
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-Q

(Mark One)

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

For the quarterly period ended July 30, 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

(State or other jurisdiction of incorporation or organization)

94-1655526

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

3050 Bowers Avenue

P.O. Box 58039

Santa Clara, California 95052-8039

(Address of principal executive offices)

(408) 727-5555

(Registrant's telephone number, including area code)

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

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

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 such files). 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

Number of shares outstanding of the issuer's common stock as of July 30, 2023: 836,533,852

APPLIED MATERIALS, INC.
FORM 10-Q FOR THE QUARTERLY PERIOD ENDED JULY 30, 2023
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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

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

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
	(Unaudited)			
Net sales	\$ 6,425	\$ 6,520	\$ 19,794	\$ 19,036
Cost of products sold	3,449	3,514	10,579	10,144
Gross profit	2,976	3,006	9,215	8,892
Operating expenses:				
Research, development and engineering	767	705	2,313	2,045
Marketing and selling	193	180	584	520
General and administrative	214	197	635	537
Severance and related charges	—	—	—	(4)
Total operating expenses	1,174	1,082	3,532	3,098
Income from operations	1,802	1,924	5,683	5,794
Interest expense	60	56	180	171
Interest and other income (expense), net	64	(7)	41	27
Income before income taxes	1,806	1,861	5,544	5,650
Provision for income taxes	246	255	692	716
Net income	\$ 1,560	\$ 1,606	\$ 4,852	\$ 4,934
Earnings per share:				
Basic	\$ 1.86	\$ 1.86	\$ 5.76	\$ 5.63
Diluted	\$ 1.85	\$ 1.85	\$ 5.73	\$ 5.59
Weighted average number of shares:				
Basic	838	864	842	877
Diluted	843	869	846	883

See accompanying Notes to Consolidated Condensed Financial Statements.

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

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
	(Unaudited)			
Net income	\$ 1,560	\$ 1,606	\$ 4,852	\$ 4,934
Other comprehensive income (loss), net of tax:				
Change in unrealized gain (loss) on available-for-sale investments	(3)	3	25	(45)
Change in unrealized net loss on derivative instruments	15	13	(46)	46
Other comprehensive income (loss), net of tax	12	16	(21)	1
Comprehensive income	<u>\$ 1,572</u>	<u>\$ 1,622</u>	<u>\$ 4,831</u>	<u>\$ 4,935</u>

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC.
CONSOLIDATED CONDENSED BALANCE SHEETS
(In millions)

	<u>July 30, 2023</u>	<u>October 30, 2022</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 6,025	\$ 1,995
Short-term investments	510	586
Accounts receivable, net	5,230	6,068
Inventories	5,809	5,932
Other current assets	1,305	1,344
Total current assets	18,879	15,925
Long-term investments	2,177	1,980
Property, plant and equipment, net	2,604	2,307
Goodwill	3,732	3,700
Purchased technology and other intangible assets, net	305	339
Deferred income taxes and other assets	2,713	2,475
Total assets	\$ 30,410	\$ 26,726
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	\$ 199	\$ —
Accounts payable and accrued expenses	4,528	4,237
Contract liabilities	3,497	3,142
Total current liabilities	8,224	7,379
Long-term debt	5,460	5,457
Income taxes payable	818	964
Other liabilities	815	732
Total liabilities	15,317	14,532
Stockholders' equity:		
Common stock	8	8
Additional paid-in capital	8,914	8,593
Retained earnings	41,988	37,892
Treasury stock	(35,594)	(34,097)
Accumulated other comprehensive loss	(223)	(202)
Total stockholders' equity	15,093	12,194
Total liabilities and stockholders' equity	\$ 30,410	\$ 26,726

Amounts as of July 30, 2023 are unaudited. Amounts as of October 30, 2022 are derived from the October 30, 2022 audited consolidated financial statements.

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC
CONSOLIDATED CONDENSED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions)

Three Months Ended July 30, 2023	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			Shares	Amount		
(Unaudited)								
Balance as of April 30, 2023	840	\$ 8	\$ 8,811	\$ 40,696	1,182	\$ (35,151)	\$ (235)	\$ 14,129
Net income	—	—	—	1,560	—	—	—	1,560
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	12	12
Dividends declared (\$0.32 per common share)	—	—	—	(268)	—	—	—	(268)
Share-based compensation	—	—	114	—	—	—	—	114
Net issuance under stock plans	—	—	(11)	—	—	—	—	(11)
Common stock repurchases	(4)	—	—	—	4	(443)	—	(443)
Balance as of July 30, 2023	836	\$ 8	\$ 8,914	\$ 41,988	1,186	\$ (35,594)	\$ (223)	\$ 15,093

Nine Months Ended July 30, 2023	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			Shares	Amount		
(Unaudited)								
Balance as of October 30, 2022	844	\$ 8	\$ 8,593	\$ 37,892	1,173	\$ (34,097)	\$ (202)	\$ 12,194
Net income	—	—	—	4,852	—	—	—	4,852
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	(21)	(21)
Dividends declared (\$0.90 per common share)	—	—	—	(756)	—	—	—	(756)
Share-based compensation	—	—	375	—	—	—	—	375
Net issuance under stock plans	5	—	(54)	—	—	—	—	(54)
Common stock repurchases	(13)	—	—	—	13	(1,497)	—	(1,497)
Balance as of July 30, 2023	836	\$ 8	\$ 8,914	\$ 41,988	1,186	\$ (35,594)	\$ (223)	\$ 15,093

