

### Introduction

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is intended to facilitate an understanding of our business and results of operations. This MD&A should be read in conjunction with our Consolidated Financial Statements and the accompanying Notes to Consolidated Financial Statements included elsewhere in this Form 10-K. The following discussion contains forward-looking statements and should also be read in conjunction with the cautionary statement set forth at the beginning of this Form 10-K. MD&A consists of the following sections:

- *Overview*: a summary of our business and measurements
- *Results of Operations*: a discussion of operating results
- *Segment Information*: a discussion of segment operating results
- *Recent Accounting Pronouncements*: a discussion of new accounting pronouncements and its impact to our consolidated financial statements
- *Financial Condition, Liquidity and Capital Resources*: an analysis of cash flows, sources and uses of cash
- *Contractual Obligations and Off-Balance Sheet Arrangements*
- *Critical Accounting Policies and Estimates*: a discussion of critical accounting policies that require the exercise of judgments and estimates

### Overview

We provide manufacturing equipment, services and software to the semiconductor, display, and related industries. Our customers include manufacturers of semiconductor wafers and chips, liquid crystal and organic light-emitting diode (OLED) displays, and other electronic devices. These customers may use what they manufacture in their own end products or sell the items to other companies for use in electronic products. Each of our segments is subject to variable industry conditions, as demand for manufacturing equipment and services can change depending on supply and demand for chips, display technologies, and other electronic devices, as well as other factors, such as global economic, political and market conditions, and the nature and timing of technological advances in fabrication processes.

We operate in three reportable segments: Semiconductor Systems, Applied Global Services, and Display and Adjacent Markets. A summary of financial information for each reportable segment is found in Note 16 of Notes to Consolidated Financial Statements. A discussion of factors that could affect our operations is set forth under "Risk Factors" in Part I, Item 1A, which is incorporated herein by reference. Product development and manufacturing activities occur primarily in the United States, Europe, Israel, and Asia. Our broad range of equipment and service products are highly technical and are sold primarily through a direct sales force.

Our results are driven primarily by customer spending on capital equipment and services to support key technology transitions or to increase production volume in response to worldwide demand for semiconductors and displays. Spending by semiconductor customers, which include companies that operate in the foundry, logic, memory, and other semiconductor chip markets, is driven by demand for electronic products, including smartphones and other mobile devices, servers, personal computers, automotive devices, storage, and other products. The growth of data and emerging end-market drivers such as artificial intelligence, the Internet of Things, 5G networks, smart vehicles and augmented and virtual reality are also creating the next wave of growth for the industry. As a result, products within the Semiconductor Systems segment are subject to significant changes in customer requirements, including transitions to smaller dimensions, increasingly complex chip architectures, new materials and an increasing number of applications. Demand for display manufacturing equipment spending depends primarily on consumer demand for increasingly larger and more advanced TVs as well as larger and higher resolution displays for next-generation mobile devices, and investments in new types of display technologies. The timing of customer investment in manufacturing equipment is also affected by the timing of next-generation process development and the timing of capacity expansion to meet end-market demand. In light of these conditions, our results can vary significantly year-over-year, as well as quarter-over-quarter.



Our strategic priorities include developing products that help solve customers' challenges at technology inflections; expanding our served market opportunities in the semiconductor and display industries; and growing our services business. Our long-term growth strategy requires continued development of new materials engineering capabilities, including products and platforms that enable expansion into new and adjacent markets. Our significant investments in research, development and engineering must generally enable us to deliver new products and technologies before the emergence of strong demand, thus allowing customers to incorporate these products into their manufacturing plans during early-stage technology selection. We work closely with our global customers to design systems and processes that meet their planned technical and production requirements.

The following table presents certain significant measurements for the past three fiscal years:

				Change	
	2023	2022	2021	2023 over 2022	2022 over 2021
	(In millions, except per share amounts and percentages)				
Net sales	\$ 26,517	\$ 25,785	\$ 23,063	\$ 732	\$ 2,722
Gross margin	46.7 %	46.5 %	47.3 %	0.2 points	(0.8) points
Operating income	\$ 7,654	\$ 7,788	\$ 6,889	\$ (134)	\$ 899
Operating margin	28.9 %	30.2 %	29.9 %	(1.3) points	0.3 points
Net income	\$ 6,856	\$ 6,525	\$ 5,888	\$ 331	\$ 637
Earnings per diluted share	\$ 8.11	\$ 7.44	\$ 6.40	\$ 0.67	\$ 1.04

Fiscal 2023 and fiscal 2022 each contained 52 weeks, while fiscal 2021 contained 53 weeks.

Semiconductor equipment customers continued to make strategic investments in new capacity and new technology transitions during fiscal 2023. Foundry and logic spending increased in fiscal 2023 compared to fiscal 2022 driven by customer investments in mature manufacturing nodes to serve demand across a wide range of products. Memory customers' spending in fiscal 2023 was lower as compared to fiscal 2022 due to deferred capacity additions primarily as a result of weakness in demand for consumer electronic products.

Our Applied Global Services net sales in fiscal 2023 increased compared to fiscal 2022 primarily due to an increase in sales associated with long-term service agreements and higher customer spending on legacy systems, partially offset by a decrease in net sales due to additional export regulations issued by the United States government in 2022 and lower customer utilization rates. Our Display and Adjacent Markets net sales decreased in fiscal 2023 compared to fiscal 2022 primarily due to lower customer investments in display manufacturing equipment for TVs as a result of weakness in demand for consumer electronic products.

We experienced supply chain and logistics constraints in fiscal 2022, and although there have been significant improvements in supply chain performance in fiscal 2023, we expect some shortages to persist, and managing these supply chain constraints to increase shipments to customers remains a top priority.

In fiscal 2024, we expect advanced foundry and logic demand to be stronger as compared to fiscal 2023 due to increased customer spending in PC, cloud and Artificial Intelligence (AI) data centers as well as customers' continued investments in new technology. Demand for mature manufacturing nodes is expected to be lower as compared to fiscal 2023, primarily due to decreased customer spending in the industrial automation and automotive markets. We expect memory customers' spending to be higher as compared to fiscal 2023 as customers continue to invest in new technology.

In the past two years, the United States government announced additional export regulations for U.S. semiconductor technology sold in China. For a description of risks associated with global trade, see the risk factor entitled "*Business and Industry Risks - Global trade issues and changes in and uncertainties with respect to trade policies and export regulations, including import and export license requirements, trade sanctions, tariffs and international trade disputes, have adversely impacted and could further adversely impact our business and operations, and reduce the competitiveness of our products relative to local and global competitors*" in Part I, Item 1A, "Risk Factors."

## Results of Operations

### Net Sales

Net sales for the periods indicated were as follows:

							Change	
	2023		2022		2021		2023 over 2022	2022 over 2021
	(In millions, except percentages)							
Semiconductor Systems	\$ 19,698	74%	\$ 18,797	73%	\$ 16,286	71%	5 %	15 %
Applied Global Services	5,732	22%	5,543	22%	5,013	22%	3 %	11 %
Display and Adjacent Markets	868	3%	1,331	5%	1,634	7%	(35)%	(19)%
Corporate and Other	219	1%	114	—%	130	—%	92 %	(12)%
Total	\$ 26,517	100%	\$ 25,785	100%	\$ 23,063	100%	3 %	12 %

The Semiconductor Systems segment continued to represent the largest contributor of net sales. Net sales in fiscal 2023 compared to fiscal 2022 and fiscal 2022 compared to fiscal 2021 increased primarily due to continued customer investment in semiconductor equipment, partially offset by the reduction in customer investment in display manufacturing equipment. The increase in net sales in fiscal 2023 compared to fiscal 2022 was also due to improvements in our supply chain performance enabling us to better fulfill demand.

Net sales by geographic region, determined by the location of customers' facilities to which products were shipped, were as follows:

							Change				
	2023		2022		2021		2023 over 2022	2022 over 2021			
	(In millions, except percentages)										
China	\$	7,247	27%	\$	7,254	28%	\$	7,535	33%	— %	(4)%
Korea		4,609	18%		4,395	17%		5,012	22%	5 %	(12)%
Taiwan		5,670	21%		6,262	24%		4,742	20%	(9)%	32 %
Japan		2,075	8%		2,012	8%		1,962	8%	3 %	3 %
Southeast Asia		758	3%		1,084	4%		677	3%	(30)%	60 %
Asia Pacific		20,359	77%		21,007	81%		19,928	86%	(3)%	5 %
United States		4,006	15%		3,104	12%		2,038	9%	29 %	52 %
Europe		2,152	8%		1,674	7%		1,097	5%	29 %	53 %
Total	\$	26,517	100%	\$	25,785	100%	\$	23,063	100%	3 %	12 %

The increases in net sales to customers in the U.S. and Europe for fiscal 2023 compared to fiscal 2022 primarily reflected increased investment by customers in semiconductor equipment and increased customer spending on legacy systems and comprehensive service agreements.

The increase in net sales to customers in Korea for fiscal 2023 compared to fiscal 2022 primarily reflected increased investment by customers in semiconductor equipment and increased customer spending on comprehensive service agreements, spares and legacy systems, partially offset by decreased investment in display manufacturing equipment.

The increase in net sales to customers in Japan for fiscal 2023 compared to fiscal 2022 primarily reflected increased investment in display manufacturing equipment, partially offset by decreased investment by customers in semiconductor equipment.

Net sales to customers in China for 2023 compared to fiscal 2022 remained flat and primarily reflected increased investment in semiconductor equipment, offset by decreased in customer spending on long-term service agreements due to the impact of additional export regulations issued by the United States government in 2022 and decreased investment in display manufacturing equipment.

The changes in net sales in all other regions for fiscal 2023 compared to fiscal 2022 primarily reflected changes in semiconductor manufacturing equipment spending.

The increases in net sales in all regions other than China and Korea in fiscal 2022 compared to fiscal 2021 primarily reflected changes in semiconductor equipment spending and customer spending on comprehensive service agreements. The decrease in net sales to customers in China for fiscal 2022 compared to fiscal 2021 primarily reflected decreased investment in display manufacturing equipment and semiconductor equipment, partially offset by increased spending on spares and comprehensive service agreements. The decrease in net sales to customers in Korea for fiscal 2022 compared to fiscal 2021 primarily reflected decreased investment in semiconductor equipment, partially offset by increased investment in display manufacturing equipment.

### ***Gross Margin***

Gross margins for the periods indicated were as follows:

				Change	
	2023	2022	2021	2023 over 2022	2022 over 2021
	(In millions, except percentages)				
Gross margin	46.7 %	46.5 %	47.3 %	0.2 points	(0.8) points

Gross margin in fiscal 2023 increased compared to fiscal 2022 primarily driven by favorable changes in customer and product mix and an increase in average selling prices, partially offset by higher material costs and inventory charges.

Gross margin in fiscal 2022 decreased compared to fiscal 2021 primarily driven by higher material, freight, and logistics costs and higher personnel costs due to an increase in headcount to provide manufacturing capacity and flexibility, partially offset by favorable changes in product mix and an increase in average selling prices.

Gross margin during fiscal 2023, 2022 and 2021 included \$180 million, \$147 million and \$118 million, respectively, of share-based compensation expense.

### ***Research, Development and Engineering***

Research, Development and Engineering (RD&E) expenses for the periods indicated were as follows:

				Change	
	2023	2022	2021	2023 over 2022	2022 over 2021
	(In millions)				
Research, development and engineering	\$ 3,102	\$ 2,771	\$ 2,485	\$ 331	\$ 286

Our future operating results depend to a considerable extent on our ability to maintain a competitive advantage in the equipment and service products we provide. Development cycles range from 12 to 36 months depending on whether the product is an enhancement of an existing product, which typically has a shorter development cycle, or a new product, which typically has a longer development cycle. Most of our existing products resulted from internal development activities and innovations involving new technologies, materials and processes. In certain instances, we acquire technologies, either in existing or new product areas, to complement our existing technology capabilities and to reduce time to market.

We believe that it is critical to continue to make substantial investments in RD&E to assure the availability of innovative technology that meets the current and projected requirements of our customers' most advanced designs. We have maintained and intend to continue our commitment to investing in RD&E in order to continue to offer new products and technologies.

We continued our RD&E investments in Semiconductor Systems and Display and Adjacent Markets on the development of new unit process systems and integrated materials solutions. Areas of investment include etch, deposition, metrology and inspection, patterning, packaging and other technologies to improve chip performance, power, area, cost and time-to-market. In Display and Adjacent Markets, RD&E investments were focused on expanding our market opportunity with new display technologies.

The increases in RD&E expenses during fiscal 2023 compared to fiscal 2022 were primarily due to additional headcount, higher depreciation expense and consumable and equipment costs associated with ongoing product development. In addition, the increases in RD&E expenses in fiscal 2023 compared to fiscal 2022 also included a \$30 million impairment of fixed assets. The increases in RD&E expenses during fiscal 2022 compared to fiscal 2021 were primarily due to additional headcount, higher consumable and equipment costs associated with ongoing product development and share-based compensation expense. These increases reflect our ongoing investments in product development initiatives, consistent with our growth strategy. We continued to prioritize existing RD&E investments in technical capabilities and critical research and development programs in current and new markets, with a focus on semiconductor technologies.

RD&E expenses during fiscal 2023, 2022 and 2021 included \$179 million, \$151 million and \$129 million, respectively, of share-based compensation expense.

### ***Marketing and Selling***

Marketing and selling expenses for the periods indicated were as follows:

	2023	2022	2021	Change	
				2023 over 2022	2022 over 2021
	(In millions)				
Marketing and selling	\$ 776	\$ 703	\$ 609	\$ 73	\$ 94

Marketing and selling expenses for fiscal 2023 increased compared to fiscal 2022 primarily due to additional headcount and higher travel related expenses. Marketing and selling expenses for fiscal 2022 increased compared to fiscal 2021 primarily due to additional headcount. Marketing and selling expenses for fiscal years 2023, 2022 and 2021 included \$55 million, \$49 million and \$43 million, respectively, of share-based compensation expense.

### ***General and Administrative***

General and administrative (G&A) expenses for the periods indicated were as follows:

	2023	2022	2021	Change	
				2023 over 2022	2022 over 2021
	(In millions)				
General and administrative	\$ 852	\$ 735	\$ 620	\$ 117	\$ 115

G&A expenses in fiscal 2023 increased compared to fiscal 2022 primarily due to additional headcount, higher professional fees and depreciation expense. G&A expenses in fiscal 2022 increased compared to fiscal 2021 primarily due to additional headcount and higher travel related expenses.

G&A expenses during fiscal 2023, 2022 and 2021 included \$76 million, \$66 million and \$56 million, respectively, of share-based compensation expense.

### ***Interest Expense and Interest and Other Income (expense), net***

Interest expense and interest and other income (expense), net for the periods indicated were as follows:

	2023	2022	2021	Change	
				2023 over 2022	2022 over 2021
	(In millions)				
Interest expense	\$ 238	\$ 228	\$ 236	\$ 10	\$ (8)
Interest and other income (expense), net	\$ 300	\$ 39	\$ 118	\$ 261	\$ (79)

Interest expense incurred was primarily associated with issued senior unsecured notes. Interest expense in fiscal 2023 remained relatively flat compared to fiscal 2022 and fiscal 2021 primarily due to the average principal balance of the senior unsecured notes remained consistent at \$5.5 billion in each of the last three years.

Interest and other income (expense), net in fiscal 2023 increased compared to fiscal 2022, primarily driven by higher interest income as a result of an increase in market rates of interest and higher net gain on equity investments, partially offset by higher impairment losses on equity investments, compared to the prior year. Interest and other income (expense), net in fiscal 2022 decreased compared to fiscal 2021, primarily driven by higher net loss from equity investments, partially offset by higher interest income during fiscal 2022 compared to fiscal 2021.

## Income Taxes

Provision for income taxes and effective tax rates for the periods indicated were as follows:

	2023	2022	2021	Change	
				2023 over 2022	2022 over 2021
(In millions, except percentages)					
Provision for income taxes	\$ 860	\$ 1,074	\$ 883	\$ (214)	\$ 191
Effective income tax rate	11.1 %	14.1 %	13.0 %	(3.0) points	1.1 points

Our provision for income taxes and effective tax rate are affected by the geographical composition of pre-tax income which includes jurisdictions with differing tax rates, conditional reduced tax rates and other income tax incentives. It is also affected by events that vary from period to period, such as changes in income tax laws and the resolution of prior years' income tax filings.

The effective tax rate for fiscal 2023 was lower than fiscal 2022 primarily due to a reduction of deferred tax assets that occurred in fiscal 2022, related to a new tax incentive in Singapore. The effective tax rate for fiscal 2022 was higher than fiscal 2021 primarily due to a reduction of deferred tax assets related to a new tax incentive in Singapore, partially offset by changes in uncertain tax positions.

Beginning in our fiscal 2023, the Tax Cuts and Jobs Act (Tax Act), enacted on December 22, 2017, eliminates the option to deduct research and development expenditures currently and requires taxpayers to capitalize and amortize them over five years for activities performed in the U.S. or fifteen years for activities performed outside of the U.S. This capitalization requirement increases our effective tax rates, deferred tax assets and cash tax liabilities beginning in fiscal 2023.

## Segment Information

We report financial results in three segments: Semiconductor Systems, Applied Global Services, and Display and Adjacent Markets. A description of the products and services, as well as financial data, for each reportable segment can be found in Note 16 of Notes to Consolidated Financial Statements.

The Corporate and Other category includes revenues from products, as well as costs of products sold, for fabricating solar photovoltaic cells and modules and certain operating expenses that are not allocated to our reportable segments and are managed separately at the corporate level. These operating expenses include costs for share-based compensation; certain management, finance, legal, human resource, and RD&E functions provided at the corporate level; and unabsorbed information technology and occupancy. In addition, we do not allocate to our reportable segments restructuring, severance and asset impairment charges and any associated adjustments related to restructuring actions, unless these actions pertain to a specific reportable segment.

The results for each reportable segment are discussed below.

### *Semiconductor Systems Segment*

The Semiconductor Systems segment is comprised primarily of capital equipment used to fabricate semiconductor chips. Semiconductor industry spending on capital equipment is driven by demand for electronic products, including smartphones and other mobile devices, servers, personal computers, automotive electronics, storage, and other products, and the nature and timing of technological advances in fabrication processes, and as a result is subject to variable industry conditions. Spending can also depend on customer facility readiness and timeline for installation of capital equipment at customer sites. Development efforts are focused on solving customers' key technical challenges in transistor, interconnect, patterning and packaging performance.

Certain significant measures for the periods indicated were as follows:

	2023	2022	2021	Change			
				2023 over 2022		2022 over 2021	
(In millions, except percentages and ratios)							
Net sales	\$ 19,698	\$ 18,797	\$ 16,286	\$ 901	5 %	\$ 2,511	15 %
Operating income	\$ 7,090	\$ 6,969	\$ 6,311	\$ 121	2 %	\$ 658	10 %
Operating margin	36.0 %	37.1 %	38.8 %	(1.1) points		(1.7) points	

Net sales for Semiconductor Systems by end use application for the periods indicated were as follows:

	2023	2022	2021
Foundry, logic and other	77 %	66 %	60 %
Dynamic random-access memory (DRAM)	17 %	19 %	19 %
Flash memory	6 %	15 %	21 %
	<u>100 %</u>	<u>100 %</u>	<u>100 %</u>

Semiconductor equipment customers continued to make strategic investments in new capacity and new technology transitions during fiscal 2023. Foundry and logic spending increased in fiscal 2023 compared to fiscal 2022 primarily driven by customer investment in mature manufacturing nodes to serve demand across a wide range of products. Spending by memory customers decreased in fiscal 2023 compared to fiscal 2022 due to deferred capacity additions primarily as a result of weakness in demand for consumer electronic products. Operating margin for fiscal 2023 decreased compared to fiscal 2022, primarily driven by increased RD&E expenses, higher inventory charges, the impact of export regulations, partially offset by favorable changes in customer and product mix, an increase in average selling prices and lower freight and logistics costs.