APPLIED MATERIALS, INC
CONSOLIDATED CONDENSED STATEMENTS OF STOCKHOLDERS' EQUITY - (Continued)
(In millions)

Three Months Ended July 31, 2022	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			Shares	Amount		
(Unaudited)								
Balance as of May 1, 2022	869	\$ 9	\$ 8,306	\$ 35,137	1,146	\$ (31,598)	\$ (275)	\$ 11,579
Net income	—	—	—	1,606	—	—	—	1,606
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	16	16
Dividends declared (\$0.26 per common share)	—	—	—	(223)	—	—	—	(223)
Share-based compensation	—	—	95	—	—	—	—	95
Net issuance under stock plans	1	—	(3)	—	—	—	—	(3)
Common stock repurchases	(10)	—	—	—	10	(1,000)	—	(1,000)
Balance as of July 31, 2022	860	\$ 9	\$ 8,398	\$ 36,520	1,156	\$ (32,598)	\$ (259)	\$ 12,070

Nine Months Ended July 31, 2022	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			Shares	Amount		
(Unaudited)								
Balance as of October 31, 2021	892	\$ 9	\$ 8,247	\$ 32,246	1,119	\$ (27,995)	\$ (260)	\$ 12,247
Net income	—	—	—	4,934	—	—	—	4,934
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	1	1
Dividends declared (\$0.76 per common share)	—	—	—	(660)	—	—	—	(660)
Share-based compensation	—	—	314	—	—	—	—	314
Net issuance under stock plans	5	—	(163)	—	—	—	—	(163)
Common stock repurchases	(37)	—	—	—	37	(4,603)	—	(4,603)
Balance as of July 31, 2022	860	\$ 9	\$ 8,398	\$ 36,520	1,156	\$ (32,598)	\$ (259)	\$ 12,070

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC.
CONSOLIDATED CONDENSED STATEMENTS OF CASH FLOWS

(In millions)

	Nine Months Ended	
	July 30, 2023	July 31, 2022
	(Unaudited)	
Cash flows from operating activities:		
Net income	\$ 4,852	\$ 4,934
Adjustments required to reconcile net income to cash provided by operating activities:		
Depreciation and amortization	385	321
Severance and related charges	—	(4)
Share-based compensation	375	314
Deferred income taxes	(174)	(209)
Other	189	14
Changes in operating assets and liabilities:		
Accounts receivable	838	3
Inventories	123	(1,164)
Other current and non-current assets	27	(19)
Accounts payable and accrued expenses	(441)	195
Contract liabilities	355	725
Income taxes payable	545	(597)
Other liabilities	71	29
Cash provided by operating activities	<u>7,145</u>	<u>4,542</u>
Cash flows from investing activities:		
Capital expenditures	(797)	(564)
Cash paid for acquisitions, net of cash acquired	(25)	(441)
Proceeds from sales and maturities of investments	971	1,013
Purchases of investments	(1,195)	(1,175)
Cash used in investing activities	<u>(1,046)</u>	<u>(1,167)</u>
Cash flows from financing activities:		
Proceeds from commercial paper	892	—
Repayments of commercial paper	(700)	—
Proceeds from common stock issuances	111	96
Common stock repurchases	(1,489)	(4,603)
Tax withholding payments for vested equity awards	(165)	(259)
Payments of dividends to stockholders	(707)	(650)
Repayments of principal on finance leases	(8)	—
Cash used in financing activities	<u>(2,066)</u>	<u>(5,416)</u>
Increase (decrease) in cash, cash equivalents and restricted cash equivalents	4,033	(2,041)
Cash, cash equivalents and restricted cash equivalents — beginning of period	2,100	5,101
Cash, cash equivalents and restricted cash equivalents — end of period	<u>\$ 6,133</u>	<u>\$ 3,060</u>
Reconciliation of cash, cash equivalents and restricted cash equivalents		
Cash and cash equivalents	\$ 6,025	\$ 2,956
Restricted cash equivalents included in deferred income taxes and other assets	108	104
Total cash, cash equivalents and restricted cash equivalents	<u>\$ 6,133</u>	<u>\$ 3,060</u>
Supplemental cash flow information:		
Cash payments for income taxes	\$ 418	\$ 1,623
Cash refunds from income taxes	\$ 51	\$ 133
Cash payments for interest	\$ 137	\$ 137

See accompanying Notes to Consolidated Condensed Financial Statements.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

Note 1 Basis of Presentation***Basis of Presentation***

In the opinion of our management, the unaudited interim consolidated condensed financial statements of Applied Materials, Inc. and its subsidiaries (we, us, and our) included herein have been prepared on a basis consistent with the October 30, 2022 audited consolidated financial statements and include all material adjustments, consisting of normal recurring adjustments, necessary to fairly state the information set forth therein. These unaudited interim consolidated condensed financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended October 30, 2022 (2022 Form 10-K).

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. Our results of operations for the three and nine months ended July 30, 2023 are not necessarily indicative of future operating results. Our fiscal year ends on the last Sunday in October of each year. Fiscal 2023 and 2022 contain 52 weeks each and the first nine months of fiscal 2023 and 2022 each contained 39 weeks.