Foundry and logic spending increased in fiscal 2022 compared to fiscal 2021 driven by customer investment in both advanced and mature nodes. Spending by DRAM customers increased and flash memory customers decreased in fiscal 2022 compared to fiscal 2021 due to changes in investments in new technology and capacity. Operating margin for fiscal 2022 decreased compared to fiscal 2021, primarily driven by higher material, freight, logistics costs and higher personnel costs due to the hiring of additional headcount to provide manufacturing capacity and flexibility, partially offset by favorable changes in product mix and an increase in average selling prices.

### ***Applied Global Services Segment***

The Applied Global Services segment provides integrated solutions to optimize equipment and fab performance and productivity, including spares, upgrades, services, certain remanufactured earlier generation equipment and factory automation software for semiconductor, display and solar products.

Demand for Applied Global Services' solutions are driven by our large and growing installed base of manufacturing systems, and customers' needs to shorten ramp times, improve device performance and yield, and optimize factory output and operating costs. Industry conditions that affect Applied Global Services' sales of spares and services are primarily characterized by changes in semiconductor manufacturers' wafer starts and higher utilization rates, growth of the installed base of equipment, growing service intensity of newer tools, and our ability to sell more comprehensive service agreements.

Certain significant measures for the periods indicated were as follows:

	2023	2022	2021	Change			
				2023 over 2022		2022 over 2021	
(In millions, except percentages and ratios)							
Net sales	\$ 5,732	\$ 5,543	\$ 5,013	\$ 189	3 %	\$ 530	11 %
Operating income	\$ 1,657	\$ 1,661	\$ 1,508	\$ (4)	— %	\$ 153	10 %
Operating margin	28.9 %	30.0 %	30.1 %	(1.1) points		(0.1) points	

Net sales for fiscal 2023 increased compared to fiscal 2022 primarily due to an increase in sales associated with long-term service agreements and higher customer spending on legacy systems, partially offset by a decrease in net sales due to additional export regulations issued by the United States government in 2022 and lower customer utilization rates. Operating margin for fiscal 2023 decreased compared to fiscal 2022 primarily due to the impact of the export regulations, higher inventory charges and unfavorable changes in product mix.

Net sales for fiscal 2022 increased compared to fiscal 2021 primarily due to higher customer spending on comprehensive service agreements, spares and legacy systems. Operating margin for fiscal 2022 decreased compared to fiscal 2021 primarily due to higher expense related to an increase in headcount to support business growth and higher freight costs, partially offset by higher net sales in fiscal 2022.



### ***Display and Adjacent Markets Segment***

The Display and Adjacent Markets segment encompasses products for manufacturing liquid crystal and OLED displays, and other display technologies for TVs, monitors, laptops, personal computers, electronic tablets, smart phones, other consumer-oriented devices, equipment upgrades and solar energy cells. The segment is focused on expanding its presence through technologically-differentiated equipment for manufacturing large-scale LCD TVs, OLEDs, low temperature polysilicon (LTPS), metal oxide, and touch panel sectors; and development of products that provide customers with improved performance and yields.

Display industry growth depends primarily on consumer demand for increasingly larger and more advanced TVs as well as larger and higher resolution displays for next-generation mobile devices. Uneven spending patterns by customers in the Display and Adjacent Markets segment can cause significant fluctuations quarter-over-quarter, as well as year-over-year.

Certain significant measures for the periods presented were as follows:

	2023	2022	2021	Change			
				2023 over 2022	2022 over 2021		
(In millions, except percentages and ratios)							
Net sales	\$ 868	\$ 1,331	\$ 1,634	\$ (463)	(35)%	\$ (303)	(19)%
Operating income	\$ 133	\$ 260	\$ 314	\$ (127)	(49)%	\$ (54)	(17)%
Operating margin	15.3 %	19.5 %	19.2 %	(4.2) points		0.3 points	

Net sales for fiscal 2023 decreased compared to fiscal 2022 primarily due to lower customer investments in display manufacturing equipment for TVs as a result of weakness in demand for consumer electronic products. Operating margin for fiscal 2023 decreased compared to fiscal 2022 primarily due to lower net sales, partially offset by a reduction in headcount related costs as headcount moved to open positions within Semiconductor Systems and Applied Global Services segments.

Net sales for fiscal 2022 decreased compared to fiscal 2021 primarily due to lower customer investments in display manufacturing equipment for TVs and mobile products. Operating margin for fiscal 2022 increased compared to fiscal 2021 primarily due to reduction in headcount related costs as headcount moved to open positions within Semiconductor Systems and Applied Global Services segments, offset by higher material costs.

**Recent Accounting Pronouncements**

For a description of recent accounting pronouncements, including the expected dates of adoption and estimated effects, if any, on our consolidated financial statements, see Note 1, “Summary of Significant Accounting Policies,” of the Notes to Consolidated Financial Statements.

## Financial Condition, Liquidity and Capital Resources

Our cash, cash equivalents and investments consist of the following:

	October 29, 2023	October 30, 2022
	(In millions)	
Cash and cash equivalents	\$ 6,132	\$ 1,995
Short-term investments	737	586
Long-term investments	2,281	1,980
Total cash, cash-equivalents and investments	<u>\$ 9,150</u>	<u>\$ 4,561</u>

### *Sources and Uses of Cash*

A summary of cash provided by (used in) operating, investing, and financing activities is as follows:

	2023	2022	2021
	(In millions)		
Cash provided by operating activities	\$ 8,700	\$ 5,399	\$ 5,442
Cash used in investing activities	\$ (1,535)	\$ (1,357)	\$ (1,216)
Cash used in financing activities	\$ (3,032)	\$ (7,043)	\$ (4,591)

### *Operating Activities*

Cash from operating activities for fiscal 2023 was \$8.7 billion, which reflects net income adjusted for the effect of non-cash charges and changes in working capital components. Significant non-cash charges included depreciation, amortization, share-based compensation and deferred income taxes. Cash provided by operating activities in fiscal 2023 increased compared to fiscal 2022 primarily due to better inventory management, better accounts receivable collections and lower income tax payments, partially offset by higher payments to vendors and lower year over year change in deferred revenue. Cash provided by operating activities remained relatively flat in fiscal 2022 compared to fiscal 2021 primarily due to higher inventory and income tax payments, partially offset by higher net income and lower year over year increase in accounts receivable.

We have agreements with various financial institutions to sell accounts receivable and discount promissory notes from selected customers. We sell our accounts receivable generally without recourse. From time to time, we also discount letters of credit issued by customers through various financial institutions. The discounting of letters of credit depends on many factors, including the willingness of financial institutions to discount the letters of credit and the cost of such arrangements. We sold \$0.7 billion, \$1.0 billion and \$1.3 billion of accounts receivable during fiscal 2023, 2022 and 2021, respectively. We did not discount letters of credit issued by customers in fiscal 2023, 2022 and 2021. There was no discounting of promissory notes in each of fiscal 2023, 2022 and 2021. Financing charges on the sale of receivables and discounting of letters of credit are included in interest expense in the accompanying Consolidated Statements of Operations and were not material for all years presented.

Our working capital was \$11.8 billion at October 29, 2023 and \$8.5 billion at October 30, 2022.

Days sales outstanding of our accounts receivable at the end of fiscal 2023, 2022 and 2021 was 70 days, 82 days, and 74 days, respectively. Days sales outstanding varies due to the timing of shipments and payment terms. The decrease in days sales outstanding at the end of fiscal 2023 was primarily due to a lower accounts receivable balance as a result of the timing of customer payments compared to the end of fiscal 2022. The increase in days sales outstanding at the end of fiscal 2022 was primarily due to higher accounts receivable balance as a result of the timing of customer payments and lower sales of accounts receivables compared to the end of fiscal 2021.

### ***Investing Activities***

We used \$1.5 billion, \$1.4 billion and \$1.2 billion of cash in investing activities in fiscal 2023, 2022 and 2021, respectively. Capital expenditures in fiscal 2023, 2022 and 2021 were \$1,106 million, \$787 million and \$668 million, respectively. Capital expenditures were primarily for investments in real property acquisitions and improvements, demonstration and testing equipment, manufacturing and network equipment. Net cash paid for acquisitions in fiscal 2023, 2022 and 2021 were \$25 million, \$441 million and \$12 million, respectively. Purchases of investments, net of proceeds from sales and maturities of investments, for 2023, 2022 and 2021 was \$404 million, \$129 million and \$536 million, respectively. Investing activities also included investments in technology to allow us to access new market opportunities or emerging technologies.

Our investment portfolio consists principally of investment grade money market mutual funds, U.S. Treasury and agency securities, municipal bonds, corporate bonds and mortgage-backed and asset-backed securities, as well as equity securities. We regularly monitor the credit risk in our investment portfolio and take appropriate measures, which may include the sale of certain securities, to manage such risks prudently in accordance with our investment policies.

### ***Financing Activities***

We used \$3.0 billion of cash in financing activities in fiscal 2023, consisting primarily of repurchases of common stock of \$2.2 billion, cash dividends to stockholders of \$975 million and tax withholding payments for vested equity awards of \$179 million, offset by proceeds received from common stock issuances of \$227 million and net proceeds from issuances of commercial paper of \$91 million.

We used \$7.0 billion of cash in financing activities in fiscal 2022, consisting primarily of repurchases of common stock of \$6.1 billion, cash dividends to stockholders of \$873 million and tax withholding payments for vested equity awards of \$266 million, offset by proceeds received from common stock issuances of \$199 million.

We used \$4.6 billion of cash in financing activities in fiscal 2021, consisting primarily of repurchases of common stock of \$3.8 billion, cash dividends to stockholders of \$838 million and tax withholding payments for vested equity awards of \$178 million, offset by proceeds received from common stock issuances of \$175 million.

In March 2023, our Board of Directors approved a common stock repurchase program authorizing \$10.0 billion in repurchases, which supplemented the previously existing \$6.0 billion authorization approved in March 2022. At October 29, 2023, approximately \$12.7 billion remained available for future stock repurchases under the repurchase program.

During fiscal 2023, our Board of Directors declared one quarterly cash dividend of \$0.26 per share and three quarterly cash dividends of \$0.32 per share. During fiscal 2022, our Board of Directors declared one quarterly cash dividend of \$0.24 per share and three quarterly cash dividends of \$0.26 per share. During fiscal 2021, our Board of Directors declared one quarterly cash dividend of \$0.22 per share and three quarterly cash dividends of \$0.24 per share. Dividends paid during fiscal 2023, 2022 and 2021 amounted to \$975 million, \$873 million and \$838 million, respectively. We currently anticipate that cash dividends will continue to be paid on a quarterly basis, although the declaration of any future cash dividend is at the discretion of the Board of Directors and will depend on our financial condition, results of operations, capital requirements, business conditions and other factors, as well as a determination by the Board of Directors that cash dividends are in the best interests of our stockholders.

We have credit facilities for unsecured borrowings in various currencies of up to \$1.6 billion, of which \$1.5 billion is comprised of a committed revolving credit agreement (Revolving Credit Agreement) with a group of banks. The Revolving Credit Agreement includes a provision under which we may request an increase in the amount of the facility of up to \$500 million for a total commitment of no more than \$2.0 billion, subject to the receipt of commitments from one or more lenders for any such increase and other customary conditions. The Revolving Credit Agreement is scheduled to expire in February 2026, unless extended as permitted under the Revolving Credit Agreement. The Revolving Credit Agreement provides for borrowings in United States dollars that bear interest for each advance at one of two rates selected by us, plus an applicable margin, which varies according to our public debt credit ratings. The Revolving Credit Agreement includes financial and other covenants with which we were in compliance as of October 29, 2023.

Remaining credit facilities in the amount of approximately \$53 million are with Japanese banks. Our ability to borrow under these facilities is subject to bank approval at the time of the borrowing request, and any advances will be at rates indexed to the banks' prime reference rate denominated in Japanese yen.

We have a short-term commercial paper program under which we may from time to time issue unsecured commercial paper notes of up to a total amount of \$1.5 billion. The proceeds from the issuances of commercial paper are used for general corporate purposes. At October 29, 2023, we had \$100 million of commercial paper notes outstanding. The commercial paper program is backstopped by the Revolving Credit Agreement and borrowings under the Revolving Credit Agreement reduce the amount of commercial paper notes we can issue.

We had senior unsecured notes in the aggregate principal amount of \$5.5 billion outstanding as of October 29, 2023. See Note 10 of the Notes to the Consolidated Financial Statements for additional discussion of existing debt. We may seek to refinance our existing debt and may incur additional indebtedness depending on our capital requirements and the availability of financing.

### ***Others***

On December 22, 2017, the U.S. government enacted the Tax Act, which requires a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries. The transition tax expense is payable in installments over eight years, with eight percent due in each of the first five years starting with fiscal 2018. As of October 29, 2023, we had \$612 million of total payments remaining, payable in installments in the next three years.

Beginning in fiscal 2023, the Tax Act eliminates the option to deduct research and development expenditures currently and requires taxpayers to capitalize and amortize them over five years for activities performed in the U.S. or fifteen years for activities performed outside of the U.S. This capitalization requirement increases our effective tax rates, deferred tax assets and cash tax liabilities beginning in fiscal 2023.

On August 9, 2022, the U.S. government enacted the U.S. CHIPS and Science Act (“CHIPS Act”). The CHIPS Act creates a 25% investment tax credit for certain investments in domestic semiconductor manufacturing. The credit is provided for qualifying property, which is placed in service after December 31, 2022, for which construction begins before January 1, 2027, and is treated as a government grant. We recognize this investment tax credit when there is reasonable assurance that we will qualify for the credit and the benefit will be received.

On August 16, 2022, the U.S. government enacted the Inflation Reduction Act. The Inflation Reduction Act introduces a new 15% corporate minimum tax, based on adjusted financial statement income of certain large corporations. Applicable corporations would be allowed to claim a credit for the minimum tax paid against regular tax in future years. The minimum tax may impact our financial results starting in fiscal 2024. We will evaluate the effect of the corporate minimum tax as more guidance becomes available. The Inflation Reduction Act also includes an excise tax that imposes a 1% surcharge on stock repurchases. This excise tax was effective January 1, 2023. The excise tax is included in our direct cost of stock repurchases and is recorded in equity. We do not expect the excise tax to have a significant impact on our financial results.

Although cash requirements will fluctuate based on the timing and extent of factors such as those discussed above, our management believes that cash generated from operations, together with the liquidity provided by existing cash balances and borrowing capability, will be sufficient to satisfy our liquidity requirements for the next 12 months. For further details regarding our operating, investing and financing activities, see the Consolidated Statements of Cash Flows in this report.

For details on standby letters of credit, guarantee instruments and other agreements with banks, see Off-Balance Sheet Arrangements below.

## **Contractual Obligations and Off-Balance Sheet Arrangements**

We have certain on-balance sheet and off-balance sheet obligation arrangements to make future payments under various contracts. Certain contractual arrangements which are recorded on our balance sheet include borrowing facilities and debts and lease obligations.

### ***Borrowing Facilities and Debt Obligations***

As of October 29, 2023, we had \$5.5 billion in aggregate principal amount of senior unsecured notes with varying maturities. Future interest payments associated with these unsecured notes were \$2.8 billion, of which \$205 million is due within 12 months and the remaining interest payments are due beyond 12 months. See Note 10, Borrowing Facilities and Debt, of the Notes to the Consolidated Financial Statements for further discussion related to our borrowing facilities and debt obligations.

### ***Lease Obligations***

As of October 29, 2023, our operating lease obligation was \$370 million related to various operating lease arrangements for certain facilities and equipment and our finance lease obligation was \$106 million related to lease arrangements that contain a purchase option which we are reasonably certain to exercise at the end of the lease term. See Note 11, Leases, of the Notes to the Consolidated Financial Statements for further discussion relating to these lease obligations.

### ***Purchase Obligations***

As of October 29, 2023, we had \$5.5 billion of purchase obligations for goods and services, of which \$5.1 billion is payable within 12 months and the remaining amount is payable beyond 12 months.

### ***Deemed Repatriation Tax Payable***

As of October 29, 2023, we had \$612 million of transition tax liability, of which \$153 million is payable within 12 months and the remaining amount is payable beyond 12 months. This transition tax liability is associated with the deemed repatriation of accumulated foreign earnings as a result of the enactment of the Tax Act.

### ***Other Long-term Liabilities***

We also have the obligation to fund our pension, postretirement and deferred compensation plans. We evaluate the need to make contributions to our pension and postretirement benefit plans after considering the funded status of the plans, movements in the discount rate, performance of the plan assets and related tax consequences. Payments to the plans would be dependent on these factors and could vary across a wide range of amounts and time periods. Payments for deferred compensation plans are dependent on activity by participants, making the timing of payments uncertain. Information on our pension, postretirement benefit and deferred compensation plans is presented in Note 13, Employee Benefit Plans, of the Notes to the Consolidated Financial Statements.

As of October 29, 2023, the gross liability for unrecognized tax benefits that was not expected to result in payment of cash within one year was \$511 million. Interest and penalties related to uncertain tax positions that were not expected to result in payment of cash within one year of October 29, 2023 was \$136 million. At this time, we are unable to reliably estimate the timing of payments due to uncertainties in the timing of tax audit outcomes.

### ***Off-Balance Sheet Arrangements***

In the ordinary course of business, we provide standby letters of credit or other guarantee instruments to third parties as required for certain transactions initiated by either us or our subsidiaries. These include agreements with various banks to facilitate subsidiary banking operations worldwide, including overdraft arrangements. We also have agreements with various banks to facilitate subsidiary banking operations worldwide, including overdraft arrangements, issuance of bank guarantees, and letters of credit. See Note 15, Warranty, Guarantees, Commitments and Contingencies, of the Notes to the Consolidated Financial Statements for further discussion relating to these arrangements.

## **Critical Accounting Policies and Estimates**

The preparation of consolidated financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make judgments, assumptions and estimates that affect the amounts reported. Note 1 of Notes to Consolidated Financial Statements describes the significant accounting policies used in the preparation of the consolidated financial statements. Certain of these significant accounting policies are considered to be critical accounting policies.

A critical accounting policy is defined as one that is both material to the presentation of our consolidated financial statements and that requires management to make difficult, subjective or complex judgments that could have a material effect on our financial condition or results of operations. Specifically, these policies have the following attributes: (1) we are required to make assumptions about matters that are highly uncertain at the time of the estimate; and (2) different estimates we could reasonably have used, or change in the estimate that are reasonably likely to occur, would have a material effect on our financial condition or results of operations.

Estimates and assumptions about future events and their effects cannot be determined with certainty. We base our estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained and as our operating environment changes. These changes have historically been minor and have been included in the consolidated financial statements as soon as they became known. In addition, management is periodically faced with uncertainties, the outcomes of which are not within our control and will not be known for prolonged periods of time. These uncertainties include those discussed in Part I, Item 1A, "Risk Factors." Based on a critical assessment of our accounting policies and the underlying judgments and uncertainties affecting the application of those policies, management believes that our consolidated financial statements are fairly stated in accordance with accounting principles generally accepted in the United States of America, and provide a meaningful presentation of our financial condition and results of operations.

Management believes that the following are critical accounting policies and estimates:

### ***Revenue Recognition***

We recognize revenue when promised goods or services (performance obligations) are transferred to a customer in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. We perform the following five steps to determine when to recognize revenue: (1) identification of the contract(s) with customers, (2) identification of the performance obligations in the contract, (3) determination of the transaction price, (4) allocation of the transaction price to the performance obligations in the contract, and (5) recognition of revenue when, or as, a performance obligation is satisfied. Management uses judgment to identify performance obligations within a contract and to determine whether multiple promised goods or services in a contract should be accounted for separately or as a group. Judgment is also used in interpreting commercial terms and determining when transfer of control occurs. Moreover, judgment is used to estimate the contract's transaction price and allocate it to each performance obligation. Any material changes in the identification of performance obligations, determination and allocation of the transaction price to performance obligations, and determination of when transfer of control occurs to the customer, could impact the timing and amount of revenue recognition, which could have a material effect on our financial condition and results of operations.

### ***Inventory Valuation***

Inventories are generally stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out (FIFO) basis. The carrying value of inventory is reduced for estimated obsolescence by the difference between its cost and the estimated net realizable value based upon assumptions about future demand. We evaluate the inventory carrying value for potential excess and obsolete inventory exposures by analyzing historical and anticipated demand. In addition, inventories are evaluated for potential obsolescence due to the effect of known and anticipated engineering change orders and new products. If actual demand were to be substantially lower than estimated, additional adjustments for excess or obsolete inventory may be required, which could have a material adverse effect on our business, financial condition and results of operations.



## ***Income Taxes***

Our provision for income taxes and effective tax rate are affected by the geographical composition of pre-tax income which includes jurisdictions with differing tax rates, conditional reduced tax rates and other income tax incentives. It is also affected by events that are not consistent from period to period, such as changes to income tax laws and the resolution of prior years' income tax filings.

We recognize a current tax liability for the estimated amount of income tax payable on tax returns for the current fiscal year. Deferred tax assets and liabilities are recognized for the estimated future tax effects of temporary differences between the book and tax bases of assets and liabilities. Deferred tax assets are also recognized for net operating loss and tax credit carryforwards. Deferred tax assets are offset by a valuation allowance to the extent it is more likely than not that they are not expected to be realized. Deferred tax assets and liabilities are measured based on enacted tax rates that are expected to apply in the period in which the assets are realized or the liabilities are settled. Deferred tax assets and liabilities are adjusted for the effect of a change in tax rates, laws, or status when the change is enacted.

We recognize tax benefits from uncertain tax positions only if it is more likely than not that the tax position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized from such positions are estimated based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. Any changes in judgment related to uncertain tax positions are recognized in our provision for income taxes in the quarter in which such change occurs. Interest and penalties related to uncertain tax positions are recognized in our provision for income taxes.

The calculation of our provision for income taxes and effective tax rate involves significant judgment in estimating the impact of uncertainties in the application of complex tax laws. Resolution of these uncertainties in a manner inconsistent with our expectations could have a material impact on our results of operations and financial condition.

**Item 7A:     *Quantitative and Qualitative Disclosures About Market Risk***

We are exposed to financial market risks, including fluctuations in interest rate and foreign currency exchange rates.

**Interest Rate Risk**

*Available-for-sale Debt Securities.* The market value of our investments in available-for-sale securities was approximately \$2.1 billion at October 29, 2023. An immediate hypothetical 100 basis point increase in interest rates would result in a decrease in the fair value of investments as of October 29, 2023 of approximately \$27 million.

*Debt.* At October 29, 2023, the aggregate principal of long-term senior unsecured notes issued by us was \$5.5 billion with an estimated fair value of \$4.7 billion. A hypothetical decrease in interest rates of 100 basis points would result in an increase in the fair value of our long-term senior notes issuances of approximately \$398 million at October 29, 2023. From time to time, we use interest rate swaps or rate lock agreements to mitigate the potential impact of changes in benchmark interest rates on interest expense and cash flows.

**Foreign Currency Risk**

Certain of our operations are conducted in foreign currencies, such as Japanese yen, Israeli shekel, euro and Taiwanese dollar. Hedges are used to reduce, but not eliminate, the impact of foreign currency exchange rate movements on the consolidated balance sheet, statement of operations, and statement of cash flows.

We use primarily foreign currency forward contracts to offset the impact of foreign exchange movements on non-U.S. dollar denominated monetary assets and liabilities. The foreign exchange gains and losses on the assets and liabilities are recorded in interest and other income (expense), net and are offset by the gains and losses on the hedges.

We use foreign currency forward and option contracts to hedge a portion of anticipated non-U.S. dollar denominated revenues and expenses expected to occur within the next 24 months. Gains and losses on these hedging contracts generally mitigate the effect of currency movements on our net sales, cost of products sold, and operating expenses. A hypothetical 10% adverse change in foreign currency exchange rates relative to the U.S. Dollar would result in a decrease in the fair value of these hedging contracts of \$163 million at October 29, 2023.

We do not use foreign currency forward or option contracts for trading or speculative purposes.

**Item 8:     *Financial Statements and Supplementary Data***

The consolidated financial statements required by this Item are set forth on the pages indicated at Item 15(a).

**Item 9:     *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

None.

**Item 9A: Controls and Procedures****Disclosure Controls and Procedures**

As of the end of the period covered by this report, our management conducted an evaluation, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) of the Securities Exchange Act of 1934 (the Exchange Act). Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report in ensuring that information required to be disclosed was recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and to provide reasonable assurance that information required to be disclosed by us in such reports is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

**Management's Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) of the Exchange Act. Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, our management conducted an evaluation of the effectiveness of our internal control over financial reporting based upon the framework in "Internal Control — Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of October 29, 2023.

KPMG LLP, an independent registered public accounting firm, has audited the consolidated financial statements included in this Form 10-K and, as part of the audit, has issued a report, included herein, on the effectiveness of our internal control over financial reporting as of October 29, 2023.

**Changes in Internal Control over Financial Reporting**

During the fourth quarter of fiscal 2023, there were no changes in the internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Inherent Limitations of Disclosure Controls and Procedures and Internal Control over Financial Reporting**

It should be noted that any system of controls, however well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system will be met. In addition, the design of any control system is based in part upon certain assumptions about the likelihood of future events.

**Item 9B: Other Information**

During the three months ended October 29, 2023, no director or officer, as defined in Rule 16a-1(f), adopted or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement," each as defined in Regulation S-K Item 408.

**Item 9C: Disclosure Regarding Foreign Jurisdictions that Prevent Inspections**

Not applicable.

## PART III

### **Item 10: *Directors, Executive Officers and Corporate Governance***

Except for the information regarding executive officers required by Item 401 of Regulation S-K (which is included in Part I, Item 1 of this Annual Report on Form 10-K, under “Information about our Executive Officers”) and code of ethics (which is set forth below), the information required by this item will be provided in accordance with Instruction G(3) to Form 10-K no later than February 26, 2024.

We have implemented the Standards of Business Conduct, a code of ethics with which every person who works for us and every member of the Board of Directors is expected to comply. If any substantive amendments are made to the Standards of Business Conduct or any waiver is granted, including any implicit waiver, from a provision of the code to our Chief Executive Officer, Chief Financial Officer or Chief Accounting Officer, we will disclose the nature of such amendment or waiver on our website or in a report on Form 8-K. The above information, including the Standards of Business Conduct, is available on our website under the Governance Documents section at <https://www.appliedmaterials.com/us/en/about/corporate-governance.html>. This website address is intended to be an inactive, textual reference only. None of the materials on, or accessible through, this website is part of this report or is incorporated by reference herein.

### **Item 11: *Executive Compensation***

The information required by this Item will be provided in accordance with Instruction G(3) to Form 10-K no later than February 26, 2024.

**Item 12: Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

Except for the information regarding securities authorized for issuance under equity compensation plans (which is set forth below), the information required by this Item will be provided in accordance with Instruction G(3) to Form 10-K no later than February 26, 2024.

The following table summarizes information with respect to equity awards under our equity compensation plans as of October 29, 2023:

**Equity Compensation Plan Information**

Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights(1)	(b) Weighted Average Exercise Price of Outstanding Options, Warrants and Rights(2)	(c) Number of Securities Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))
(In millions, except prices)			
Equity compensation plans approved by security holders	12	\$ —	37 <sup>(3)</sup>
Total	12	\$ —	37

- (1) Includes only restricted stock units and performance share units outstanding under our equity compensation plans, as no options, stock warrants or other rights were outstanding as of October 29, 2023.
- (2) The weighted average exercise price calculation does not take into account any restricted stock units or performance shares.
- (3) Includes 12 million shares of our common stock available for future issuance under the Applied Materials, Inc. Omnibus Employees' Stock Purchase Plan. Of these 12 million shares, 1 million are subject to purchase during the purchase period in effect as of October 29, 2023.

We have the following equity compensation plan that has not been approved by stockholders:

*Applied Materials Profit Sharing Scheme.* The Applied Materials Profit Sharing Scheme was adopted effective July 3, 1996 to enable employees of Applied Materials Ireland Limited and its participating subsidiaries to purchase our common stock at 100% of fair market value on the purchase date. Under this plan, eligible employees may elect to forego a certain portion of their base salary and certain bonuses they have earned and that otherwise would be payable in cash to purchase shares of our common stock at full fair market value. Since the eligible employees pay full fair market value for the shares, there is no reserved amount of shares under this plan and, accordingly, the table above does not include any set number of shares available for future issuance under the plan.

**Item 13: *Certain Relationships and Related Transactions, and Director Independence***

The information required by this Item will be provided in accordance with Instruction G(3) to Form 10-K no later than February 26, 2024.

**Item 14: *Principal Accounting Fees and Services***

Our independent registered public accounting firm is KPMG LLP, Santa Clara, California, Auditor Firm ID: 185.

The information required by this Item will be provided in accordance with Instruction G(3) to Form 10-K no later than February 26, 2024.

## PART IV

### Item 15: *Exhibits, Financial Statement Schedules*

(a) The following documents are filed as part of this Annual Report on Form 10-K:

	<u>Page Number</u>
(1) Financial Statements:	
<u>Reports of Independent Registered Public Accounting Firm</u>	<u>56</u>
<u>Consolidated Statements of Operations</u>	<u>59</u>
<u>Consolidated Statements of Comprehensive Income</u>	<u>60</u>
<u>Consolidated Balance Sheets</u>	<u>61</u>
<u>Consolidated Statements of Stockholders' Equity</u>	<u>62</u>
<u>Consolidated Statements of Cash Flows</u>	<u>63</u>
<u>Notes to Consolidated Financial Statements</u>	<u>64</u>
(2) Exhibits:	
<u>The exhibits listed in the accompanying Index to Exhibits are filed or incorporated by reference as part of this Annual Report on Form 10-K</u>	<u>99</u>

All other schedules are omitted because they are not applicable or the required information is shown in the Consolidated Financial Statements or Notes thereto.

### Item 16: *Form 10-K Summary*

None.



## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors  
Applied Materials, Inc.:

### *Opinion on the Consolidated Financial Statements*

We have audited the accompanying consolidated balance sheets of Applied Materials, Inc. and subsidiaries (the Company) as of October 29, 2023 and October 30, 2022, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended October 29, 2023, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of October 29, 2023 and October 30, 2022, and the results of its operations and its cash flows for each of the years in the three-year period ended October 29, 2023, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of October 29, 2023, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated December 15, 2023 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

### *Basis for Opinion*

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

### *Critical Audit Matter*

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

*Evaluation of net realizable value adjustments to inventories for excess or obsolescence*

As discussed in notes 1 and 8 to the consolidated financial statements, the Company has inventories with a carrying value of \$5,725 million as of October 29, 2023. The Company adjusts inventory carrying value for estimated excess or obsolescence equal to the difference between cost of inventory and the estimated net realizable value based upon assumptions about future demand and market conditions. If actual demand were to be substantially lower than estimated, there could be a significant adverse impact on the carrying value of inventories and results of operations.

We identified the evaluation of net realizable value adjustments to certain inventories for excess or obsolescence as a critical audit matter. Evaluation of the Company's estimates regarding forecasted sales and inventory consumption involved a high degree of auditor judgment.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's process for determining net realizable value adjustments for inventory excess or obsolescence, including controls related to estimating forecasted sales and inventory consumption. We evaluated certain inventories for excess or obsolescence by comparing the Company's sales and inventory consumption forecast to historical sales, historical inventory usage, known customer orders, and industry outlook reports. In addition, for certain inventories, we compared the Company's historical estimates of net realizable value adjustments for excess and obsolescence to the actual physical inventory disposals to evaluate the Company's ability to accurately estimate the net realizable value adjustments.

/s/ KPMG LLP

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KPMG LLP

We have served as the Company's auditor since 2004.

Santa Clara, California

December 15, 2023

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors  
Applied Materials, Inc.:

### *Opinion on Internal Control Over Financial Reporting*

We have audited Applied Materials, Inc. and subsidiaries' (the Company) internal control over financial reporting as of October 29, 2023, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of October 29, 2023, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of October 29, 2023 and October 30, 2022, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended October 29, 2023, and the related notes (collectively, the consolidated financial statements), and our report dated December 15, 2023 expressed an unqualified opinion on those consolidated financial statements.

### *Basis for Opinion*

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### *Definition and Limitations of Internal Control Over Financial Reporting*

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP  
KPMG LLP

Santa Clara, California  
December 15, 2023

**APPLIED MATERIALS, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(In millions, except per share amounts)

<b>Fiscal Year</b>	<b>2023</b>	<b>2022</b>	<b>2021</b>
Net sales	\$ 26,517	\$ 25,785	\$ 23,063
Cost of products sold	14,133	13,792	12,149
Gross profit	12,384	11,993	10,914
Operating expenses:			
Research, development and engineering	3,102	2,771	2,485
Marketing and selling	776	703	609
General and administrative	852	735	620
Severance and related charges	—	(4)	157
Deal termination fee	—	—	154
Total operating expenses	4,730	4,205	4,025
Income from operations	7,654	7,788	6,889
Interest expense	238	228	236
Interest and other income (expense), net	300	39	118
Income before income taxes	7,716	7,599	6,771
Provision for income taxes	860	1,074	883
Net income	\$ 6,856	\$ 6,525	\$ 5,888
Earnings per share:			
Basic	\$ 8.16	\$ 7.49	\$ 6.47
Diluted	\$ 8.11	\$ 7.44	\$ 6.40
Weighted average number of shares:			
Basic	840	871	910
Diluted	845	877	919

See accompanying Notes to Consolidated Financial Statements.

**APPLIED MATERIALS, INC.**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**  
(In millions)

Fiscal Year	2023	2022	2021
Net income	\$ 6,856	\$ 6,525	\$ 5,888
Other comprehensive income (loss), net of tax:			
Change in unrealized gain (loss) on available-for-sale investments	25	(74)	(21)
Change in unrealized net loss on derivative instruments	(66)	51	30
Change in defined and postretirement benefit plans	26	81	30
Other comprehensive income (loss), net of tax	(15)	58	39
Comprehensive income	<u>\$ 6,841</u>	<u>\$ 6,583</u>	<u>\$ 5,927</u>

See accompanying Notes to Consolidated Financial Statements.

**APPLIED MATERIALS, INC.**  
**CONSOLIDATED BALANCE SHEETS**  
(In millions, except per share amounts)

	October 29, 2023	October 30, 2022
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 6,132	\$ 1,995
Short-term investments	737	586
Accounts receivable, net	5,165	6,068
Inventories	5,725	5,932
Other current assets	1,388	1,344
Total current assets	19,147	15,925
Long-term investments	2,281	1,980
Property, plant and equipment, net	2,723	2,307
Goodwill	3,732	3,700
Purchased technology and other intangible assets, net	294	339
Deferred income taxes and other assets	2,552	2,475
Total assets	<u>\$ 30,729</u>	<u>\$ 26,726</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Short-term debt	\$ 100	\$ —
Accounts payable and accrued expenses	4,297	4,237
Contract liabilities	2,975	3,142
Total current liabilities	7,372	7,379
Long-term debt	5,461	5,457
Income taxes payable	833	964
Other liabilities	714	732
Total liabilities	14,380	14,532
Commitments and contingencies (Note 15)		
Stockholders' equity:		
Preferred stock: \$0.01 par value per share; 1 shares authorized; no shares issued	—	—
Common stock: \$0.01 par value per share; 2,500 shares authorized; 833 and 844 shares outstanding at 2023 and 2022, respectively	8	8
Additional paid-in capital	9,131	8,593
Retained earnings	43,726	37,892
Treasury stock: 1,191 and 1,173 shares at 2023 and 2022, respectively	(36,299)	(34,097)
Accumulated other comprehensive loss	(217)	(202)
Total stockholders' equity	16,349	12,194
Total liabilities and stockholders' equity	<u>\$ 30,729</u>	<u>\$ 26,726</u>

See accompanying Notes to Consolidated Financial Statements.

**APPLIED MATERIALS, INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
(In millions, except per share amounts)

	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			Shares	Amount		
Balance at October 25, 2020	914	\$ 9	\$ 7,904	\$ 27,209	1,091	\$ (24,245)	\$ (299)	\$ 10,578
Net income	—	—	—	5,888	—	—	—	5,888
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	39	39
Dividends declared (\$0.94 per common share)	—	—	—	(851)	—	—	—	(851)
Share-based compensation	—	—	346	—	—	—	—	346
Net issuance under stock plans	6	—	(3)	—	—	—	—	(3)
Common stock repurchases	(28)	—	—	—	28	(3,750)	—	(3,750)
Balance at October 31, 2021	892	\$ 9	\$ 8,247	\$ 32,246	1,119	\$ (27,995)	\$ (260)	\$ 12,247
Net income	—	—	—	6,525	—	—	—	6,525
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	58	58
Dividends declared (\$1.02 per common share)	—	—	—	(879)	—	—	—	(879)
Share-based compensation	—	—	413	—	—	—	—	413
Net issuance under stock plans	6	—	(67)	—	—	—	—	(67)
Common stock repurchases	(54)	(1)	—	—	54	(6,102)	—	(6,103)
Balance at October 30, 2022	844	\$ 8	\$ 8,593	\$ 37,892	1,173	\$ (34,097)	\$ (202)	\$ 12,194
Net income	—	—	—	6,856	—	—	—	6,856
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	(15)	(15)
Dividends declared (\$1.22 per common share)	—	—	—	(1,022)	—	—	—	(1,022)
Share-based compensation	—	—	490	—	—	—	—	490
Net issuance under stock plans	7	—	48	—	—	—	—	48
Common stock repurchases	(18)	—	—	—	18	(2,202)	—	(2,202)
Balance at October 29, 2023	833	\$ 8	\$ 9,131	\$ 43,726	1,191	\$ (36,299)	\$ (217)	\$ 16,349

See accompanying Notes to Consolidated Financial Statements.



**APPLIED MATERIALS, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(In millions)

Fiscal Year	2023	2022	2021
Cash flows from operating activities:			
Net income	\$ 6,856	\$ 6,525	\$ 5,888
Adjustments required to reconcile net income to cash provided by operating activities:			
Depreciation and amortization	515	444	394
Severance and related charges	—	(4)	148
Deferred income taxes	24	(223)	80
Other	40	36	(70)
Share-based compensation	490	413	346
Changes in operating assets and liabilities, net of amounts acquired:			
Accounts receivable	903	(1,109)	(1,989)
Inventories	207	(1,590)	(405)
Other current and non-current assets	(48)	(16)	(602)
Accounts payable and accrued expenses	(138)	390	465
Contract liabilities	(167)	1,039	755
Income taxes payable	(20)	(541)	396
Other liabilities	38	35	36
Cash provided by operating activities	8,700	5,399	5,442
Cash flows from investing activities:			
Capital expenditures	(1,106)	(787)	(668)
Cash paid for acquisitions, net of cash acquired	(25)	(441)	(12)
Proceeds from sales and maturities of investments	1,268	1,363	1,471
Purchases of investments	(1,672)	(1,492)	(2,007)
Cash used in investing activities	(1,535)	(1,357)	(1,216)
Cash flows from financing activities:			
Proceeds from commercial paper	991	—	—
Repayments of commercial paper	(900)	—	—
Proceeds from common stock issuances	227	199	175
Common stock repurchases	(2,189)	(6,103)	(3,750)
Tax withholding payments for vested equity awards	(179)	(266)	(178)
Payments of dividends to stockholders	(975)	(873)	(838)
Repayments of principals on finance leases	(7)	—	—
Cash used in financing activities	(3,032)	(7,043)	(4,591)
Increase (decrease) in cash, cash equivalents and restricted cash equivalents	4,133	(3,001)	(365)
Cash, cash equivalents and restricted cash equivalents — beginning of period	2,100	5,101	5,466
Cash, cash equivalents and restricted cash equivalents — end of period	\$ 6,233	\$ 2,100	\$ 5,101
Reconciliation of cash, cash equivalents, and restricted cash equivalents			
Cash and cash equivalents	\$ 6,132	\$ 1,995	\$ 4,995
Restricted cash equivalents included in deferred income taxes and other assets	101	105	106
Total cash, cash equivalents, and restricted cash equivalents	\$ 6,233	\$ 2,100	\$ 5,101
Supplemental cash flow information:			
Cash payments for income taxes	\$ 1,006	\$ 1,869	\$ 851
Cash refunds from income taxes	\$ 53	\$ 156	\$ 27
Cash payments for interest	\$ 205	\$ 205	\$ 205

See accompanying Notes to Consolidated Financial Statements.