Recent Accounting Pronouncements***Accounting Standards Not Yet 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. This authoritative guidance is effective for us in our fiscal 2023 Form 10-K. The adoption of this authoritative guidance is not expected to have a significant impact to our financial results and only impacts the disclosures in our notes to 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 condensed 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, with early adoption permitted. We are currently evaluating the effect of this new guidance on our consolidated condensed financial statements.

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

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.

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
(In millions, except per share amounts)				
Numerator:				
Net income	\$ 1,560	\$ 1,606	\$ 4,852	\$ 4,934
Denominator:				
Weighted average common shares outstanding	838	864	842	877
Effect of weighted dilutive restricted stock units and employee stock purchase plan shares	5	5	4	6
Denominator for diluted earnings per share	<u>843</u>	<u>869</u>	<u>846</u>	<u>883</u>
Basic earnings per share	\$ 1.86	\$ 1.86	\$ 5.76	\$ 5.63
Diluted earnings per share	\$ 1.85	\$ 1.85	\$ 5.73	\$ 5.59
Potentially weighted dilutive securities	—	3	2	2

Potentially weighted dilutive securities attributable to outstanding restricted stock units are excluded from the calculation of diluted earnings per share 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 CONDENSED 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>July 30, 2023</u>	<u>Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Estimated Fair Value</u>
	(In millions)			
Cash	\$ 1,397	\$ —	\$ —	\$ 1,397
Cash equivalents:				
Money market funds*	3,525	—	—	3,525
Commercial paper, corporate bonds and medium-term notes	1,103	—	—	1,103
Total Cash equivalents	4,628	—	—	4,628
Total Cash and Cash equivalents	<u>\$ 6,025</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 6,025</u>
Short-term and long-term investments:				
Bank certificates of deposit and time deposits	\$ 9	\$ —	\$ —	\$ 9
U.S. Treasury and agency securities	411	—	9	402
Non-U.S. government securities**	6	—	—	6
Municipal securities	438	—	11	427
Commercial paper, corporate bonds and medium-term notes	591	—	12	579
Asset-backed and mortgage-backed securities	448	—	14	434
Total fixed income securities	1,903	—	46	1,857
Publicly traded equity securities	79	51	13	117
Equity investments in privately held companies	660	78	25	713
Total equity investments	739	129	38	830
Total short-term and long-term investments	<u>\$ 2,642</u>	<u>\$ 129</u>	<u>\$ 84</u>	<u>\$ 2,687</u>
Total Cash, Cash equivalents and Investments	<u>\$ 8,667</u>	<u>\$ 129</u>	<u>\$ 84</u>	<u>\$ 8,712</u>

*Excludes restricted cash equivalents invested in money market funds related to deferred compensation plans.

**Includes Canadian provincial government debt.

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED 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 restricted cash equivalents invested in money market funds related to deferred compensation plans.

**Includes Canadian provincial government debt.

Maturities of Investments

The following table summarizes the contractual maturities of our investments as of July 30, 2023:

	Cost	Estimated Fair Value
	(In millions)	
Due in one year or less	\$ 488	\$ 482
Due after one through five years	964	938
Due after five years	3	3
No single maturity date*	1,187	1,264
Total	\$ 2,642	\$ 2,687

*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 CONDENSED FINANCIAL STATEMENTS - (Continued)

Gains and Losses on Investments

During the three and nine months ended July 30, 2023 and July 31, 2022 gross realized gains and losses on our fixed income portfolio were not material.

As of July 30, 2023 and October 30, 2022, 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 the three and nine months ended July 30, 2023 and July 31, 2022, we did not recognize material credit losses and the ending allowance for credit losses was not material to our fixed income portfolio.

The components of gain (loss) on equity investments for the three and nine months ended July 30, 2023 and July 31, 2022 were as follows:

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
	(In millions)			
Publicly traded equity securities				
Unrealized gain	\$ 12	\$ 3	\$ 31	\$ 21
Unrealized loss	(1)	(23)	(28)	(33)
Realized gain on sales and dividends	4	3	5	5
Realized loss on sales	—	—	(2)	—
Equity investments in privately held companies				
Unrealized gain	1	7	13	32
Unrealized loss	(18)	(5)	(29)	(5)
Realized gain on sales and dividends	2	—	7	2
Realized loss on sales and impairments	(2)	(2)	(119)	(6)
Total gain (loss) on equity investments, net	\$ (2)	\$ (17)	\$ (122)	\$ 16

Impairment losses on equity investments in privately held companies, included in the above table, were not material during the three months ended July 30, 2023 and were \$119 million during the nine months ended July 30, 2023. Impairment losses on equity investments were not material during the three and nine months ended July 31, 2022. These impairment losses are included in interest and other income (expense), net in the Consolidated Condensed Statement of Operations.