**APPLIED MATERIALS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1    Summary of Significant Accounting Policies**

*Principles of Consolidation and Basis of Presentation*

The consolidated financial statements include the accounts of Applied Materials, Inc. and its subsidiaries (we, us, and our) after elimination of intercompany balances and transactions. All references to a fiscal year apply to our fiscal year which ends on the last Sunday in October. Fiscal 2023, 2022 and 2021 contained 52, 52 and 53 weeks, respectively. Each fiscal quarter of 2023 and 2022 contained 13 weeks. The first fiscal quarter of 2021 contained 14 weeks, while the second, third and fourth quarters of fiscal 2021 contained 13 weeks.

*Use of Estimates*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make judgments, estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ materially from those estimates. On an ongoing basis, we evaluate our estimates, including those related to standalone selling price (SSP) related to revenue recognition, accounts receivable and sales allowances, fair values of financial instruments, inventories, intangible assets and goodwill, useful lives of intangible assets and property and equipment, fair values of share-based awards, warranty, and income taxes, among others. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities.

*Cash Equivalents*

All highly-liquid investments with a remaining maturity of three months or less at the time of purchase are considered to be cash equivalents. Cash equivalents consist primarily of investments in institutional money market funds and investment grade commercial paper.

*Investments*

All of our investments, except equity investments, are classified as available-for-sale at the respective balance sheet dates. Investments classified as available-for-sale are measured and recorded in the Consolidated Balance Sheets at fair value, and unrealized gains and losses, net of tax, are reported as a separate component of other comprehensive income. Interest earned on cash and investments, as well as realized gains and losses on sale of securities, are included in interest and other income, net in the Consolidated Statements of Operations.

Our equity investments with readily determinable values consist of publicly traded equity securities. These investments are measured at fair value using quoted prices for identical assets in an active market. Privately held equity investments without readily determinable fair value are measured at cost, less impairment, adjusted by observable price changes. Adjustments resulting from impairments and observable price changes are recorded in interest and other income, net in the Consolidated Statements of Operations.

*Allowance for Credit Losses*

We maintain an allowance for credit losses for estimated losses resulting from the inability of our customers to make required payments. This allowance is based on historical experience, credit evaluations, specific customer collection history and any customer-specific issues we have identified. Changes in circumstances, such as an unexpected material adverse change in a major customer's ability to meet its financial obligation to us or its payment trends, may require us to further adjust our estimates of the recoverability of amounts due to us. Bad debt expense and any reversals are recorded in marketing and selling expenses in the Consolidated Statement of Operations.

*Inventories*

Inventories are stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out (FIFO) basis. We adjust inventory carrying value for estimated obsolescence equal to the difference between the cost of inventory and the estimated net realizable value based upon assumptions about future demand and market conditions. We fully write down inventories and noncancelable purchase orders for inventory deemed obsolete. We perform periodic reviews of inventory items to identify excess inventories on hand by comparing on-hand balances to anticipated usage using recent historical activity as well as anticipated or forecasted demand. If estimates of customer demand diminish further or market conditions become less favorable than those projected by us, additional inventory adjustments may be required.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Property, Plant and Equipment*

Property, plant and equipment is stated at cost. Depreciation is provided over the estimated useful lives of the assets using the straight-line method. Estimated useful lives for financial reporting purposes are as follows: buildings and improvements, 3 to 30 years; demonstration and manufacturing equipment, 3 to 5 years; software, 3 to 5 years; and furniture, fixtures and other equipment, 3 to 5 years. Land improvements are amortized over the shorter of 15 years or the estimated useful life. Leasehold improvements are amortized over the shorter of five years or the lease term.

In connection with our periodic review of estimated useful lives of the property, plant, and equipment subsequent to the end of fiscal 2023, we will increase the estimated useful lives of certain assets. The estimated useful lives of certain buildings and improvements will increase by 5 years. The estimated range of useful lives of demonstration and manufacturing equipment will increase to between 5 to 8 years. This change in accounting estimate will be effective beginning fiscal year 2024 and will be applied on a prospective basis to the assets on our balance sheet as of October 29, 2023, as well as to future asset purchases. Based on the carrying amount of the assets included in property, plant and equipment, net in our Consolidated Balance Sheet as of October 29, 2023, we currently estimate this change will increase income from operations before income taxes in fiscal 2024 by approximately \$128 million as a result of the reduction in depreciation expense.

*Government Assistance*

We receive government assistance from various domestic and foreign governments in the form of cash grants or refundable tax credits. These arrangements incentivize us to continue growing our capital investments and research and development activities. Government incentives generally contain conditions that must be met in order for the assistance to be earned. We recognize the incentives when there is reasonable assurance that we will comply with all conditions specified in the incentive arrangement and the incentive will be received.

We record capital expenditure related incentives as an offset to the associated property, plant and equipment, net within our Consolidated Balance Sheets and recognize a reduction to depreciation expense over the useful life of the corresponding acquired asset. We record incentives related to operating activities as a reduction to expense in the same line item on the Consolidated Statements of Operations as the expenditure for which the grant is intended to compensate. Capital expenditure related incentives reduced gross property, plant and equipment, net by \$154 million in fiscal 2023. Contra-depreciation expense was not material in fiscal 2023. Operating incentives recognized as a reduction to research, development and engineering expense was \$53 million in fiscal 2023. Capital expenditure related incentives reduced our income taxes payable by \$149 million as of October 29, 2023, of which \$140 million is in accounts payable and accrued expenses and \$9 million is in income taxes payable, in our Consolidated Balance Sheets.

*Goodwill and Intangible Assets*

Intangible asset are generally recorded in connection with a business acquisition. The value assigned to intangible assets is usually based on estimates and judgments regarding expectations for the success and life cycle of products and technology acquired. We evaluate the useful lives of our intangible assets each reporting period to determine whether events and circumstances require revising the remaining period of amortization. In addition, we review intangible assets for impairment when events or changes in circumstances indicate their carrying value may not be recoverable. Management considers such indicators as significant differences in actual product acceptance from the estimates, changes in the competitive and economic environments, technological advances, and changes in cost structure.

Intangible assets with infinite lives are not subject to amortization and consist primarily of in-process technology, which will be subject to amortization upon commercialization. If an in-process technology project is abandoned, the acquired technology attributable to the project will be written-off.

Goodwill and intangible assets with indefinite useful lives are not amortized but are reviewed for impairment annually during the fourth quarter of each fiscal year and whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. Intangible assets with finite lives are presented at cost, net of accumulated amortization, and are amortized over their estimated useful lives of 1 to 15 years using the straight-line method.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The process of evaluating the potential impairment of goodwill and intangible assets requires judgment. When reviewing goodwill for impairment, we first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. In performing a qualitative assessment, we consider business conditions and other factors including, but not limited to (i) adverse industry or economic trends, (ii) restructuring actions and lower projections that may impact future operating results, (iii) sustained decline in share price, and (iv) overall financial performance and other events affecting the reporting units. If we conclude that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then a quantitative impairment test is performed by estimating the fair value of the reporting unit and comparing it to its carrying value. If the carrying value of a reporting unit exceeds its fair value, we would record an impairment charge equal to the excess of the carrying value of the reporting unit over its fair value.

*Long-Lived Assets*

We evaluate long-lived assets for impairment whenever events or changes in circumstances indicate the carrying value of an asset group may not be recoverable. We assess the fair value of the assets based on the amount of the undiscounted future cash flow that the assets are expected to generate and recognize an impairment loss when estimated undiscounted future cash flow expected to result from the use of the asset, plus net proceeds expected from disposition of the asset, if any, are less than the carrying value of the asset. When we identify an impairment, we reduce the carrying value of the group of assets to comparable market values, when available and appropriate, or to our estimated fair value based on a discounted cash flow approach.

*Revenue Recognition from Contracts with Customers*

We recognize revenue when promised goods or services are transferred to a customer in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. We determine revenue recognition through the following five steps: (1) identification of the contract(s) with customers, (2) identification of the performance obligations in the contract, (3) determination of the transaction price, (4) allocation of the transaction price to the performance obligations in the contract, and (5) recognition of revenue when, or as, a performance obligation is satisfied.

*Identifying the contract(s) with customers.* We sell manufacturing equipment, services, and spare parts directly to our customers in the semiconductor, display, and related industries. We generally consider written documentation including, but not limited to, signed purchase orders, master agreements, and sales orders as contracts provided that collection is probable. Collectability is assessed based on the customer's creditworthiness determined by reviewing the customer's published credit and financial information, historical payment experience, as well as other relevant factors.

*Identifying the performance obligations.* Our performance obligations include delivery of manufacturing equipment, service agreements, spare parts, installation, extended warranty and training. Our service agreements are considered one performance obligation and may include multiple goods and services that we provide to the customer to deliver against a performance metric. Judgment is used to determine whether multiple promised goods or services in a contract should be accounted for separately or as a group.

*Determine the transaction price.* The transaction price for our contracts with customers may include fixed and variable consideration. We include variable consideration in the transaction price to the extent that it is probable that a significant reversal of revenue will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

*Allocate the transaction price to the performance obligations.* A contract's transaction price is allocated to each distinct performance obligation identified within the contract. We generally estimate the standalone selling price of a distinct performance obligation based on historical cost plus an appropriate margin. For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using the relative standalone selling price of each distinct good or service in the contract.

*Recognizing the revenue as performance obligations are satisfied.* We recognize revenue from equipment and spares parts at a point in time when we have satisfied our performance obligation by transferring control of the goods to the customer which typically occurs at shipment or delivery. Revenue from service agreements is recognized over time, typically within 12 months, as customers receive the benefits of services.

The incremental costs to obtain a contract are not material.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Payment Terms.* Payment terms vary by contract. Generally, the majority of payments are due within a certain number of days from shipment of goods or performance of service. The remainder is typically due upon customer technical acceptance. We typically receive deposits on future deliverables from customers in the Semiconductor Systems and Display and Adjacent Markets segments and, in certain instances, may also receive deposits from customers in the Applied Global Services segment. Our payment terms do not generally contain a significant financing component.

*Shipping and Handling Costs*

We account for shipping and handling activities related to contracts with customers as costs to fulfill our promise to transfer the associated products. Accordingly, amounts billed for shipping and handling costs are recorded as a component of net sales and costs as a component of cost of products sold.

*Warranty*

We provide for the estimated cost of warranty when revenue is recognized. Estimated warranty costs are determined by analyzing specific product, current and historical configuration statistics and regional warranty support costs. Our warranty obligation is affected by product and component failure rates, material usage and labor costs incurred in correcting product failures during the warranty period. If actual warranty costs differ substantially from our estimates, revisions to the estimated warranty liability would be required.

We also sell extended warranty contracts to our customers which provide an extension of the standard warranty coverage period of up to 2 years. We receive payment at the inception of the contract and recognizes revenue ratably over the extended warranty coverage period, as the customer simultaneously receives and consumes the benefits of the extended warranty.

*Sales and Value Added Taxes*

Taxes collected from customers and remitted to governmental authorities are presented on a net basis in the Consolidated Statements of Operations.

*Research, Development and Engineering Costs*

Research, development and engineering costs are expensed as incurred.

*Income Taxes*

We recognize a current tax liability for the estimated amount of income tax payable on tax returns for the current fiscal year. Deferred tax assets and liabilities are recognized for the estimated future tax effects of temporary differences between the book and tax bases of assets and liabilities. Deferred tax assets are also recognized for net operating loss and tax credit carryovers. Deferred tax assets are offset by a valuation allowance to the extent it is more likely than not that they are not expected to be realized. Deferred tax assets and liabilities are measured based on enacted tax rates that are expected to apply in the period in which the assets are realized or the liabilities are settled. Deferred tax assets and liabilities are adjusted for the effect of a change in tax rates, laws, or status when the change is enacted.

We recognize tax benefits from uncertain tax positions only if it is more likely than not that the tax position will be sustained upon examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized from such positions are estimated based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. Any changes in judgment related to uncertain tax positions are recognized in our provision for income taxes in the quarter in which such change occurs. Interest and penalties related to uncertain tax positions are recognized in our provision for income taxes.



## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Derivative Financial Instruments*

We use financial instruments, such as foreign currency forward and option contracts, to hedge a portion of, but not all, existing and anticipated foreign currency denominated transactions typically expected to occur within 24 months. The purpose of our foreign currency management is to mitigate the effect of exchange rate fluctuations on certain foreign currency denominated revenues, costs and eventual cash flows. In certain cases, we also use interest rate swap or lock agreements to hedge against the variability of cash flows due to changes in the benchmark interest rate of fixed rate debt. The terms of derivative financial instruments used for hedging purposes are generally consistent with the timing of the transactions being hedged. Our derivative financial instruments are recorded as assets or liabilities at fair value and reported gross on our Consolidated Balance Sheets. However, under master netting agreements in place with our counterparties, we may net settle transactions of the same currency under certain circumstances. For derivative instruments designated and qualifying as cash flow hedges, the gain or loss is reported as a component of accumulated other comprehensive income (loss) in stockholders' equity, and is reclassified into earnings when the hedged transaction affects earnings. Any portion excluded from the assessment of effectiveness is recognized in the same line as the hedged transaction but may be recognized in a different manner, e.g. amortized. If a hedged transaction becomes probable of not occurring according to the original strategy, the hedge relationship is discontinued and we recognize the gain or loss on the associated derivative in earnings. For hedges of existing foreign currency denominated assets or liabilities, the gain or loss is recorded in earnings in the same period to offset the changes in the fair value of the assets or liabilities being hedged.

*Foreign Currency*

As of October 29, 2023, all of our subsidiaries use the United States dollar as their functional currency. Accordingly, assets and liabilities of these subsidiaries are remeasured using exchange rates in effect at the end of the period, except for non-monetary assets, such as inventories and property, plant and equipment, which are remeasured using historical exchange rates. Foreign currency-denominated revenues and costs are remeasured using average exchange rates for the period, except for costs related to the non-monetary assets and liabilities, which are remeasured using historical exchange rates. The resulting remeasurement gains and losses are included in interest and other income, net in the Consolidated Statements of Operations as incurred.

*Concentrations of Credit Risk*

Financial instruments that potentially subject us to significant concentrations of credit risk consist principally of cash equivalents, investments, trade accounts receivable and derivative financial instruments used in hedging activities. We invest in a variety of financial instruments, such as, but not limited to, commercial paper, corporate bonds, municipal securities, United States Treasury and agency securities, and asset-backed and mortgage-backed securities, and, by policy, limits the amount of credit exposure with any one financial institution or commercial issuer. We are exposed to credit-related losses in the event of nonperformance by counterparties to derivative financial instruments but do not expect any counterparties to fail to meet their obligations. We perform ongoing credit evaluations of our customers' financial condition and generally require no collateral to secure accounts receivable. We maintain an allowance for potentially uncollectible accounts receivable based on our assessment of the collectability of accounts receivable. We regularly review the allowance by considering factors such as historical experience, credit quality, age of the accounts receivable balances, and current economic conditions that may affect a customer's ability to pay. In addition, we utilize deposits and/or letters of credit to mitigate credit risk when considered appropriate.

*Recent Accounting Pronouncements**Accounting Standards Adopted*

*Disclosures by Business Entities about Government Assistance.* In November 2021, the Financial Accounting Standards Board (FASB) issued an accounting standard update which requires annual disclosures related to certain government assistance received by business entities (Topic 832) including (1) the types of assistance, (2) the entity's accounting for the assistance, and (3) the effect of the assistance on an entity's financial statements. We adopted this guidance for our fiscal 2023 Form 10-K. The adoption of this authoritative guidance only impacted the disclosures in our notes to consolidated financial statements.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Accounting Standards Not Yet Adopted*

*Improvements to Reportable Segment Disclosures.* In November 2023, the FASB issued an accounting standard update to improve reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses (Topic 280). The standard requires interim and annual disclosure of significant segment expenses that are regularly provided to the chief operating decision-maker (CODM) and included within the reported measure of a segment's profit or loss, requires interim disclosures about a reportable segment's profit or loss and assets that are currently required annually, requires disclosure of the position and title of the CODM, clarifies circumstances in which an entity can disclose multiple segment measures of profit or loss and contains other disclosure requirements. This authoritative guidance will be effective for us in fiscal 2025 for annual periods and in the first quarter of fiscal 2026 for interim periods, with early adoption permitted. We are currently evaluating the effect of this new guidance on our consolidated financial statements.

*Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions.* In June 2022, the FASB issued an accounting standard update which clarifies how the fair value of equity securities subject to contractual sale restrictions is determined (Topic 820). The amendment clarifies that a contractual sale restriction should not be considered in measuring fair value. It also requires certain qualitative and quantitative disclosures related to equity securities subject to contractual sale restrictions. This authoritative guidance will be effective for us in the first quarter of fiscal 2025, with early adoption permitted. We are currently evaluating the effect of this new guidance on our consolidated financial statements.

*Contract Assets and Contract Liabilities from Revenue Contracts with Customers in a Business Combination.* In October 2021, the FASB issued an accounting standard update to improve the accounting for contract assets and contract liabilities from revenue contracts with customers in a business combination (Topic 805). This amendment improves comparability for both the recognition and measurement of acquired revenue contracts with customers at the date of and after a business combination. This authoritative guidance will be effective for us in the first quarter of fiscal 2024. The impact of the adoption depends on the facts and circumstances of future acquisitions.

**Note 2 Earnings Per Share**

Basic earnings per share is determined using the weighted average number of common shares outstanding during the period. Diluted earnings per share is determined using the weighted average number of common shares and potential common shares (representing the dilutive effect of restricted stock units and employee stock purchase plan shares) outstanding during the period. Our net income has not been adjusted for any period presented for purposes of computing basic or diluted earnings per share due to our non-complex capital structure.

Fiscal Year	2023	2022	2021
(In millions, except per share amounts)			
Numerator:			
Net income	\$ 6,856	\$ 6,525	\$ 5,888
Denominator:			
Weighted average common shares outstanding	840	871	910
Effect of weighted dilutive restricted stock units and employee stock purchase plan shares	5	6	9
Denominator for diluted earnings per share	845	877	919
Basic earnings per share	\$ 8.16	\$ 7.49	\$ 6.47
Diluted earnings per share	\$ 8.11	\$ 7.44	\$ 6.40
Potentially weighted dilutive securities	—	3	—

Excluded from the calculation of diluted earnings per share are securities attributable to outstanding restricted stock units where the combined exercise price and average unamortized fair value are greater than the average market price of our common stock, and therefore their inclusion would be anti-dilutive.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 3 Cash, Cash Equivalents and Investments**

***Summary of Cash, Cash Equivalents and Investments***

The following tables summarize our cash, cash equivalents and investments by security type:

<u>October 29, 2023</u>	<u>Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Estimated Fair Value</u>
	<b>(In millions)</b>			
Cash	\$ 1,417	\$ —	\$ —	\$ 1,417
Cash equivalents:				
Money market funds*	3,260	—	—	3,260
Municipal securities	26	—	—	26
Commercial paper, corporate bonds and medium-term notes	1,429	—	—	1,429
Total cash equivalents	4,715	—	—	4,715
Total cash and cash equivalents	<u>\$ 6,132</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 6,132</u>
Short-term and long-term investments:				
Bank certificates of deposit and time deposits	\$ 18	\$ —	\$ —	\$ 18
U.S. Treasury and agency securities	381	—	7	374
Non-U.S. government securities**	7	—	1	6
Municipal securities	438	—	11	427
Commercial paper, corporate bonds and medium-term notes	760	—	12	748
Asset-backed and mortgage-backed securities	502	—	15	487
Total fixed income securities	2,106	—	46	2,060
Publicly traded equity securities	543	171	16	698
Equity investments in privately held companies	192	78	10	260
Total equity investments	735	249	26	958
Total short-term and long-term investments	<u>\$ 2,841</u>	<u>\$ 249</u>	<u>\$ 72</u>	<u>\$ 3,018</u>
Total cash, cash equivalents and investments	<u>\$ 8,973</u>	<u>\$ 249</u>	<u>\$ 72</u>	<u>\$ 9,150</u>

\*Excludes \$101 million of restricted cash equivalents invested in money market funds related to deferred compensation plans.

\*\*Includes Canadian provincial government debt.



APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

October 30, 2022	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(In millions)			
Cash	\$ 1,199	\$ —	\$ —	\$ 1,199
Cash equivalents:				
Money market funds*	660	—	—	660
U.S. Treasury and agency securities	4	—	—	4
Municipal securities	13	—	—	13
Commercial paper, corporate bonds and medium-term notes	119	—	—	119
Total cash equivalents	796	—	—	796
Total cash and cash equivalents	\$ 1,995	\$ —	\$ —	\$ 1,995
Short-term and long-term investments:				
Bank certificates of deposit	\$ 7	\$ —	\$ —	\$ 7
U.S. Treasury and agency securities	435	—	13	422
Non-U.S. government securities**	7	—	1	6
Municipal securities	389	—	16	373
Commercial paper, corporate bonds and medium-term notes	595	—	21	574
Asset-backed and mortgage-backed securities	432	—	19	413
Total fixed income securities	1,865	—	70	1,795
Publicly traded equity securities	85	63	26	122
Equity investments in privately held companies	567	86	4	649
Total equity investments	652	149	30	771
Total short-term and long-term investments	\$ 2,517	\$ 149	\$ 100	\$ 2,566
Total cash, cash equivalents and investments	\$ 4,512	\$ 149	\$ 100	\$ 4,561

\*Excludes \$105 million of restricted cash equivalents invested in money market funds related to deferred compensation plans.

\*\*Includes Canadian provincial government debt.

During fiscal 2023, 2022 and 2021, interest income from our cash, cash equivalents and fixed income securities was \$262 million, \$44 million and \$26 million, respectively.

*Maturities of Investments*

The following table summarizes the contractual maturities of our investments at October 29, 2023:

	Cost	Estimated Fair Value
	(In millions)	
Due in one year or less	\$ 716	\$ 709
Due after one through five years	888	864
No single maturity date*	1,237	1,445
Total	\$ 2,841	\$ 3,018

\*Securities with no single maturity date include publicly traded and privately held equity securities and asset-backed and mortgage-backed securities.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

*Gains and Losses on Investments*

At October 29, 2023, gross unrealized losses related to our fixed income portfolio were not material. We regularly review our fixed income portfolio to identify and evaluate investments that have indications of possible impairment from credit losses or other factors. Factors considered in determining whether an unrealized loss is considered to be a credit loss include: the significance of the decline in value compared to the cost basis; the financial condition; credit quality and near-term prospects of the investee; and whether it is more likely than not that we will be required to sell the security prior to recovery. Credit losses related to available-for-sale debt securities are recorded as an allowance for credit losses through interest and other income (expense), net. Any additional changes in fair value that are not related to credit losses are recognized in accumulated other comprehensive income (loss) (AOCI).

During fiscal 2023, 2022 and 2021, gross realized gains and losses related to our fixed income portfolio were not material.

During fiscal 2023, 2022 and 2021, we did not recognize significant credit losses and the ending allowance for credit losses was not material.

The components of gain (loss) on equity investments for each fiscal year were as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	(In millions)		
Publicly traded equity securities			
Unrealized gain	\$ 193	\$ 30	\$ 14
Unrealized loss	(44)	(62)	(11)
Realized gain on sales and dividends	9	7	2
Realized loss on sales or impairment	(4)	—	—
Equity investments in privately held companies			
Unrealized gain	15	41	65
Unrealized loss	(30)	(5)	(12)
Realized gain on sales and dividends	9	3	48
Realized loss on sales or impairment	(121)	(7)	(7)
Total gain (loss) on equity investments, net	<u>\$ 27</u>	<u>\$ 7</u>	<u>\$ 99</u>

Impairment losses on equity investments in privately held companies, included in the above table, were not material during fiscal 2022 and 2021 and were \$121 million during fiscal 2023. These impairment losses are included in interest and other income (expense), net in the Consolidated Statement of Operations.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 4 Fair Value Measurements**

Our financial assets are measured and recorded at fair value on a recurring basis, except for equity investments in privately held companies. These equity investments are generally accounted for under the measurement alternative, defined as cost, less impairments, adjusted for subsequent observable price changes and are periodically assessed for impairment when events or circumstances indicate that a decline in value may have occurred. Our nonfinancial assets, such as goodwill, intangible assets, and property, plant and equipment, are recorded at cost and are assessed for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable.

*Fair Value Hierarchy*

We use the following fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

- Level 1 — Quoted prices in active markets for identical assets or liabilities;
- Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Our investments consist primarily of debt securities that are classified as available-for-sale and recorded at their fair values. In determining the fair value of investments, we use pricing information from pricing services that value securities based on quoted market prices and models that utilize observable market inputs. In the event a fair value estimate is unavailable from a pricing service, we generally obtain non-binding price quotes from brokers. In addition, to validate pricing information obtained from pricing services, we periodically perform supplemental analysis on a sample of securities. We review any significant unanticipated differences identified through this analysis to determine the appropriate fair value. As of October 29, 2023, substantially all of our available-for-sale, short-term and long-term investments were recognized at fair value that was determined based upon observable inputs or quoted prices.

Our equity investments with readily determinable values consist of publicly traded equity securities. These investments are measured at fair value using quoted prices for identical assets in an active market and the changes in fair value of these equity investments are recognized in the consolidated statements of operations.

Investments with remaining effective maturities of 12 months or less from the balance sheet date are classified as short-term investments. Investments with remaining effective maturities of more than 12 months from the balance sheet date are classified as long-term investments.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

*Assets Measured at Fair Value on a Recurring Basis*

Financial assets (excluding cash balances) measured at fair value on a recurring basis are summarized below:

	October 29, 2023			October 30, 2022		
	Level 1	Level 2	Total	Level 1	Level 2	Total
(In millions)						
Assets:						
Available-for-sale debt security investments						
Money market funds*	\$ 3,361	\$ —	\$ 3,361	\$ 765	\$ —	\$ 765
Bank certificates of deposit and time deposits	—	18	18	—	7	7
U.S. Treasury and agency securities	331	43	374	404	22	426
Non-U.S. government securities	—	6	6	—	6	6
Municipal securities	—	453	453	—	386	386
Commercial paper, corporate bonds and medium-term notes	—	2,177	2,177	—	693	693
Asset-backed and mortgage-backed securities	—	487	487	—	413	413
Total available-for-sale debt security investments	<u>\$ 3,692</u>	<u>\$ 3,184</u>	<u>\$ 6,876</u>	<u>\$ 1,169</u>	<u>\$ 1,527</u>	<u>\$ 2,696</u>
Equity investments with readily determinable values						
Publicly traded equity securities	\$ 698	\$ —	\$ 698	\$ 122	\$ —	\$ 122
Total equity investments with readily determinable values	<u>\$ 698</u>	<u>\$ —</u>	<u>\$ 698</u>	<u>\$ 122</u>	<u>\$ —</u>	<u>\$ 122</u>
Total	<u>\$ 4,390</u>	<u>\$ 3,184</u>	<u>\$ 7,574</u>	<u>\$ 1,291</u>	<u>\$ 1,527</u>	<u>\$ 2,818</u>

\*Amounts as of October 29, 2023 and October 30, 2022 include \$101 million and \$105 million, respectively, invested in money market funds related to deferred compensation plans. Due to restrictions on the distribution of these funds, they are classified as restricted cash equivalents and are included in deferred income taxes and other assets in the Consolidated Balance Sheets.

We did not have any financial assets measured at fair value on a recurring basis within Level 3 fair value measurements as of October 29, 2023 or October 30, 2022.

*Assets and Liabilities without Readily Determinable Values Measured on a Non-recurring Basis*

Our equity investments without readily determinable values consist of equity investments in privately held companies. We elected the measurement alternative, defined as cost, less impairments, adjusted for subsequent observable price changes on a prospective basis for certain equity investments without readily determinable fair values and are required to account for any subsequent observable changes in fair value within the statements of operations. These investments are classified as Level 3 within the fair value hierarchy and periodically assessed for impairment when an event or circumstance indicates that a decline in value may have occurred. Impairment losses on equity investments in privately held companies, included in the above table, were not material during fiscal 2022 and 2021 and were \$121 million during fiscal 2023. These impairment losses are included in interest and other income (expense), net in the Consolidated Statement of Operations.

*Other*

The carrying amounts of our financial instruments, including cash and cash equivalents, restricted cash equivalents, accounts receivable, commercial paper notes, and accounts payable and accrued expenses, approximate fair value due to their short maturities. At October 29, 2023, the aggregate principal amount of long-term senior unsecured notes was \$5.5 billion, and the estimated fair value was \$4.7 billion. At October 30, 2022, the aggregate principal amount of long-term senior unsecured notes was \$5.5 billion and the estimated fair value was \$4.8 billion. The estimated fair value of long-term senior unsecured notes is determined by Level 2 inputs and is based primarily on quoted market prices for the same or similar issues. See Note 10 of the Notes to the Consolidated Financial Statements for further detail of existing debt.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 5 Derivative Instruments and Hedging Activities***Derivative Financial Instruments*

We conduct business in a number of foreign countries, with certain transactions denominated in local currencies, such as the Japanese yen, Israeli shekel, euro and Taiwanese dollar. We use derivative financial instruments, such as foreign currency forward and option contracts, to hedge certain forecasted foreign currency denominated transactions expected to occur typically within the next 24 months. The purpose of our foreign currency management is to mitigate the effect of exchange rate fluctuations on certain foreign currency denominated revenues, costs and eventual cash flows. The terms of currency instruments used for hedging purposes are generally consistent with the timing of the transactions being hedged.

We do not use derivative financial instruments for trading or speculative purposes. Derivative instruments and hedging activities, including foreign exchange and interest rate contracts, are recognized on the balance sheet at fair value. Changes in the fair value of derivatives that do not qualify for hedge accounting treatment are recognized currently in earnings. All of our derivative financial instruments are recorded at their fair value in other current assets or in accounts payable and accrued expenses.

Hedges related to anticipated transactions are designated and documented at the inception of the hedge as cash flow hedges and foreign exchange derivatives are typically entered into once per month. Cash flow hedges are evaluated for effectiveness quarterly. The effective portion of the gain or loss on these hedges is reported as a component of AOCI in stockholders' equity and is reclassified into earnings when the hedged transaction affects earnings. The majority of the after-tax net income or loss related to foreign exchange derivative instruments included in AOCI at October 29, 2023 is expected to be reclassified into earnings within 12 months. Changes in fair value caused by changes in time value of option contracts designated as cash flow hedges are excluded from the assessment of effectiveness. The initial value of this excluded component is amortized on a straight-line basis over the life of the hedging instrument and recognized in the financial statement line item to which the hedge relates. If the transaction being hedged is probable not to occur, we recognize the gain or loss on the associated financial instrument in the consolidated statement of operations. The amount recognized due to discontinuance of cash flow hedges that were probable of not occurring by the end of the originally specified time period was not significant for fiscal years 2023, 2022 or 2021.

Foreign currency forward contracts are generally used to hedge certain foreign currency denominated assets or liabilities. Accordingly, changes in the fair value of these hedges are recorded in earnings to offset the changes in the fair value of the assets or liabilities being hedged.

As of October 29, 2023 and October 30, 2022, the total outstanding notional amount of foreign exchange contracts was \$1.7 billion and \$2.1 billion, respectively. The fair values of foreign exchange derivative instruments at October 29, 2023 and October 30, 2022 were not material.

The gain (loss) on derivatives in cash flow hedging relationships recognized in AOCI for derivatives designated as hedging instruments for the indicated periods were as follows:

	Derivatives in Cash Flow Hedging Relationships		
	2023	2022	2021
	(In millions)		
Foreign exchange contracts	\$ (56)	\$ 128	\$ 36
Total	\$ (56)	\$ 128	\$ 36

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The effects of derivative instruments and hedging activities on the Consolidated Statements of Operations were as follows:

	Total Amount Presented in the Consolidated Statement of Operations in which the Effects of Cash Flow Hedges are Recorded	Derivatives in Cash Flow Hedging Relationships	
		Amount of Gain or (Loss) Reclassified from AOCI into Consolidated Statement of Operations	Amounts of Gain (Loss) Excluded from Effectiveness Testing Recognized in Consolidated Statement of Operations
<b>2023</b>		<b>(In millions)</b>	
Foreign Exchange Contracts:			
Net sales	\$ 26,517	\$ 63	\$ —
Cost of products sold	\$ 14,133	—	—
Research, development and engineering	\$ 3,102	(14)	—
Marketing and selling	\$ 776	(2)	—
General and administrative	\$ 852	(4)	—
Interest Rate Contracts:			
Interest expense	\$ 238	(13)	—
		<u>\$ 30</u>	<u>\$ —</u>
<b>2022</b>			
Foreign Exchange Contracts:			
Net sales	\$ 25,785	\$ 100	\$ —
Cost of products sold	\$ 13,792	(12)	—
Research, development and engineering	\$ 2,771	(7)	(1)
Marketing and selling	\$ 703	(3)	—
General and administrative	\$ 735	(3)	—
Interest Rate Contracts:			
Interest expense	\$ 228	(13)	—
		<u>\$ 62</u>	<u>\$ (1)</u>
<b>2021</b>			
Foreign Exchange Contracts:			
Net sales	\$ 23,063	\$ 4	\$ —
Cost of products sold	\$ 12,149	2	(2)
Research, development and engineering	\$ 2,485	3	—
General and administrative	\$ 620	1	—
Interest Rate Contracts:			
Interest expense	\$ 236	(13)	—
		<u>\$ (3)</u>	<u>\$ (2)</u>

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

	Location of Gain or (Loss) Recognized in Consolidated Statement of Operations	Amount of Gain or (Loss) Recognized in Consolidated Statement of Operations		
		2023	2022	2021
(In millions)				
<u>Derivatives Not Designated as Hedging Instruments</u>				
Foreign exchange contracts	Interest and other income (expense), net	\$ (4)	\$ 67	\$ 29
Total return swaps - deferred compensation	Cost of products sold	1	(3)	3
Total return swaps - deferred compensation	Operating expenses	9	(29)	29
Total return swaps - deferred compensation	Interest and other income (expense), net	(11)	(2)	(1)
Total		\$ (5)	\$ 33	\$ 60

*Credit Risk Contingent Features*

If our credit rating were to fall below investment grade, we would be in violation of credit risk contingent provisions of the derivative instruments discussed above, and certain counterparties to the derivative instruments could request immediate payment on derivative instruments in net liability positions. The aggregate fair value of all derivative instruments with credit-risk related contingent features that were in a net liability position was immaterial as of October 29, 2023 and October 30, 2022.

Entering into derivative contracts with banks exposes us to credit-related losses in the event of the banks' nonperformance. However, our exposure is not considered significant.

**Note 6 Accounts Receivable, Net**

We have agreements with various financial institutions to sell accounts receivable and discount promissory notes from selected customers. We sell our accounts receivable generally without recourse. From time to time, we also discount letters of credit issued by customers through various financial institutions. The discounting of letters of credit depends on many factors, including the willingness of financial institutions to discount the letters of credit and the cost of such arrangements.

We sold \$0.7 billion, \$1.0 billion and \$1.3 billion of accounts receivable during fiscal 2023, 2022 and 2021, respectively. We did not discount letters of credit issued by customers in fiscal 2023, 2022 and 2021. There was no discounting of promissory notes in each of fiscal 2023, 2022 and 2021. Financing charges on the sale of receivables and discounting of letters of credit are included in interest expense in the accompanying Consolidated Statements of Operations and were not material for all years presented.

Accounts receivable are presented net of allowance for credit losses of \$29 million at October 29, 2023 and October 30, 2022. Changes in allowance for credit losses in fiscal 2023, 2022 and 2021 were not material.

We sell our products principally to manufacturers within the semiconductor and display industries. While we believe that our allowance for credit losses is adequate and represents our best estimate as of October 29, 2023, we continue to closely monitor customer liquidity and industry and economic conditions, which may result in changes to our estimates.

**Note 7 Contract Balances and Performance Obligations**

*Contract Assets and Liabilities*

Contract assets primarily result from receivables for goods transferred to customers where payment is conditional upon technical sign off and not just the passage of time. Contract liabilities consist of unsatisfied performance obligations related to advance payments received and billings in excess of revenue recognized. Our contract assets and liabilities are reported in a net position on a contract-by-contract basis at the end of each reporting period.

Contract assets are generally classified as current and are included in Other Current Assets in the Consolidated Balance Sheets. Contract liabilities are classified as current or non-current based on the timing of when performance obligations will be satisfied and associated revenue is expected to be recognized.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

Contract balances at the end of each reporting period were as follows:

	<u>October 29, 2023</u>	<u>October 30, 2022</u>
	<b>(In millions)</b>	
Contract assets	\$ 274	\$ 173
Contract liabilities	\$ 2,975	\$ 3,142

The increase in contract assets during fiscal 2023, was primarily due to an increase in unsatisfied performance obligations related to goods transferred to customers where payment was conditional upon technical sign off.

During fiscal 2023, we recognized revenue of approximately \$2.9 billion related to contract liabilities at October 30, 2022. This reduction in contract liabilities was offset by new billings for products and services for which there were unsatisfied performance obligations to customers and revenue had not yet been recognized as of October 29, 2023.

There were no credit losses recognized on our accounts receivables and contract assets during fiscal 2023 and 2022.

*Performance Obligations*

As of October 29, 2023, the amount of remaining unsatisfied performance obligations on contracts, primarily consisting of written purchase orders received from customers, with an original estimated duration of one year or more was approximately \$6.0 billion, of which approximately 59% is expected to be recognized within 12 months and the remainder is expected to be recognized within the following 24 months thereafter.

We have elected the available practical expedient to exclude the value of unsatisfied performance obligations for contracts with an original expected duration of one year or less.

**Note 8 Balance Sheet Detail**

	<u>October 29, 2023</u>	<u>October 30, 2022</u>
	<b>(In millions)</b>	
<b>Inventories</b>		
Customer service spares	\$ 1,589	\$ 1,409
Raw materials	1,653	1,807
Work-in-process	997	1,029
Finished goods		
Deferred cost of sales	413	704
Evaluation inventory	423	422
Manufactured on-hand inventory	650	561
Total finished goods	<u>1,486</u>	<u>1,687</u>
Total inventories	<u>\$ 5,725</u>	<u>\$ 5,932</u>
	<u>October 29, 2023</u>	<u>October 30, 2022</u>
	<b>(In millions)</b>	
<b>Other Current Assets</b>		
Prepaid income taxes and income taxes receivable	\$ 412	\$ 461
Prepaid expenses and other	976	883
	<u>\$ 1,388</u>	<u>\$ 1,344</u>



**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

	<u>Useful Life</u>	<u>October 29, 2023</u>	<u>October 30, 2022</u>
	(In years)	(In millions)	
<b>Property, Plant and Equipment, Net</b>			
Land and improvements		\$ 393	\$ 387
Buildings and improvements	3-30	2,194	2,027
Demonstration and manufacturing equipment	3-5	2,353	2,083
Furniture, fixtures and other equipment	3-5	762	743
Construction in progress		672	389
Gross property, plant and equipment		6,374	5,629
Accumulated depreciation		(3,651)	(3,322)
		<u>\$ 2,723</u>	<u>\$ 2,307</u>

Depreciation expense was \$471 million, \$404 million and \$345 million for fiscal 2023, 2022 and 2021, respectively.

	October 29, 2023	October 30, 2022
	(In millions)	
<b>Deferred Income Taxes and Other Assets</b>		
Non-current deferred income taxes	\$ 1,729	\$ 1,395
Operating lease right-of-use assets	370	389
Finance lease right-of-use assets	108	—
Income tax receivables and other assets	345	691
	<u>\$ 2,552</u>	<u>\$ 2,475</u>

	October 29, 2023	October 30, 2022
	(In millions)	
<b>Accounts Payable and Accrued Expenses</b>		
Accounts payable	\$ 1,478	\$ 1,755
Compensation and employee benefits	1,024	905
Warranty	332	286
Dividends payable	267	220
Income taxes payable	282	319
Other accrued taxes	65	30
Interest payable	38	39
Operating lease liabilities, current	84	85
Finance lease liabilities, current	102	—
Other	625	598
	\$ 4,297	\$ 4,237

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	October 29, 2023	October 30, 2022
	(In millions)	
<b>Other Liabilities</b>		
Defined and postretirement benefit plans	\$ 126	\$ 107
Operating lease liabilities, non-current	252	287
Other	336	338
	<u>\$ 714</u>	<u>\$ 732</u>

**Note 9 Goodwill and Intangible Assets**

As of October 29, 2023, our reporting units include Semiconductor Products Group and Imaging and Process Control Group, which combine to form the Semiconductor Systems reporting segment, Applied Global Services, Display and Adjacent Markets and other reporting units recorded under Corporate and Other.