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 July 30, 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 CONDENSED 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:

	July 30, 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*	\$ 3,633	\$ —	\$ 3,633	\$ 765	\$ —	\$ 765
Bank certificates of deposit and time deposits	—	9	9	—	7	7
U.S. Treasury and agency securities	353	49	402	404	22	426
Non-U.S. government securities	—	6	6	—	6	6
Municipal securities	—	427	427	—	386	386
Commercial paper, corporate bonds and medium-term notes	—	1,682	1,682	—	693	693
Asset-backed and mortgage-backed securities	—	434	434	—	413	413
Total available-for-sale debt security investments	<u>\$ 3,986</u>	<u>\$ 2,607</u>	<u>\$ 6,593</u>	<u>\$ 1,169</u>	<u>\$ 1,527</u>	<u>\$ 2,696</u>
Equity investments with readily determinable values						
Publicly traded equity securities	\$ 117	\$ —	\$ 117	\$ 122	\$ —	\$ 122
Total equity investments with readily determinable values	<u>\$ 117</u>	<u>\$ —</u>	<u>\$ 117</u>	<u>\$ 122</u>	<u>\$ —</u>	<u>\$ 122</u>
Total	<u>\$ 4,103</u>	<u>\$ 2,607</u>	<u>\$ 6,710</u>	<u>\$ 1,291</u>	<u>\$ 1,527</u>	<u>\$ 2,818</u>

*Amounts as of July 30, 2023 and October 30, 2022 include \$108 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 Condensed 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 July 30, 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 is 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 were not material during the three months ended July 30, 2023 and were \$119 million during the nine months ended July 30, 2023. Impairment losses on equity investments in privately held companies were not material during the three and nine months ended July 31, 2022. These impairment losses are included in interest and other income (expense), net in the Consolidated Condensed 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. As of July 30, 2023, the aggregate principal amount of long-term senior unsecured notes was \$5.5 billion and the estimated fair value was \$5.1 billion. As of 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 Condensed Financial Statements for further detail of existing debt.

NOTES TO CONSOLIDATED CONDENSED 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 as of July 30, 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 immediately recognize the gain or loss on the associated financial instrument in the consolidated condensed 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 the three and nine months ended July 30, 2023 and July 31, 2022.

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 July 30, 2023 and October 30, 2022, the total outstanding notional amounts of foreign exchange contracts were \$1.8 billion and \$2.1 billion, respectively. The fair values of foreign exchange derivative instruments as of July 30, 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:

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
	(In millions)			
Derivatives in Cash Flow Hedging Relationships:				
Foreign exchange contracts	\$ 15	\$ 35	\$ (32)	\$ 94
Total	<u>\$ 15</u>	<u>\$ 35</u>	<u>\$ (32)</u>	<u>\$ 94</u>

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

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

	Three Months Ended					
	July 30, 2023			July 31, 2022		
	Total Amount Presented in the Consolidated Condensed Statement of Operations in which the Effects of Cash Flow Hedges are Recorded	Derivatives in Cash Flow Hedging Relationships		Total Amount Presented in the Consolidated Condensed 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 Condensed Statement of Operations	Amount of Gain (Loss) Excluded from Effectiveness Testing Recognized in Consolidated Condensed Statement of Operations		Amount of Gain or (Loss) Reclassified from AOCI into Consolidated Condensed Statement of Operations	Amount of Gain (Loss) Excluded from Effectiveness Testing Recognized in Consolidated Condensed Statement of Operations	
(In millions)						
Foreign Exchange Contracts:						
Net sales	\$ 6,425	\$ 8	\$ —	\$ 6,520	\$ 32	\$ —
Cost of products sold	\$ 3,449	—	—	\$ 3,514	(4)	—
Research, development and engineering	\$ 767	(5)	—	\$ 705	(4)	—
Marketing and selling	\$ 193	(1)	—	\$ 180	(1)	—
General and administrative	\$ 214	(1)	—	\$ 197	(1)	—
Interest Rate Contracts:						
Interest expense	\$ 60	(4)	—	\$ 56	(4)	—
	<u>\$ (3)</u>	<u>\$ —</u>		<u>\$ 18</u>	<u>\$ —</u>	

	Nine Months Ended					
	July 30, 2023			July 31, 2022		
	Total Amount Presented in the Consolidated Condensed Statement of Operations in which the Effects of Cash Flow Hedges are Recorded	Derivatives in Cash Flow Hedging Relationships		Total Amount Presented in the Consolidated Condensed 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 Condensed Statement of Operations	Amount of Gain (Loss) Excluded from Effectiveness Testing Recognized in Consolidated Condensed Statement of Operations		Amount of Gain or (Loss) Reclassified from AOCI into Consolidated Condensed Statement of Operations	Amount of Gain (Loss) Excluded from Effectiveness Testing Recognized in Consolidated Condensed Statement of Operations	
(In millions)						
Foreign Exchange Contracts:						
Net sales	\$ 19,794	\$ 47	\$ —	\$ 19,036	\$ 59	\$ —
Cost of products sold	\$ 10,579	2	—	\$ 10,144	(7)	—
Research, development and engineering	\$ 2,313	(8)	—	\$ 2,045	(4)	(1)
Marketing and selling	\$ 584	(1)	—	\$ 520	(2)	—
General and administrative	\$ 635	(2)	—	\$ 537	(1)	—
Interest Rate Contracts:						
Interest expense	\$ 180	(10)	—	\$ 171	(10)	—
	<u>\$ 28</u>	<u>\$ —</u>		<u>\$ 35</u>	<u>\$ (1)</u>	

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

	Location of Gain or (Loss) Recognized in Consolidated Condensed Statement of Operations	Amount of Gain or (Loss) Recognized in Consolidated Condensed Statement of Operations			
		Three Months Ended		Nine Months Ended	
		July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
(In millions)					
Derivatives Not Designated as Hedging Instruments					
Foreign exchange contracts	Interest and other income, net	\$ 11	\$ 21	\$ (25)	\$ 41
Total return swaps - deferred compensation	Cost of products sold	2	—	3	(2)
Total return swaps - deferred compensation	Operating expenses	15	—	29	(19)
Total return swaps - deferred compensation	Interest and other income, net	(4)	(1)	(8)	(1)
Total		\$ 24	\$ 20	\$ (1)	\$ 19

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 July 30, 2023.

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 \$90 million and \$619 million of account receivables during the three and nine months ended July 30, 2023, respectively. We sold \$251 million and \$821 million of account receivables during the three and nine months ended July 31, 2022, respectively. We did not discount letters of credit issued by customers or discount promissory notes during the nine months ended July 30, 2023 and July 31, 2022. Financing charges on the sale of receivables and discounting of letters of credit are included in interest expense in the accompanying Consolidated Condensed Statements of Operations and were not material for all periods presented.

Accounts receivable are presented net of allowance for credit losses of \$29 million as of July 30, 2023 and as of October 30, 2022. 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 July 30, 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 Condensed 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 CONDENSED FINANCIAL STATEMENTS - (Continued)

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

	<u>July 30, 2023</u>	<u>October 30, 2022</u>
	<u>(In millions)</u>	
Contract assets	\$ 213	\$ 173
Contract liabilities	\$ 3,497	\$ 3,142

The increase in contract assets during the nine months ended July 30, 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 the nine months ended July 30, 2023, we recognized revenue of approximately \$2.6 billion related to contract liabilities at October 30, 2022. Contract liabilities increased during the nine months ended July 30, 2023 due to new billings for products and services for which there were unsatisfied performance obligations to customers and revenue had not yet been recognized as of July 30, 2023, partially offset by revenue recognized related to contract liabilities at October 30, 2022.

There were no credit losses recognized on our accounts receivables and contract assets during both the nine months ended July 30, 2023 and July 31, 2022.

Performance Obligations

As of July 30, 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 \$4.9 billion, of which approximately 56% 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>July 30, 2023</u>	<u>October 30, 2022</u>
	<u>(In millions)</u>	
Inventories		
Customer service spares	\$ 1,605	\$ 1,409
Raw materials	1,762	1,807
Work-in-process	989	1,029
Finished goods		
Deferred cost of sales	493	704
Evaluation inventory	443	422
Manufactured on-hand inventory	517	561
Total finished goods	<u>1,453</u>	<u>1,687</u>
Total inventories	<u>\$ 5,809</u>	<u>\$ 5,932</u>

	<u>July 30, 2023</u>	<u>October 30, 2022</u>
	<u>(In millions)</u>	
Other Current Assets		
Prepaid income taxes and income taxes receivable	\$ 418	\$ 461
Prepaid expenses and other	887	883
	<u>\$ 1,305</u>	<u>\$ 1,344</u>

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

	Useful Life (In years)	July 30, 2023	October 30, 2022
		(In millions)	
Property, Plant and Equipment, Net			
Land and improvements		\$ 393	\$ 387
Buildings and improvements	3-30	2,143	2,027
Demonstration and manufacturing equipment	3-5	2,296	2,083
Furniture, fixtures and other equipment	3-5	711	743
Construction in progress		679	389
Gross property, plant and equipment		6,222	5,629
Accumulated depreciation		(3,618)	(3,322)
		<u>\$ 2,604</u>	<u>\$ 2,307</u>

	July 30, 2023	October 30, 2022
(In millions)		
Deferred Income Taxes and Other Assets		
Non-current deferred income taxes	\$ 1,813	\$ 1,395
Operating lease right-of-use assets	371	389
Finance lease right-of-use assets	108	—
Income tax receivables and other assets	421	691
	<u>\$ 2,713</u>	<u>\$ 2,475</u>

	July 30, 2023	October 30, 2022
(In millions)		
Accounts Payable and Accrued Expenses		
Accounts payable	\$ 1,433	\$ 1,755
Compensation and employee benefits	853	905
Warranty	313	286
Dividends payable	268	220
Income taxes payable	927	319
Other accrued taxes	40	30
Interest payable	55	39
Operating lease liabilities, current	84	85
Finance lease liabilities, current	15	—
Other	540	598
	<u>\$ 4,528</u>	<u>\$ 4,237</u>

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

	July 30, 2023	October 30, 2022
	(In millions)	
Other Liabilities		
Defined and postretirement benefit plans	\$ 116	\$ 107
Operating lease liabilities, non-current	255	287
Finance lease liabilities, non-current	86	—
Other	358	338
	<u>\$ 815</u>	<u>\$ 732</u>

Note 9 Goodwill and Intangible Assets

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.

Goodwill

As of July 30, 2023, our reporting units include Semiconductor Products Group and Imaging and Process Control Group, Applied Global Services, Display and Adjacent Markets and other reporting units recorded under Corporate and Other. The Semiconductor Products Group and Imaging and Process Control Group combine to form the Semiconductor Systems reporting segment.