Our methodology for allocating the purchase price relating to purchase acquisitions is determined through established and generally accepted valuation techniques. Goodwill is measured as the excess of the purchase price over the sum of the amounts assigned to tangible and identifiable intangible assets acquired less liabilities assumed. We assign assets acquired (including goodwill) and liabilities assumed to one or more reporting units as of the date of acquisition. Typically, acquisitions relate to a single reporting unit and thus do not require the allocation of goodwill to multiple reporting units. If the products obtained in an acquisition are assigned to multiple reporting units, the goodwill is distributed to the respective reporting units as part of the purchase price allocation process.

**Goodwill**

In the fourth quarter of fiscal 2023, we performed a qualitative assessment to test goodwill for all of our reporting units for impairment. We determined that it was more likely than not that each of our reporting units' fair values exceeded their respective carrying values and that it was not necessary to perform the quantitative goodwill impairment test for any of our reporting units. The evaluation of goodwill and intangible assets for impairment requires the exercise of significant judgment. In the event of future changes in business conditions, we will be required to reassess and update our forecasts and estimates used in future impairment analyses. If the results of these future analyses are lower than current estimates, a material impairment charge may result at that time.

Details of goodwill as of October 29, 2023 and October 30, 2022 were as follows:

	October 29, 2023	October 30, 2022
	(In millions)	
<b>Goodwill by reportable segment</b>		
Semiconductor Systems	\$ 2,460	\$ 2,428
Applied Global Services	1,032	1,032
Display and Adjacent Markets	199	199
Corporate and Other	41	41
	<u>\$ 3,732</u>	<u>\$ 3,700</u>

From time to time, we acquire companies related to our existing or new markets. During fiscal 2023, goodwill increased primarily due to the preliminary purchase accounting for acquisitions, net of adjustments, which were not material to our results of operations or to our balance sheet.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

***Intangible Assets***

Details of intangible assets other than goodwill were as follows:

	October 29, 2023			October 30, 2022		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
	(In millions)					
<b>Intangible assets with finite lives:</b>						
Semiconductor Systems Group	\$ 2,001	\$ (1,714)	\$ 287	\$ 1,985	\$ (1,675)	\$ 310
Applied Global Services	79	(78)	1	79	(77)	2
Display and Adjacent Markets	194	(194)	—	194	(194)	—
Corporate & Other	36	(30)	6	36	(26)	10
Total intangible assets with finite lives	\$ 2,310	\$ (2,016)	\$ 294	\$ 2,294	\$ (1,972)	\$ 322
<b>Intangible assets with infinite lives:</b>						
Semiconductor Systems Group	\$ —	\$ —	\$ —	\$ 16	\$ —	\$ 16
Corporate & Other	—	—	—	1	—	1
Total intangible assets with infinite lives	\$ —	\$ —	\$ —	\$ 17	\$ —	\$ 17
Total intangible assets	\$ 2,310	\$ (2,016)	\$ 294	\$ 2,311	\$ (1,972)	\$ 339

The increase in intangible assets with finite lives during fiscal 2023 was primarily due to the preliminary purchase accounting for acquisitions during fiscal 2023, which were not material to our results of operations.

Amortization expense of intangible assets was \$44 million, \$40 million and \$49 million during fiscal 2023, 2022 and 2021, respectively.

As of October 29, 2023, future estimated amortization expense of intangible assets with finite lives is expected to be as follows:

	Amortization Expense (In millions)
2024	\$ 43
2025	41
2026	39
2027	26
2028	23
Thereafter	122
Total	\$ 294

**Note 10 Borrowing Facilities and Debt**

***Revolving Credit Facilities***

In February 2020, we entered into a five-year \$1.5 billion committed unsecured revolving credit agreement (Revolving Credit Agreement) with a group of banks. The Revolving Credit Agreement includes a provision under which we may request an increase in the amount of the facility of up to \$500 million for a total commitment of no more than \$2.0 billion, subject to the receipt of commitments from one or more lenders for any such increase and other customary conditions. The Revolving Credit Agreement is scheduled to expire in February 2026, unless extended as permitted under the Revolving Credit Agreement. The Revolving Credit Agreement provides for borrowings that bear interest for each advance at one of two rates selected by us, plus an applicable margin, which varies according to our public debt credit ratings.

No amounts were outstanding under the Revolving Credit Agreement as of October 29, 2023 and October 30, 2022.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In addition, we have revolving credit facilities with Japanese banks pursuant to which we may borrow up to approximately \$53 million in aggregate at any time. Our ability to borrow under these facilities is subject to bank approval at the time of the borrowing request, and any advances will be at rates indexed to the banks' prime reference rate denominated in Japanese yen. As of October 29, 2023 and October 30, 2022, no amounts were outstanding under these revolving credit facilities.

**Short-term Commercial Paper**

We have a short-term commercial paper program under which we may issue unsecured commercial paper notes of up to a total amount of \$1.5 billion. The proceeds from the issuances of commercial paper are used for general corporate purposes. At October 29, 2023, we had \$100 million of commercial paper notes outstanding and recorded as short-term debt with a weighted-average interest rate of 5.39% and maturities of 90 days, and as of October 30, 2022, we did not have any commercial paper notes outstanding.

**Senior Unsecured Notes**

Debt outstanding as of October 29, 2023 and October 30, 2022 was as follows:

	Principal Amount		Effective Interest Rate	Interest Pay Dates
	October 29, 2023	October 30, 2022		
	(In millions)			
Long-term debt:				
3.900% Senior Notes Due 2025	\$ 700	\$ 700	3.944%	April 1, October 1
3.300% Senior Notes Due 2027	1,200	1,200	3.342%	April 1, October 1
1.750% Senior Notes Due 2030	750	750	1.792%	June 1, December 1
5.100% Senior Notes Due 2035	500	500	5.127%	April 1, October 1
5.850% Senior Notes Due 2041	600	600	5.879%	June 15, December 15
4.350% Senior Notes Due 2047	1,000	1,000	4.361%	April 1, October 1
2.750% Senior Notes Due 2050	750	750	2.773%	June 1, December 1
	5,500	5,500		
Total unamortized discount	(11)	(12)		
Total unamortized debt issuance costs	(28)	(31)		
Total long-term debt	<u>\$ 5,461</u>	<u>\$ 5,457</u>		

**Note 11 Leases**

A contract contains a lease when we have the right to control the use of an identified asset for a period of time in exchange for consideration. A majority of our lease arrangements are operating leases. We also have certain leases that qualify as finance leases. We lease certain facilities, vehicles and equipment under non-cancelable operating leases, many of which include options to renew. Options that are reasonably certain to be exercised are included in the calculation of the right-of-use asset and lease liability. Our finance leases are those that contain a purchase option which we are reasonably certain to exercise at the end of the lease term. Our leases do not contain residual value guarantees or significant restrictions that impact the accounting for leases. As implicit rates are not available for the leases, we use the incremental borrowing rate as of the lease commencement date in order to measure the right-of-use asset and liability. Operating lease expense is generally recognized on a straight-line basis over the lease term. Finance lease expense is generally recognized on a straight-line basis over the life of the underlying leased asset.

We elected the practical expedient to account for lease and non-lease components as a single lease component for all leases. For leases with a term of one year or less, we elected not to record a right-of-use asset or lease liability and to account for the associated lease payments as they become due.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The components of lease expense and supplemental information were as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions, except percentage)</b>		
Operating lease cost	\$ 102	\$ 93	\$ 79
Finance lease cost:			
Amortization of right-of-use assets	\$ 2	\$ —	\$ —
Interest on lease liabilities	\$ 3	\$ —	\$ —
Weighted-average remaining lease term (in years) - operating leases	5.7	6.3	5.1
Weighted-average remaining lease term (in years) - finance leases	0.9	n/a	n/a
Weighted-average discount rate - operating leases	3.1 %	2.5 %	1.7 %
Weighted-average discount rate - finance leases	4.6 %	n/a	n/a

Supplemental cash flow information related to leases are as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions)</b>		
Operating cash flows paid for operating leases	\$ 112	\$ 107	\$ 79
Operating cash flows paid for finance leases	\$ 3	\$ —	\$ —
Financing cash flows paid for finance leases	\$ 7	\$ —	\$ —
Right-of-use assets obtained in exchange for operating lease liabilities	\$ 106	\$ 204	\$ 123
Right-of-use assets obtained in exchange for finance lease liabilities	\$ 109	\$ —	\$ —

As of October 29, 2023, the maturities of lease liabilities are as follows:

	<u>Operating Leases</u>	<u>Finance Leases</u>
<b>Fiscal</b>	<b>(In millions)</b>	
2024	\$ 93	\$ 106
2025	82	—
2026	47	—
2027	37	—
2028	30	—
Thereafter	81	—
Total lease payments	370	106
Less imputed interest	(34)	(4)
Total	<u>\$ 336</u>	<u>\$ 102</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 12 Stockholders' Equity, Comprehensive Income and Share-Based Compensation**

***Accumulated Other Comprehensive Income (Loss)***

Changes in the components of accumulated other comprehensive income (AOCI), net of tax, were as follows:

	Unrealized Gain (Loss) on Investments, Net	Unrealized Gain (Loss) on Derivative Instruments Qualifying as Cash Flow Hedges	Defined and Postretirement Benefit Plans	Cumulative Translation Adjustments	Total
	(In millions)				
Balance at October 25, 2020	\$ 20	\$ (133)	\$ (199)	\$ 13	(299)
Other comprehensive income (loss) before reclassifications	(14)	28	20	—	34
Amounts reclassified out of AOCI	(7)	2	10	—	5
Other comprehensive income (loss), net of tax	(21)	30	30	—	39
Balance at October 31, 2021	\$ (1)	\$ (103)	\$ (169)	\$ 13	\$ (260)
Other comprehensive income (loss) before reclassifications	(60)	100	71	—	111
Amounts reclassified out of AOCI	(14)	(49)	10	—	(53)
Other comprehensive income, net of tax	(74)	51	81	—	58
Balance at October 30, 2022	\$ (75)	\$ (52)	\$ (88)	\$ 13	\$ (202)
Other comprehensive income (loss) before reclassifications	16	(44)	17	—	(11)
Amounts reclassified out of AOCI	9	(22)	9	—	(4)
Other comprehensive income (loss), net of tax	25	(66)	26	—	(15)
Balance at October 29, 2023	\$ (50)	\$ (118)	\$ (62)	\$ 13	\$ (217)

The tax effects on net income of amounts reclassified from AOCI for the fiscal years 2023, 2022 and 2021 were \$18 million, \$36 million and \$18 million, respectively.

***Stock Repurchase Program***

In March 2023, our Board of Directors approved a common stock repurchase program authorizing \$10.0 billion in repurchases, which supplemented the previously existing \$6.0 billion authorization approved in March 2022. At October 29, 2023, approximately \$12.7 billion remained available for future stock repurchases under the repurchase program.

The following table summarizes our stock repurchases, including excise tax, for each fiscal year:

	2023	2022	2021
	(In millions, except per share amounts)		
Shares of common stock repurchased	18	54	28
Cost of stock repurchased	\$ 2,202	\$ 6,103	\$ 3,750
Average price paid per share	\$ 123.63	\$ 113.84	\$ 134.03

Effective January 1, 2023, stock repurchase amounts in the above table include the 1% surcharge on stock repurchases under the Inflation Reduction Act's excise tax. This excise tax is recorded in equity and reduces the amount available under the repurchase program, as applicable. Excluding this excise tax, total cost of stock repurchased was \$2,189 million, or \$122.89 per share, for fiscal 2023.

We record treasury stock purchases under the cost method using the first-in, first-out (FIFO) method. Upon reissuance of treasury stock, amounts in excess of the acquisition cost are credited to additional paid in capital. If we reissue treasury stock at an amount below our acquisition cost and additional paid in capital associated with prior treasury stock transactions is insufficient to cover the difference between the acquisition cost and the reissue price, this difference is recorded against retained earnings.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Dividends**

During fiscal 2023, our Board of Directors declared one quarterly cash dividend of \$0.26 per share and three quarterly cash dividends of \$0.32 per share. During fiscal 2022, our Board of Directors declared one quarterly cash dividend of \$0.24 per share and three quarterly cash dividends of \$0.26 per share. During fiscal 2021, our Board of Directors declared one quarterly cash dividend of \$0.22 per share and three quarterly cash dividends of \$0.24 per share. Dividends paid during fiscal 2023, 2022 and 2021 amounted to \$975 million, \$873 million and \$838 million, respectively. We currently anticipate that cash dividends will continue to be paid on a quarterly basis, although the declaration of any future cash dividend is at the discretion of the Board of Directors and will depend on our financial condition, results of operations, capital requirements, business conditions and other factors, as well as a determination by the Board of Directors that cash dividends are in the best interests of our stockholders.

**Share-Based Compensation**

We have a stockholder-approved equity plan, the Employee Stock Incentive Plan (ESIP), which permits grants to employees of share-based awards, including stock options, stock appreciation rights, restricted stock, restricted stock units, performance share units and performance units. In addition, the plan provides for the automatic grant of restricted stock units to non-employee directors and permits the grant of share-based awards to non-employee directors and consultants. Share-based awards made under the plan may be subject to accelerated vesting under certain circumstances in the event of a change in control. In addition, we have an Omnibus Employees' Stock Purchase Plan (ESPP), which enables eligible employees to purchase our common stock.

We recognized share-based compensation expense related to equity awards and ESPP shares. The effect of share-based compensation on the results of operations and the related tax benefits for each fiscal year were as follows:

	2023	2022	2021
	(In millions)		
Cost of products sold	\$ 180	\$ 147	\$ 118
Research, development, and engineering	179	151	129
Marketing and selling	55	49	43
General and administrative	76	66	56
Total share-based compensation	<u>\$ 490</u>	<u>\$ 413</u>	<u>\$ 346</u>
Income tax benefits recognized	<u>\$ 63</u>	<u>\$ 51</u>	<u>\$ 43</u>

The cost associated with share-based awards is typically recognized over the awards' service period for the entire award on a straight-line basis, adjusting for estimated forfeitures. However, in the case of share-based awards granted to certain members of senior management that allow for partial accelerated vesting in the event of a qualifying retirement based on age and years of service, the compensation expense is recognized once the individual meets the conditions for a qualifying retirement. We calculate estimated forfeiture rate on an annual basis, based on historical forfeiture activities. The cost associated with performance-based equity awards, which include performance and/or market goals, is recognized for each tranche over the service period. The cost of the portion of performance-based equity awards subject to performance goals is recognized based on an assessment of the likelihood that the applicable performance goals will be achieved, and the cost of the portion of performance-based equity awards subject to market goals is recognized based on the assumption of 100% achievement of the goal.

At October 29, 2023, we had \$791 million in total unrecognized compensation expense, net of estimated forfeitures, related to grants of share-based awards under the ESIP and shares issued under the ESPP, which will be recognized over a weighted average period of 2.5 years. At October 29, 2023, there were 25 million shares available for grant of share-based awards under the ESIP, and an additional 12 million shares available for issuance under the ESPP.

**Stock Options**

Stock options are rights to purchase, at future dates, shares of our common stock. The exercise price of each stock option equals the fair market value of our common stock on the date of grant. Options typically vest over three to four years, subject to the grantee's continued service with us through the scheduled vesting date, and expire no later than seven years from the grant date. There were no stock options granted during fiscal 2023, 2022 and 2021. There were no outstanding stock options at the end of fiscal 2023.



## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Restricted Stock Units, Restricted Stock, Performance Share Units and Performance Units*

Restricted stock units are converted into shares of our common stock upon vesting on a one-for-one basis. Restricted stock has the same rights as other issued and outstanding shares of our common stock except these shares generally have no right to dividends and are held in escrow until the award vests. Performance share units and performance units are awards that result in a payment to a grantee, generally in shares of our common stock on a one-for-one basis, if performance goals, market goals and/or other vesting criteria are achieved or the awards otherwise vest. Restricted stock units, restricted stock, performance share units and performance units typically vest over three to four years and vesting is usually subject to the grantee's continued service with us and, in some cases, achievement of specified performance and/or market goals.

The compensation expense related to share-based awards subject solely to time-based vesting requirements (Service-Based Awards) is determined using the market value of our common stock, adjusted to exclude the present value of expected dividends during the vesting period. The market value of our common stock is calculated using the closing price of our common stock on the date of grant or if the grant date is not a trading date, the average of the closing prices on the trading dates immediately preceding and following the grant date.

During fiscal 2023, 2022 and 2021, certain members of senior management were granted awards that are subject to the achievement of certain levels of specified performance and/or market goals, in addition to time-based vesting requirements (Performance Based-Awards).

Certain Performance-Based Awards are subject to the achievement of targeted levels of adjusted operating margin and targeted levels of total shareholder return (TSR) relative to the TSR of the companies in the Standard & Poor's 500 Index. Each of these two metrics will be weighted 50% and will be measured over a three-year period. The number of shares that may vest in full after three years ranges from 0% to 200% of the target amount. The awards become eligible to vest only if the goals are achieved and will vest only if the grantee remains employed by us through each applicable vesting date, subject to a qualifying retirement based on age and years of service. The awards provide for a partial vesting based on actual performance at the conclusion of the three-year performance period in the event of a qualifying retirement.

During fiscal 2021, certain executive officers were also granted non-recurring long-term Performance-Based Awards that are subject to the achievement of targeted levels of our absolute TSR. The awards become eligible to vest only if targeted levels of TSR are achieved during a five-year performance period and will vest only if the grantee remains employed by us through the vesting date in October 2025, except in the event of involuntary termination of employment without cause, death or following a change of control. The number of shares that may vest in full after five years ranges from 0% to 200% of the target amount.

The fair value of the portion of the Performance-Based Awards subject to targeted levels of relative TSR or absolute TSR is estimated on the date of grant using a Monte Carlo simulation model. Compensation expense is recognized based upon the assumption of 100% achievement of the TSR goal and will not be reversed even if the threshold level of TSR is never achieved, and is reflected over the service period and reduced for estimated forfeitures.

The fair value of the portion of the Performance-Based Awards subject to targeted levels of adjusted operating margin is estimated on the date of grant based on the market value of our common stock, adjusted to exclude the present value of expected dividends during the vesting period. The market value of our common stock is calculated using the closing price of our common stock on the date of the grant or if the grant date is not a trading date, the average of the closing prices on the trading dates immediately preceding and following the grant date. If the performance goals are not met as of the end of the performance period, no compensation expense is recognized and any previously recognized compensation expense is reversed. The expected cost is based on the portion of the awards that is probable to vest and is reflected over the service period and reduced for estimated forfeitures.



**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The following tables summarize the assumptions used for the valuation of share-based awards for the periods presented:

	<b>2023</b>	<b>2022</b>	<b>2021</b>
<b>Service-Based Awards and the portion of Performance-Based Awards subject to performance goals:</b>			
Grant date market value	\$104.22 - \$143.97	\$74.62 - \$157.29	\$74.37 - \$143.05
Risk-free interest rate	3.64% - 5.48%	0.16% - 4.48%	0.04% - 0.82%
Dividend yield	0.70% - 3.59%	0.47% - 3.83%	0.20% - 3.09%
Fair value	\$102.09 - \$141.33	\$72.24 - \$154.88	\$72.20 - \$140.66

	<b>2023</b>	<b>2022</b>	<b>2021*</b>
<b>Portion of Performance-Based Awards subject to market goals:</b>			
Grant date market value	\$109.37	\$146.49	\$86.10 - \$88.84
Risk-free interest rate	4.10 %	0.87%	0.20% - 0.41%
Dividend yield	0.95 %	0.66%	0.99% - 1.02%
Expected volatility	52.38 %	47.35%	40.51% - 47.00%
Fair value	\$162.72	\$210.69	\$129.27 - \$136.81

\*Fiscal 2021 included both annual and non-recurring long-term Performance-Based Awards.

A summary of the changes in restricted stock units, restricted stock, performance shares and performance units outstanding under our equity compensation plans is presented below:

	<b>Shares</b>	<b>Weighted Average Grant Date Fair Value</b>	<b>Weighted Average Remaining Contractual Term</b>	<b>Aggregate Intrinsic Value</b>
	<b>(In millions, except per share amounts)</b>			
Non-vested restricted stock units, restricted stock, performance shares and performance units at October 25, 2020	15	\$ 45.36	2.2 years	\$ 914
Granted	5	\$ 92.04		
Vested	(6)	\$ 43.11		
Canceled	(1)	\$ 59.41		
Non-vested restricted stock units, restricted stock, performance shares and performance units at October 31, 2021	13	\$ 63.29	2.2 years	\$ 1,752
Granted	4	\$ 132.44		
Vested	(5)	\$ 54.00		
Canceled	(1)	\$ 82.54		
Non-vested restricted stock units, restricted stock, performance shares and performance units at October 30, 2022	11	\$ 92.31	2.2 years	\$ 1,024
Granted	6	\$ 104.00		
Vested	(5)	\$ 72.49		
Canceled	—	\$ 103.73		
Non-vested restricted stock units, restricted stock, performance shares and performance units at October 29, 2023	12	\$ 106.24	2.4 years	\$ 1,524
Non-vested restricted stock units, restricted stock, performance shares and performance units expected to vest	11	\$ 107.26	2.3 years	\$ 1,495

At October 29, 2023, 0.8 million additional Performance-Based Awards could be earned based upon achievement of certain levels of specified performance and/or market goals.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Employee Stock Purchase Plans*

Under the ESPP, substantially all employees may purchase our common stock through payroll deductions at a price equal to 85 percent of the lower of the fair market value of our common stock at the beginning or end of each 6-month purchase period, subject to certain limits. Our purchasing cycles began in March and September of each of fiscal 2023, 2022 and 2021. We issued 2 million shares in fiscal 2023 at a weighted average price of \$87.75 per share, 2 million shares in fiscal 2022 at a weighted average price of \$93.30 per share and 3 million shares in fiscal 2021 at a weighted average price of \$70.29 per share, under the ESPP. Compensation expense is calculated using the fair value of the employees' purchase rights under the Black-Scholes model. Underlying assumptions used in the model are outlined in the following table:

	2023	2022	2021
<b>ESPP:</b>			
Dividend yield	0.98 %	0.97 %	0.72 %
Expected volatility	39.4 %	46.8 %	41.3 %
Risk-free interest rate	5.29 %	2.24 %	0.05 %
Expected life (in years)	0.5	0.5	0.5
Weighted average estimated fair value	\$35.31	\$30.23	\$33.77

**Note 13 Employee Benefit Plans***Employee Bonus Plans*

We have various employee bonus plans. A discretionary bonus plan provides for the distribution of a percentage of pre-tax income to our employees who are not participants in other performance-based incentive plans, up to a maximum percentage of eligible compensation. Other plans provide for bonuses to our executives and other key contributors based on the achievement of profitability and/or other specified performance criteria. Charges under these plans for fiscal 2023, 2022 and 2021 were \$702 million, \$623 million and \$631 million, respectively.

*Employee Savings and Retirement Plan*

Our Employee Savings and Retirement Plan (the 401(k) Plan) is qualified under Sections 401(a) and (k) of the Internal Revenue Code (the Code). Eligible employees may make salary deferral and catch-up contributions under the 401(k) Plan on a pre-tax basis and on a Roth basis, subject to an annual dollar limit established by the Code. We match 100% of participant salary and/or Roth deferral contributions up to the first 3% of eligible contribution and then 50% of every dollar between 4% and 6% of eligible contribution. We do not make matching contributions on any catch-up contributions made by participants. Plan participants who were employed by us or any of our affiliates are 100% vested in their matching contribution account balances. Our matching contributions under the 401(k) Plan were approximately \$85 million for fiscal 2023, \$67 million for fiscal 2022 and \$61 million for fiscal 2021.

*Defined Benefit Pension Plans of Foreign Subsidiaries and Other Postretirement Benefits*

Several of our foreign subsidiaries have defined benefit pension plans covering substantially all of their eligible employees. Benefits under these plans are typically based on years of service and final average compensation levels. The plans are managed in accordance with applicable local statutes and practices. We deposit funds for certain of these plans with insurance companies, pension trustees, government-managed accounts, and/or accrue the expense for the unfunded portion of the benefit obligation on our Consolidated Financial Statements. Our practice is to fund the various pension plans in amounts sufficient to meet the minimum requirements as established by applicable local governmental oversight and taxing authorities. Depending on the design of the plan, local custom and market circumstances, the liabilities of a plan may exceed the qualified plan assets. The differences between the aggregate projected benefit obligations and aggregate plan assets of these plans have been recorded as liabilities by us and are included in other liabilities and accrued expenses in the Consolidated Balance Sheets.

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A summary of the changes in benefit obligations and plan assets, which includes post-retirement benefits, for each fiscal year is presented below:

	2023	2022	2021
	(In millions, except percentages)		
<b>Change in projected benefit obligation</b>			
Beginning projected benefit obligation	\$ 414	\$ 685	\$ 674
Service cost	10	14	15
Interest cost	16	9	8
Plan participants' contributions	1	1	1
Actuarial (gain) loss	(38)	(201)	(1)
Foreign currency exchange rate changes	15	(84)	3
Benefits paid	(10)	(10)	(15)
Plan amendments and other adjustments	—	—	—
Ending projected benefit obligation	<u>\$ 408</u>	<u>\$ 414</u>	<u>\$ 685</u>
<b>Ending accumulated benefit obligation</b>	<u>\$ 351</u>	<u>\$ 371</u>	<u>\$ 626</u>
<b>Range of assumptions to determine benefit obligations</b>			
Discount rate	1.3% - 7.1%	1.5% - 7.3%	0.6% - 6.6%
Rate of compensation increase	3.3% - 10.3%	2.7% - 10.0%	2.4% - 10.0%
<b>Change in plan assets</b>			
Beginning fair value of plan assets	\$ 351	\$ 491	\$ 431
Return on plan assets	5	(78)	49
Employer contributions	9	11	22
Plan participants' contributions	1	1	1
Foreign currency exchange rate changes	18	(64)	3
Benefits paid	(10)	(10)	(15)
Ending fair value of plan assets	<u>\$ 374</u>	<u>\$ 351</u>	<u>\$ 491</u>
Funded status	<u>\$ (34)</u>	<u>\$ (63)</u>	<u>\$ (194)</u>
<b>Amounts recognized in the consolidated balance sheets</b>			
Noncurrent asset	\$ 95	\$ 45	\$ 1
Current liability	(3)	(1)	(2)
Noncurrent liability	(126)	(107)	(193)
Total	<u>\$ (34)</u>	<u>\$ (63)</u>	<u>\$ (194)</u>
<b>Estimated amortization from accumulated other comprehensive loss into net periodic benefit cost over the next fiscal period</b>			
Actuarial loss	\$ 3	\$ 4	\$ 11
Prior service credit	—	—	—
Total	<u>\$ 3</u>	<u>\$ 4</u>	<u>\$ 11</u>
<b>Amounts recognized in accumulated other comprehensive loss</b>			
Net actuarial loss	\$ 70	\$ 98	\$ 200
Prior service credit	1	1	1
Total	<u>\$ 71</u>	<u>\$ 99</u>	<u>\$ 201</u>
<b>Plans with projected benefit obligations in excess of plan assets</b>			
Projected benefit obligation	\$ 146	\$ 126	\$ 472
Fair value of plan assets	\$ 18	\$ 17	\$ 277
<b>Plans with accumulated benefit obligations in excess of plan assets</b>			
Accumulated benefit obligation	\$ 97	\$ 88	\$ 413
Fair value of plan assets	\$ 18	\$ 17	\$ 277

**APPLIED MATERIALS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

	2023	2022
<b>Plan assets — allocation</b>		
Equity securities	29 %	26 %
Debt securities	31 %	37 %
Insurance contracts	19 %	21 %
Other investments	20 %	15 %
Cash	1 %	1 %

The following table presents a summary of the ending fair value of the plan assets:

	October 29, 2023				October 30, 2022			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
	(In millions)							
Equity securities	\$ 102	\$ —	\$ —	\$ 102	\$ 84	\$ —	\$ —	\$ 84
Debt securities	60	—	—	60	56	—	—	56
Insurance contracts	—	—	72	72	—	—	72	72
Other investments	—	57	—	57	—	52	—	52
Cash	5	—	—	5	3	—	—	3
Total assets at fair value	<u>\$ 167</u>	<u>\$ 57</u>	<u>\$ 72</u>	296	<u>\$ 143</u>	<u>\$ 52</u>	<u>\$ 72</u>	267
Assets measured at net asset value				78				84
Total				<u>\$ 374</u>				<u>\$ 351</u>

The following table presents the activity in Level 3 instruments for each fiscal year:

	2023	2022
	(In millions)	
Balance, beginning of year	\$ 72	\$ 110
Actual return on plan assets:		
Relating to assets still held at reporting date	(4)	(24)
Purchases, sales, settlements, net	—	—
Currency impact	4	(14)
Balance, end of year	<u>\$ 72</u>	<u>\$ 72</u>

Our investment strategy for our defined benefit plans is to invest plan assets in a prudent manner, maintaining well-diversified portfolios with the long-term objective of meeting the obligations of the plans as they come due. Asset allocation decisions are typically made by plan fiduciaries with input from our international pension committee. Our asset allocation strategy incorporates a sufficient equity exposure in order for the plans to benefit from the expected better long-term performance of equities relative to the plans' liabilities. We retain investment managers, where appropriate, to manage the assets of the plans. Performance of investment managers is monitored by plan fiduciaries with the assistance of local investment consultants. The investment managers make investment decisions within the guidelines set forth by plan fiduciaries. Risk management practices include diversification across asset classes and investment styles, and periodic rebalancing toward target asset allocation ranges. Investment managers may use derivative instruments for efficient portfolio management purposes.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

A summary of the components of net periodic benefit costs and the weighted average assumptions used for net periodic benefit cost calculations for each fiscal year is presented below:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions, except percentages)</b>		
<b>Components of net periodic benefit cost</b>			
Service cost	\$ 10	\$ 14	\$ 15
Interest cost	16	9	8
Expected return on plan assets	(20)	(21)	(21)
Amortization of actuarial loss and prior service credit	4	10	14
Net periodic benefit cost	<u>\$ 10</u>	<u>\$ 12</u>	<u>\$ 16</u>
<b>Weighted average assumptions</b>			
Discount rate	3.48 %	1.41 %	1.18 %
Expected long-term return on assets	5.15 %	4.56 %	4.80 %
Rate of compensation increase	3.39 %	2.89 %	2.74 %

Asset return assumptions are derived based on actuarial and statistical methodologies, from analysis of long-term historical data relevant to the country in which each plan is in effect and the investments applicable to the corresponding plan. The discount rate for each plan was derived by reference to appropriate benchmark yields on high quality corporate bonds, allowing for the approximate duration of both plan obligations and the relevant benchmark yields.

Future expected benefit payments for the pension plans and the postretirement plan over the next ten fiscal years are as follows:

	<b>Benefit Payments</b>
	<b>(In millions)</b>
2024	\$ 11
2025	14
2026	15
2027	16
2028	16
2029-2033	108
Total	<u>\$ 180</u>

Company contributions to these plans for fiscal 2024 are expected to be approximately \$8 million.

*Executive Deferred Compensation Plans*

We sponsor two unfunded deferred compensation plans, the Executive Deferred Compensation Plan (Predecessor EDCP) and the 2016 Deferred Compensation Plan (2016 DCP) (formerly known as the 2005 Executive Deferred Compensation Plan), under which certain employees may elect to defer a portion of their following year's eligible earnings. The Predecessor EDCP was frozen as of December 31, 2004 such that no new deferrals could be made under the plan after that date and the plan would qualify for "grandfather" relief under Section 409A of the Code. The Predecessor EDCP participant accounts continue to be maintained under the plan and credited with deemed interest. The 2016 DCP was originally implemented by us effective as of January 1, 2005, and amended and restated as of October 12, 2015, and is intended to comply with the requirements of Section 409A of the Code. In addition, we also sponsor a non-qualified deferred compensation plan as a result of the acquisition of Varian. Amounts payable for all plans, including accrued deemed interest, totaled \$245 million and \$200 million at October 29, 2023 and October 30, 2022, respectively, which were included in other liabilities in the Consolidated Balance Sheets.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 14 Income Taxes**

The components of income before income taxes for each fiscal year were as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions)</b>		
U.S.	\$ 1,234	\$ 1,171	\$ 512
Foreign	6,482	6,428	6,259
	<u>\$ 7,716</u>	<u>\$ 7,599</u>	<u>\$ 6,771</u>

The components of the provision for income taxes for each fiscal year were as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions)</b>		
<b>Current:</b>			
U.S.	\$ 708	\$ 590	\$ 462
Foreign	456	275	344
State	54	14	17
	<u>1,218</u>	<u>879</u>	<u>823</u>
<b>Deferred:</b>			
U.S.	(255)	(62)	(3)
Foreign	(61)	265	67
State	(42)	(8)	(4)
	<u>(358)</u>	<u>195</u>	<u>60</u>
	<u>\$ 860</u>	<u>\$ 1,074</u>	<u>\$ 883</u>

A reconciliation between the statutory U.S. federal income tax rate and our actual effective income tax rate for each fiscal year is presented below:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Tax provision at U.S. statutory rate	21.0 %	21.0 %	21.0 %
Effect of foreign operations taxed at various rates	(8.2)	(4.4)	(7.0)
Changes in prior years' unrecognized tax benefits	(0.2)	(0.9)	0.2
Resolutions of prior years' income tax filings	(0.1)	(0.2)	(0.1)
Research and other tax credits	(1.6)	(1.0)	(0.9)
Other	0.2	(0.4)	(0.2)
	<u>11.1 %</u>	<u>14.1 %</u>	<u>13.0 %</u>

Our provision for income taxes and effective tax rate are affected by the geographical composition of pre-tax income which includes jurisdictions with differing tax rates, conditional reduced tax rates and other income tax incentives. It is also affected by events that vary from period to period, such as changes in income tax laws and the resolution of prior years' income tax filings.

Our effective tax rate for fiscal 2023 was lower than fiscal 2022 primarily due to a reduction of deferred tax assets that occurred in fiscal 2022, related to a new tax incentive in Singapore. Our effective tax rate for fiscal 2022 was higher than fiscal 2021 primarily due to a reduction of deferred tax assets related to a new tax incentive in Singapore, partially offset by changes in uncertain tax positions.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In the reconciliation between the statutory U.S. federal income tax rate and the effective income tax rate, the effect of foreign operations taxed at various rates represents the difference between an income tax provision at the U.S. federal statutory income tax rate and the recorded income tax provision, with the difference expressed as a percentage of worldwide income before income taxes. This effect is substantially related to the tax effect of pre-tax income in jurisdictions with lower statutory tax rates. The foreign operations with the most significant effective tax rate impact are in Singapore. The statutory tax rate for fiscal 2023 for Singapore is 17%. We have been granted conditional reduced tax rates that expire beginning in fiscal 2025, excluding potential renewal and subject to certain conditions with which we expect to comply. The tax benefits arising from these tax rates were \$369 million or \$0.44 per diluted share and \$232 million or \$0.26 per diluted share and \$370 million or \$0.40 per diluted share for fiscal 2023, 2022 and 2021, respectively.

Deferred tax assets and liabilities are recognized for the estimated future tax effects of temporary differences between the book and tax bases of assets and liabilities. Deferred tax assets are also recognized for net operating loss and tax credit carryovers. Deferred tax assets are offset by a valuation allowance to the extent it is more likely than not that they are not expected to be realized. The components of deferred income tax assets and liabilities were as follows:

	October 29, 2023	October 30, 2022
	(In millions)	
<b>Deferred tax assets:</b>		
Capitalized R&D expenses	\$ 83	\$ —
Allowance for doubtful accounts	4	5
Inventory reserves and basis difference	125	131
Installation and warranty reserves	35	29
Intangible assets	1,031	984
Accrued liabilities	19	35
Deferred revenue	72	82
Tax credits	536	453
Deferred compensation	217	125
Share-based compensation	50	42
Property, plant and equipment	9	—
Lease liability	98	81
Other	96	67
Gross deferred tax assets	2,375	2,034
Valuation allowance	(530)	(460)
Total deferred tax assets	1,845	1,574
<b>Deferred tax liabilities:</b>		
Property, plant and equipment	—	(111)
Right of use assets	(103)	(80)
Undistributed foreign earnings	(23)	(39)
Total deferred tax liabilities	(126)	(230)
Net deferred tax assets	\$ 1,719	\$ 1,344

A valuation allowance is recorded to reflect the estimated amount of net deferred tax assets that may not be realized. Changes in the valuation allowance in each fiscal year were as follows:

	2023	2022	2021
	(In millions)		
Beginning balance	\$ 460	\$ 361	\$ 314
Increases	70	99	47
Ending balance	\$ 530	\$ 460	\$ 361

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

At October 29, 2023, we have state research and development tax credit carryforwards of \$536 million, including \$501 million of credits that are carried over until exhausted and \$32 million that are carried over for 15 years and begin to expire in fiscal 2033. It is more likely than not that all tax credit carryforwards, net of valuation allowance, will be utilized.

We maintain liabilities for uncertain tax positions. These liabilities involve considerable judgment and estimation and are continuously monitored based on the best information available. Gross unrecognized tax benefits are classified as non-current income taxes payable or as a reduction in deferred tax assets. A reconciliation of the beginning and ending balances of gross unrecognized tax benefits in each fiscal year is as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions)</b>		
Beginning balance of gross unrecognized tax benefits	\$ 498	\$ 537	\$ 496
Settlements with tax authorities	—	(25)	—
Lapses of statutes of limitation	—	—	(4)
Increases in tax positions for current year	28	26	26
Increases in tax positions for prior years	—	28	23
Decreases in tax positions for prior years	(16)	(68)	(4)
Ending balance of gross unrecognized tax benefits	<u>\$ 510</u>	<u>\$ 498</u>	<u>\$ 537</u>

Tax expense for interest and penalties on unrecognized tax benefits for fiscal 2023, 2022 and 2021 was \$34 million, \$14 million and \$14 million, respectively. The income tax liability for interest and penalties for fiscal 2023, 2022 and 2021 was \$136 million, \$103 million and \$88 million, respectively, and was classified as non-current income taxes payable.

Included in the balance of unrecognized tax benefits for fiscal 2023, 2022 and 2021 are \$386 million, \$388 million, and \$442 million, respectively, of tax benefits that, if recognized, would affect the effective tax rate.

Our tax returns remain subject to examination by taxing authorities. These include U.S. returns for fiscal 2015 and later years, and foreign tax returns for fiscal 2011 and later years.

The timing of the resolution of income tax examinations, as well as the amounts and timing of various tax payments that may be part of the settlement process, is highly uncertain. This could cause fluctuations in our financial condition and results of operations. We continue to have ongoing negotiations with various taxing authorities throughout the year, and evaluate all domestic and foreign tax audit issues in the aggregate, along with the expiration of applicable statutes of limitations.

We believe it is reasonably possible that the amount of gross unrecognized tax benefits related to foreign operations could be reduced by up to \$200 million in the next 12 months as a result of the resolution of tax matters or the lapse of statute of limitations.

**Note 15 Warranty, Guarantees, Commitments and Contingencies**

***Warranty***

Changes in the warranty reserves during each fiscal year were as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions)</b>		
Beginning balance	\$ 286	\$ 242	\$ 201
Provisions for warranty	254	254	223
Changes in reserves related to preexisting warranty	2	11	9
Consumption of reserves	(210)	(221)	(191)
Ending balance	<u>\$ 332</u>	<u>\$ 286</u>	<u>\$ 242</u>



## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Our products are generally sold with a warranty for a 12-month period following installation. The provision for the estimated cost of warranty is recorded when revenue is recognized. Parts and labor are covered under the terms of the warranty agreement. The warranty provision is based on historical experience by product, configuration and geographic region. Quarterly warranty consumption is generally associated with sales that occurred during the preceding four quarters, and quarterly warranty provisions are generally related to the current quarter's sales.