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

	July 30, 2023	October 30, 2022
	(In millions)	
Goodwill by reportable segment		
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 the first nine months of 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 CONDENSED FINANCIAL STATEMENTS - (Continued)

Intangible Assets

Details of intangible assets other than goodwill were as follows:

	July 30, 2023			October 30, 2022		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
(In millions)						
Intangible assets with finite lives:						
Semiconductor Systems	\$ 2,000	\$ (1,704)	\$ 296	\$ 1,985	\$ (1,675)	\$ 310
Applied Global Services	79	(78)	1	79	(77)	2
Display and Adjacent Markets	194	(194)	—	194	(194)	—
Corporate and Other	36	(30)	6	36	(26)	10
Total intangible assets with finite lives	\$ 2,309	\$ (2,006)	\$ 303	\$ 2,294	\$ (1,972)	\$ 322
Intangible assets with indefinite lives:						
Semiconductor Systems	\$ —	\$ —	\$ —	\$ 16	\$ —	\$ 16
Corporate and Other	2	—	2	1	—	1
Total intangible assets with indefinite lives	\$ 2	\$ —	\$ 2	\$ 17	\$ —	\$ 17
Total intangible assets	\$ 2,311	\$ (2,006)	\$ 305	\$ 2,311	\$ (1,972)	\$ 339

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

Intangible assets with indefinite lives that are not subject to amortization 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.

Amortization expense of intangible assets were \$11 million and \$34 million during the three and nine months ended months ended July 30, 2023, respectively. Amortization expense of intangible assets were \$11 million and \$30 million during the three and nine months ended and July 31, 2022, respectively.

As of July 30, 2023, future estimated amortization expense of intangible assets with finite lives is expected to be as follows:

	Amortization Expense
	(In millions)
2023 (remaining 3 months)	\$ 11
2024	41
2025	40
2026	38
2027	25
Thereafter	148
Total	\$ 303

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

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. In February 2023, we entered into an agreement with our lenders to extend the termination date of the Revolving Credit Agreement to February 2026. The termination date may be further 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 July 30, 2023 and October 30, 2022.

In addition, we have revolving credit facilities with Japanese banks pursuant to which we may borrow up to approximately \$57 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 July 30, 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 the commercial paper program are used for general corporate purposes. As of July 30, 2023, we had commercial paper notes outstanding with an aggregate principal amount of \$200 million, which were recorded as short-term debt with a weighted-average interest rate of 5.26% and maturities of 63 days. We did not have any commercial paper notes outstanding as of October 30, 2022.

Senior Unsecured Notes

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

	Principal Amount		Effective Interest Rate	Interest Pay Dates
	July 30, 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	(29)	(31)		
Total long-term debt	<u>\$ 5,460</u>	<u>\$ 5,457</u>		

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

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.

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

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
	(In millions, except percentages)			
Operating lease cost	\$ 25	\$ 26	\$ 78	\$ 69
Finance lease cost:				
Amortization of right-of-use assets			\$ 1	\$ —
Interest on lease liabilities			\$ 2	\$ —
Weighted-average remaining lease term (in years) - operating leases			5.8	7.2
Weighted-average remaining lease term (in years) - finance leases			1.1	n/a
Weighted-average discount rate - operating leases			2.9%	2.3%
Weighted-average discount rate - finance leases			4.6%	n/a

Supplemental cash flow information related to leases are as follows:

	Nine Months Ended	
	July 30, 2023	July 31, 2022
	(In millions)	
Operating cash flows paid for operating leases	\$ 89	\$ 69
Operating cash flows paid for finance leases	\$ 2	\$ —
Financing cash flows paid for finance leases	\$ 8	\$ —
Right-of-use assets obtained in exchange for operating lease liabilities	\$ 83	\$ 192
Right-of-use assets obtained in exchange for finance lease liabilities	\$ 109	\$ —

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

As of July 30, 2023, the maturities of lease liabilities are as follows:

Fiscal	Operating Leases		Finance Leases	
	(In millions)			
2023 (remaining 3 months)	\$	21	\$	—
2024		94		106
2025		77		—
2026		43		—
2027		33		—
Thereafter		105		—
Total lease payments	\$	373	\$	106
Less imputed interest		(34)		(5)
Total	\$	339	\$	101

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

Accumulated Other Comprehensive Income (Loss)

Changes in the components of accumulated other comprehensive income (loss) (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 as of October 30, 2022	\$ (75)	\$ (52)	\$ (88)	\$ 13	\$ (202)
Other comprehensive income (loss) before reclassifications	16	(25)	—	—	(9)
Amounts reclassified out of AOCI	9	(21)	—	—	(12)
Other comprehensive income (loss), net of tax	25	(46)	—	—	(21)
Balance as of July 30, 2023	\$ (50)	\$ (98)	\$ (88)	\$ 13	\$ (223)

	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 as of October 31, 2021	\$ (1)	\$ (103)	\$ (169)	\$ 13	\$ (260)
Other comprehensive income (loss) before reclassifications	(36)	73	—	—	37
Amounts reclassified out of AOCI	(9)	(27)	—	—	(36)
Other comprehensive income (loss), net of tax	(45)	46	—	—	1
Balance as of July 31, 2022	\$ (46)	\$ (57)	\$ (169)	\$ 13	\$ (259)

The tax effects on net income of amounts reclassified from AOCI for the three and nine months ended July 30, 2023 and July 31, 2022 were not material.

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

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. As of July 30, 2023, approximately \$13.4 billion remained available for future stock repurchases under the repurchase program.

The following table summarizes our stock repurchases, including excise tax, for the three and nine months ended July 30, 2023 and July 31, 2022:

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
	(in millions, except per share amount)			
Shares of common stock repurchased	4	10	13	37
Cost of stock repurchased	\$ 443	\$ 1,000	\$ 1,497	\$ 4,603
Average price paid per share	\$ 131.09	\$ 102.09	\$ 117.35	\$ 125.85

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 were \$439 million, or \$129.86 per share, and \$1,489 million, or \$116.70 per share, for the three and nine months ended July 30, 2023, respectively.

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.

Dividends

In June 2023, March 2023 and December 2022, our Board of Directors declared quarterly cash dividends, in the amount of \$0.32, \$0.32, and \$0.26 per share, respectively. The dividend declared in June 2023 is payable in September 2023. Dividends paid during the nine months ended July 30, 2023 and July 31, 2022 totaled \$707 million and \$650 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.

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

During the three and nine months ended July 30, 2023 and July 31, 2022, we recognized share-based compensation expense related to equity awards and ESPP shares. The effect of share-based compensation on the results of operations was as follows:

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
	(In millions)			
Cost of products sold	\$ 42	\$ 34	\$ 138	\$ 112
Research, development and engineering	42	35	137	115
Marketing and selling	13	11	42	37
General and administrative	17	15	58	50
Total share-based compensation	<u>\$ 114</u>	<u>\$ 95</u>	<u>\$ 375</u>	<u>\$ 314</u>

The cost associated with share-based awards is recognized over the awards' service period for the entire award on a straight-line basis, adjusting for estimated forfeitures. We calculate estimated forfeiture rate on an annual basis, based on historical forfeiture activities. Share-based awards granted to certain members of senior management allow for partial accelerated vesting in the event of a qualifying retirement based on age and years of service. 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.

As of July 30, 2023, we had \$854 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 2.7 years. As of July 30, 2023, there were 25 million shares available for grant of share-based awards under the ESIP, and an additional 13 million shares available for issuance under the ESPP.

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

A summary of the changes in restricted stock units, restricted stock, performance share units and performance units outstanding under our equity compensation plans during the nine months ended July 30, 2023 is presented below:

	Shares	Weighted Average Grant Date Fair Value
	(In millions, except per share amounts)	
Outstanding as of October 30, 2022	11	\$ 92.31
Granted	6	\$ 103.11
Vested	(5)	\$ 71.61
Canceled	—	\$ 103.92
Outstanding as of July 30, 2023	<u>12</u>	<u>\$ 105.27</u>

As of July 30, 2023, 0.8 million additional performance-based awards could be earned based upon achievement of certain levels of specified performance and/or market goals.

During the first quarter of fiscal 2023, certain members of senior management were granted awards that 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 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 number of shares that may vest in full after three years ranges from 0% to 200% of the target amount. 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.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

The fair value of the portion of the awards subject to targeted levels of adjusted operating margin is estimated on the date of grant. 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.

The fair value of the portion of the awards subject to targeted levels of relative 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.

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 begin in March and September of each of fiscal year. We issued a total of 1 million shares in each of the nine months ended July 30, 2023 and July 31, 2022.

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:

	Nine Months Ended	
	July 30, 2023	July 31, 2022
Dividend yield	1.09%	0.74%
Expected volatility	43.3%	45.2%
Risk-free interest rate	5.14%	0.60%
Expected life (in years)	0.5	0.5
Weighted average estimated fair value	\$32.47	\$35.79

Note 13 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 vary from period to period, such as changes in income tax laws and the resolution of prior years' income tax filings.

Our effective tax rates for the third quarter of fiscal 2023 and 2022 were 13.6 percent and 13.7 percent, respectively.

Our effective tax rates for the first nine months of fiscal 2023 and 2022 were 12.5 percent and 12.7 percent, respectively. The effective tax rate for the first nine months of fiscal 2023 was lower than the same period in the prior fiscal year primarily due to a reduction of deferred tax assets related to a new tax incentive in Singapore in fiscal 2022, offset in part by larger excess tax benefits from share-based compensation in fiscal 2022.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

Note 14 Warranty, Guarantees, Commitments and Contingencies**Warranty**

Changes in the warranty reserves are presented below:

	Three Months Ended		Nine Months Ended	
	July 30 2023	July 31 2022	July 30 2023	July 31 2022
	(In millions)			
Beginning balance	\$ 310	\$ 262	\$ 286	\$ 242
Warranties issued	62	64	186	189
Change in reserves related to preexisting warranty	(2)	4	—	9
Consumption of reserves	(57)	(57)	(159)	(167)
Ending balance	<u>\$ 313</u>	<u>\$ 273</u>	<u>\$ 313</u>	<u>\$ 273</u>

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 July 30, 2023, the maximum potential amount of future payments that we could be required to make under these guarantee agreements was approximately \$422 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 July 30, 2023, we have provided parent guarantees to banks for approximately \$296 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, regulatory 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 these 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. We are cooperating fully with the government. This matter is subject to uncertainties, and we cannot predict the outcome, nor reasonably estimate a range of loss or penalties, if any, relating to this matter.