***Guarantees***

In the ordinary course of business, we provide standby letters of credit or other guarantee instruments to third parties as required for certain transactions initiated by either us or our subsidiaries. As of October 29, 2023, the maximum potential amount of future payments that we could be required to make under these guarantee agreements was approximately \$333 million. We have not recorded any liability in connection with these guarantee agreements beyond that required to appropriately account for the underlying transaction being guaranteed. We do not believe, based on historical experience and information currently available, that it is probable that any amounts will be required to be paid under these guarantee agreements.

We also have agreements with various banks to facilitate subsidiary banking operations worldwide, including overdraft arrangements, issuance of bank guarantees, and letters of credit. As of October 29, 2023, we have provided parent guarantees to banks for approximately \$293 million to cover these arrangements.

***Legal Matters***

From time to time, we receive notification from third parties, including customers and suppliers, seeking indemnification, litigation support, payment of money or other actions by us in connection with claims made against them. In addition, from time to time, we receive notification from third parties claiming that we may be or are infringing or misusing their intellectual property or other rights. We also are subject to various other legal proceedings, government investigations or inquiries, and claims, both asserted and unasserted, that arise in the ordinary course of business. These matters are subject to uncertainties, and we cannot predict the outcome of these matters, or governmental inquiries or proceedings that may occur. Although the outcome of the above-described matters, claims and proceedings cannot be predicted with certainty, we do not believe at this time that any of the above-described matters will have a material effect on our consolidated financial condition or results of operations.

In August 2022, we received a subpoena from the U.S. Attorney's Office for the District of Massachusetts requesting information relating to certain China customer shipments. In November 2023, we received a subpoena from the U.S. Commerce Department's Bureau of Industry and Security requesting the same information. We are cooperating fully with the government in these matters. These matters are subject to uncertainties, and we cannot predict the outcome, nor reasonably estimate a range of loss or penalties, if any, relating to these matters.

**Note 16    Industry Segment Operations**

Our three reportable segments are: Semiconductor Systems, Applied Global Services, and Display and Adjacent Markets. As defined under the accounting literature, our chief operating decision-maker has been identified as the President and Chief Executive Officer, who reviews operating results to make decisions about allocating resources and assessing performance for the entire Company. Segment information is presented based upon our management organization structure as of October 29, 2023 and the distinctive nature of each segment. Future changes to this internal financial structure may result in changes to our reportable segments.

The Semiconductor Systems reportable segment includes semiconductor capital equipment for etch, rapid thermal processing, deposition, chemical mechanical planarization, metrology and inspection, wafer packaging, and ion implantation.

The Applied Global Services segment provides integrated solutions to optimize equipment and fab performance and productivity, including spares, upgrades, services, certain remanufactured earlier generation equipment and factory automation software for semiconductor, display and other products.

The Display and Adjacent Markets segment includes products for manufacturing liquid crystal displays (LCDs), organic light-emitting diodes (OLEDs), equipment upgrades and other display technologies for TVs, monitors, laptops, personal computers, smart phones, other consumer-oriented devices and solar energy cells.

Each operating segment is separately managed and has separate financial results that are reviewed by our chief operating decision-maker. Each reportable segment contains closely related products that are unique to the particular segment. Segment operating income is determined based upon internal performance measures used by our chief operating decision-maker. The chief operating decision-maker does not evaluate operating segments using total asset information.

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

We derive the segment results directly from our internal management reporting system. The accounting policies we use to derive reportable segment results are substantially the same as those used for external reporting purposes. Management measures the performance of each reportable segment based upon several metrics including orders, net sales and operating income. Management uses these results to evaluate the performance of, and to assign resources to, each of the reportable segments.

The Corporate and Other category includes revenues from products, as well as costs of products sold, for fabricating solar photovoltaic cells and modules, and certain operating expenses that are not allocated to our reportable segments and are managed separately at the corporate level. These operating expenses include costs related to share-based compensation; certain management, finance, legal, human resources, and research, development and engineering functions provided at the corporate level; and unabsorbed information technology and occupancy. In addition, we do not allocate to our reportable segments restructuring, severance and asset impairment charges and any associated adjustments related to restructuring actions, unless these actions pertain to a specific reportable segment. Segment operating income also excludes interest income/expense and other financial charges and income taxes. Management does not consider the unallocated costs in measuring the performance of the reportable segments.

Information for each reportable segment for and as of the end of each fiscal year were as follows:

	<u>Net Sales</u>	<u>Operating Income (Loss)</u>	<u>Depreciation/ Amortization</u>	<u>Capital Expenditures</u>	<u>Accounts Receivable</u>	<u>Inventories</u>
	(In millions)					
2023:						
Semiconductor Systems	\$ 19,698	\$ 7,090	\$ 235	\$ 381	\$ 3,943	\$ 3,433
Applied Global Services	5,732	1,657	31	39	1,111	2,073
Display and Adjacent Markets	868	133	19	13	184	200
Corporate and Other	219	(1,226)	230	673	(73)	19
Total	<u>\$ 26,517</u>	<u>\$ 7,654</u>	<u>\$ 515</u>	<u>\$ 1,106</u>	<u>\$ 5,165</u>	<u>\$ 5,725</u>
2022:						
Semiconductor Systems	\$ 18,797	\$ 6,969	\$ 203	\$ 249	\$ 4,924	\$ 3,995
Applied Global Services	5,543	1,661	31	38	997	1,788
Display and Adjacent Markets	1,331	260	31	30	148	129
Corporate and Other	114	(1,102)	179	470	(1)	20
Total	<u>\$ 25,785</u>	<u>\$ 7,788</u>	<u>\$ 444</u>	<u>\$ 787</u>	<u>\$ 6,068</u>	<u>\$ 5,932</u>
2021:						
Semiconductor Systems	\$ 16,286	\$ 6,311	\$ 194	\$ 228	\$ 3,886	\$ 2,586
Applied Global Services	5,013	1,508	32	29	922	1,561
Display and Adjacent Markets	1,634	314	27	32	207	153
Corporate and Other	130	(1,244)	141	379	(62)	9
Total	<u>\$ 23,063</u>	<u>\$ 6,889</u>	<u>\$ 394</u>	<u>\$ 668</u>	<u>\$ 4,953</u>	<u>\$ 4,309</u>

Semiconductor Systems and Display and Adjacent Markets revenues are recognized at a point in time. Applied Global Services revenue is recognized at a point in time for tangible goods such as spare parts and equipment, and over time for service agreements. The majority of revenue recognized over time is recognized within 12 months of the contract inception.

Net sales for Semiconductor Systems by end use application for the periods indicated were as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Foundry, logic and other	77 %	66 %	60 %
Dynamic random-access memory (DRAM)	17 %	19 %	19 %
Flash memory	6 %	15 %	21 %
	<u>100 %</u>	<u>100 %</u>	<u>100 %</u>

**APPLIED MATERIALS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The reconciling items included in Corporate and Other were as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions)</b>		
Unallocated net sales	\$ 219	\$ 114	\$ 130
Unallocated cost of products sold and expenses	(955)	(807)	(725)
Share-based compensation	(490)	(413)	(346)
Severance and related charges	—	4	(149)
Deal termination fee	—	—	(154)
Total	<u>\$ (1,226)</u>	<u>\$ (1,102)</u>	<u>\$ (1,244)</u>

For geographical reporting, revenue by geographic location is determined by the location of customers' facilities to which products were shipped. Long-lived assets consist primarily of property, plant and equipment and right-of-use assets and are attributed to the geographic location in which they are located. Fiscal 2021 long-lived asset amount has been updated to include right-of-use assets to conform with the current year presentation. Net sales and long-lived assets by geographic region for and as of each fiscal year were as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
	<b>(In millions)</b>		
Net sales:			
United States	\$ 4,006	\$ 3,104	\$ 2,038
China	7,247	7,254	7,535
Korea	4,609	4,395	5,012
Taiwan	5,670	6,262	4,742
Japan	2,075	2,012	1,962
Europe	2,152	1,674	1,097
Southeast Asia	758	1,084	677
Total outside United States	<u>22,511</u>	<u>22,681</u>	<u>21,025</u>
Consolidated total	<u>\$ 26,517</u>	<u>\$ 25,785</u>	<u>\$ 23,063</u>

	<u>October 29, 2023</u>	<u>October 30, 2022</u>
	<b>(In millions)</b>	
Long-lived assets:		
United States	\$ 3,239	\$ 2,725
China	4	6
Korea	11	14
Taiwan	59	62
Japan	7	7
Europe	110	75
Southeast Asia	6	8
Total outside United States	<u>197</u>	<u>172</u>
Consolidated total	<u>\$ 3,436</u>	<u>\$ 2,897</u>

**APPLIED MATERIALS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The following customers accounted for at least 10 percent of our net sales in each fiscal year, which were for products and services in multiple reportable segments:

	<b>2023</b>	<b>2022</b>	<b>2021</b>
Samsung Electronics Co., Ltd.	15 %	12 %	20 %
Taiwan Semiconductor Manufacturing Company Limited	19 %	20 %	15 %
Intel Corporation	*	10 %	*

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\*Less than 10%

## INDEX TO EXHIBITS

These Exhibits are numbered in accordance with the Exhibit Table of Item 601 of Regulation S-K:

<u>Exhibit No.</u>	<u>Description</u>	<u>Form</u>	<u>Incorporated by Reference</u>		
			<u>File No.</u>	<u>Exhibit No.</u>	<u>Filing Date</u>
<u>3.1</u>	<u>Amended and Restated Certificate of Incorporation of Applied Materials, Inc., as amended and restated through March 16, 2020</u>	8-K	000-06920	3.1	3/16/2020
<u>3.2</u>	<u>Amended and Restated Bylaws of Applied Materials, Inc., as amended and restated through December 8, 2023</u>	8-K	000-06920	3.2	12/13/2023
<u>4.1</u>	<u>Indenture, dated June 8, 2011, by and between Applied Materials, Inc. and U.S. Bank National Association, as Trustee</u>	8-K	000-06920	4.1	6/10/2011
<u>4.2</u>	<u>First Supplemental Indenture, dated June 8, 2011, by and between Applied Materials, Inc. and U.S. Bank National Association, as Trustee</u>	8-K	000-06920	4.2	6/10/2011
<u>4.3</u>	<u>Second Supplemental Indenture, dated September 24, 2015, by and between Applied Materials, Inc. and U.S. Bank National Association, as Trustee</u>	8-K	000-06920	4.1	9/24/2015
<u>4.4</u>	<u>Third Supplemental Indenture, dated March 31, 2017, by and between Applied Materials, Inc. and U.S. Bank National Association, as Trustee</u>	8-K	000-06920	4.1	3/31/2017
<u>4.5</u>	<u>Fourth Supplemental Indenture dated May 29, 2020, by and between Applied Materials, Inc. and U.S. Bank National Association</u>	8-K	000-06920	4.1	5/29/2020
<u>4.6</u>	<u>Description of Registrant's Securities Registered Under Section 12 of the Securities Exchange Act of 1934†</u>				
<u>10.1</u>	<u>Form of Indemnification Agreement between Applied Materials, Inc. and Directors and certain officers</u>	10-K	000-06920	10.1	12/16/2022
<u>10.2</u>	<u>Applied Materials, Inc. Profit Sharing Scheme (Ireland)</u>	S-8	333-45011	4.1	1/27/1998
<u>10.3*</u>	<u>Applied Materials Inc. Employee Financial Assistance Plan, amended and restated as of December 18, 2008</u>	10-Q	000-06920	10.58	3/3/2009
<u>10.4</u>	<u>Deed of Amendment to Applied Materials Profit Sharing Scheme, dated February 7, 2006, to amend Clause 20 of the Trust Deed thereunder</u>	10-K	000-06920	10.48	12/12/2008
<u>10.5</u>	<u>Deed of Amendment to Applied Materials Profit Sharing Scheme, dated February 7, 2006, to amend the definition of Eligible Employee in the First Schedule to the Trust Deed thereunder.</u>	10-K	000-06920	10.49	12/12/2008
<u>10.6*</u>	<u>Form of Restricted Stock Unit Agreement for use under the amended and restated Applied Materials, Inc. Employee Stock Incentive Plan</u>	10-Q	000-06920	10.3	5/27/2021
<u>10.7*</u>	<u>Form of Restricted Stock Unit Agreement for Nonemployee Directors for use under the amended and restated Applied Materials, Inc. Employee Stock Incentive Plan</u>	10-Q	000-06920	10.4	5/27/2021
<u>10.8*</u>	<u>Form of Restricted Stock Agreement for use under the amended and restated Applied Materials, Inc. Employee Stock Incentive Plan</u>	10-Q	000-06920	10.3	8/23/2012
<u>10.9*</u>	<u>Applied Materials, Inc. Omnibus Employees' Stock Purchase Plan, effective September 1, 2021</u>	8-K	000-06920	10.2	3/16/2021
<u>10.10*</u>	<u>Offer Letter, dated August 14, 2013, between Applied Materials, Inc. and Gary E. Dickerson</u>	10-Q	000-06920	10.2	8/22/2013
<u>10.11*</u>	<u>Form of Non-Qualified Stock Option Agreement for Employees for use under the Applied Materials, Inc. Employee Stock Incentive Plan, as amended</u>	10-Q	000-06920	10.4	8/22/2013
<u>10.12*</u>	<u>Form of Performance Unit Agreement for use under the Applied Materials, Inc. Employee Stock Incentive Plan, as amended</u>	10-Q	000-06920	10.2	2/20/2014

<b>Exhibit No.</b>	<b>Description</b>	<b>Form</b>	<b>Incorporated by Reference</b>		
			<b>File No.</b>	<b>Exhibit No.</b>	<b>Filing Date</b>
<u>10.13*</u>	<u>Applied Materials, Inc. Applied Incentive Plan, amended and restated effective September 7, 2023†</u>				
<u>10.14*</u>	<u>Applied Materials, Inc. 2016 Deferred Compensation Plan, as amended and restated on January 1, 2021</u>	10-K	000-06920	10.15	12/16/2022
<u>10.15*</u>	<u>Applied Materials, Inc. Employee Stock Incentive Plan, as amended and restated effective March 11, 2021</u>	8-K	000-06920	10.1	3/16/2021
<u>10.16*</u>	<u>Applied Materials, Inc. Senior Executive Bonus Plan, as amended and restated effective September 8, 2023†</u>				
<u>10.17*</u>	<u>Form of Performance Share Unit Agreement for members of the Executive Staff for use under the amended and restated Applied Materials, Inc. Employee Stock Incentive Plan†</u>				
<u>10.18*</u>	<u>Form of Restricted Stock Unit Agreement for members of the Executive Staff for use under the amended and restated Applied Materials, Inc. Employee Stock Incentive Plan†</u>				
<u>10.19*</u>	<u>Offer Letter, dated February 26, 2022, between Applied Materials, Inc. and Brice Hill</u>	10-Q	000-06920	10.1	5/26/2022
<u>10.20</u>	<u>Credit Agreement, dated as of February 21, 2020, among Applied Materials, Inc., JPMorgan Chase Bank, N.A., as administrative agent, and other lenders named therein</u>	8-K	000-06920	10.1	2/21/2020
<u>10.21</u>	<u>Amendment No. 1, dated as of July 27, 2022, to the Credit Agreement, dated as of February 21, 2020, among Applied Materials, Inc., JPMorgan Chase Bank, N.A., as administrative agent, and other lenders named therein</u>	10-Q	000-06920	10.1	8/25/2022
<u>10.22</u>	<u>Extension Agreement, dated as of February 21, 2023, to Credit Agreement, dated as of February 21, 2020 (as amended by that certain Amendment No. 1 to Credit Agreement, dated as of July 27, 2022), among Applied Materials, Inc., the lenders party thereto, and JPMorgan Chase Bank, N.A., as administrative agent</u>	10-Q	000-06920	10.1	2/23/2023
<u>21</u>	<u>Subsidiaries of Applied Materials, Inc.†</u>				
<u>23</u>	<u>Consent of Independent Registered Public Accounting Firm, KPMG LLP†</u>				
<u>24</u>	<u>Power of Attorney (included on the signature page of this Annual Report on Form 10-K)†</u>				
<u>31.1</u>	<u>Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002†</u>				
<u>31.2</u>	<u>Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002†</u>				
<u>32.1</u>	<u>Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002†</u>				
<u>32.2</u>	<u>Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002†</u>				
<u>97.1</u>	<u>Applied Materials, Inc. Compensation Recovery Policy, adopted on September 7, 2023†</u>				
101.INS	XBRL Instance Document†				
101.SCH	XBRL Taxonomy Extension Schema Document†				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document†				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document†				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document†				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document†				
104	Cover Page Interactive Data File (formatted as inline XBRL)				

- \* Indicates a management contract or compensatory plan or arrangement, as required by Item 15(a)(3).
- † Filed herewith.
- ‡ Furnished herewith.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

APPLIED MATERIALS, INC.

By: /s/ GARY E. DICKERSON  
Gary E. Dickerson  
*President, Chief Executive Officer*

Dated: December 15, 2023



## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gary E. Dickerson, Brice Hill and Teri Little, jointly and severally, his or her attorneys-in-fact, each with the power of substitution, for him or her in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

\*\*\*\*\*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>/s/</u>	<u>Title</u>	<u>Date</u>
<u>GARY E. DICKERSON</u> Gary E. Dickerson	President, Chief Executive Officer and Director (Principal Executive Officer)	December 15, 2023
<u>BRICE HILL</u> Brice Hill	Senior Vice President, Chief Financial Officer (Principal Financial Officer)	December 15, 2023
<u>CHARLES W. READ</u> Charles W. Read	Corporate Vice President, Business Units and Operations Chief Financial Officer (Principal Accounting Officer)	December 15, 2023
<u>THOMAS J. IANNOTTI</u> Thomas J. Iannotti	Chairman of the Board	December 15, 2023
<u>RANI BORKAR</u> Rani Borkar	Director	December 15, 2023
<u>JUDY BRUNER</u> Judy Bruner	Director	December 15, 2023
<u>XUN CHEN</u> Xun Chen	Director	December 15, 2023
<u>AART J. DE GEUS</u> Aart J. de Geus	Director	December 15, 2023
<u>ALEXANDER A. KARSNER</u> Alexander A. Karsner	Director	December 15, 2023
<u>KEVIN P. MARCH</u> Kevin P. March	Director	December 15, 2023
<u>YVONNE MCGILL</u> Yvonne McGill	Director	December 15, 2023
<u>SCOTT A. MCGREGOR</u> Scott A. McGregor	Director	December 15, 2023

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## **BOARD OF DIRECTORS**

(as of December 31, 2023)

### **Thomas J. Iannotti**

Chairman of the Board of Applied Materials, Inc.  
Senior Vice President and General Manager,  
Enterprise Services  
Hewlett-Packard Company (retired)

### **Rani Borkar**

Corporate Vice President  
Azure Hardware Systems and Infrastructure  
Microsoft Corporation

### **Judy Bruner**

Executive Vice President  
Administration and Chief Financial Officer  
SanDisk Corporation (retired)

### **Xun (Eric) Chen**

Executive Chairman  
ParityBit Technologies, Inc.

### **Aart J. de Geus**

Executive Chair of the Board of Directors  
Synopsys, Inc.

### **Gary E. Dickerson**

President and Chief Executive Officer  
Applied Materials, Inc.

### **Alexander A. Karsner**

Senior Strategist  
X (parent company: Alphabet Inc.)

### **Kevin P. March**

Senior Vice President  
Chief Financial Officer  
Texas Instruments, Incorporated (retired)

### **Yvonne McGill**

Chief Financial Officer  
Dell Technologies Inc.

### **Scott A. McGregor**

President and Chief Executive Officer  
Broadcom Corporation (retired)

## **EXECUTIVE OFFICERS**

(as of December 31, 2023)

### **Gary E. Dickerson**

President and Chief Executive Officer

### **Brice Hill**

Senior Vice President, Chief Financial Officer  
and Global Information Services

### **Prabu Raja**

President, Semiconductor Products Group

### **Teri Little**

Senior Vice President, Chief Legal Officer  
and Corporate Secretary

### **Omkaram Nalamasu**

Senior Vice President,  
Chief Technology Officer

### **Timothy M. Deane**

Group Vice President,  
Applied Global Services

### **Charles W. Read**

Corporate Vice President, Business Units  
and Operations Chief Financial Officer



[WWW.APPLIEDMATERIALS.COM](http://WWW.APPLIEDMATERIALS.COM)

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