Note 15 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 July 30, 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.

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.

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

Net sales and operating income (loss) for each reportable segment were as follows:

	Three Months Ended		Nine Months Ended	
	Net Sales	Operating Income (Loss)	Net Sales	Operating Income (Loss)
(In millions)				
July 30, 2023:				
Semiconductor Systems	\$ 4,676	\$ 1,618	\$ 14,815	\$ 5,299
Applied Global Services	1,464	429	4,261	1,226
Display and Adjacent Markets	235	37	570	66
Corporate and Other	50	(282)	148	(908)
Total	<u>\$ 6,425</u>	<u>\$ 1,802</u>	<u>\$ 19,794</u>	<u>\$ 5,683</u>
July 31, 2022:				
Semiconductor Systems	\$ 4,734	\$ 1,701	\$ 13,759	\$ 5,120
Applied Global Services	1,420	434	4,123	1,259
Display and Adjacent Markets	333	69	1,080	226
Corporate and Other	33	(280)	74	(811)
Total	<u>\$ 6,520</u>	<u>\$ 1,924</u>	<u>\$ 19,036</u>	<u>\$ 5,794</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 by geographic region, determined by the location of customers' facilities to which products were shipped to, were as follows:

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
(In millions, except percentages)						
China	\$ 1,734	\$ 1,797	(4)%	\$ 4,284	\$ 5,917	(28)%
Korea	988	1,224	(19)%	3,864	3,313	17%
Taiwan	1,345	1,537	(12)%	4,748	4,194	13%
Japan	478	438	9%	1,394	1,406	(1)%
Southeast Asia	180	270	(33)%	590	633	(7)%
Asia Pacific	4,725	5,266	(10)%	14,880	15,463	(4)%
United States	1,039	725	43%	3,203	2,274	41%
Europe	661	529	25%	1,711	1,299	32%
Total	<u>\$ 6,425</u>	<u>\$ 6,520</u>	<u>(1)%</u>	<u>\$ 19,794</u>	<u>\$ 19,036</u>	<u>4%</u>

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

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
Foundry, logic and other	79%	66%	80%	64%
Dynamic random-access memory (DRAM)	17%	15%	14%	20%
Flash memory	4%	19%	6%	16%
	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>

APPLIED MATERIALS, INC.

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS - (Continued)

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

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
	(In millions)			
Unallocated net sales	\$ 50	\$ 33	\$ 148	\$ 74
Unallocated cost of products sold and expenses	(218)	(218)	(681)	(575)
Share-based compensation	(114)	(95)	(375)	(314)
Severance and related charges	—	—	—	4
Total	\$ (282)	\$ (280)	\$ (908)	\$ (811)

The following customers accounted for at least 10 percent of our net sales for the nine months ended July 30, 2023, and sales to these customers included products and services from multiple reportable segments.

	Percentage of Net Sales
Taiwan Semiconductor Manufacturing Company Limited	22 %
Samsung Electronics Co., Ltd.	17 %

Item 2. *Management’s Discussion and Analysis of Financial Condition and Results of Operations*

The following management’s discussion and analysis is provided in addition to the accompanying consolidated condensed financial statements and notes, and for a full understanding of our results of operations and financial condition should be read in conjunction with the consolidated condensed financial statements and notes included in this Form 10-Q and the financial statements and notes for the fiscal year ended October 30, 2022 contained in our Form 10-K filed on December 16, 2022.

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 II, 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.

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, the nature and timing of technological advances in fabrication processes and other factors described under “Risk Factors” in Part II, Item 1A.

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 15 of Notes to Consolidated Condensed Financial Statements. A discussion of factors that could affect our operations is set forth under “Risk Factors” in Part II, 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. 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.

The following table presents certain significant measurements for the periods indicated:

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
	(In millions, except per share amounts and percentages)					
Net sales	\$ 6,425	\$ 6,520	\$ (95)	\$ 19,794	\$ 19,036	\$ 758
Gross margin	46.3 %	46.1 %	0.2 points	46.6 %	46.7 %	(0.1) points
Operating income	\$ 1,802	\$ 1,924	\$ (122)	\$ 5,683	\$ 5,794	\$ (111)
Operating margin	28.0 %	29.5 %	(1.5) points	28.7 %	30.4 %	(1.7) points
Net income	\$ 1,560	\$ 1,606	\$ (46)	\$ 4,852	\$ 4,934	\$ (82)
Earnings per diluted share	\$ 1.85	\$ 1.85	\$ —	\$ 5.73	\$ 5.59	\$ 0.14

Fiscal 2023 and 2022 each contain 52 weeks and the first nine months of fiscal 2023 and 2022 each contained 39 weeks.

Semiconductor equipment customers continued to make strategic investments in new capacity and new technology transitions during the nine months ended July 30, 2023. Foundry and logic customers’ spending increased in the three and nine months ended July 30, 2023 compared to the same periods in the prior year driven primarily by customer investments in mature manufacturing nodes. Memory customers’ spending in the three and nine months ended July 30, 2023 was lower as compared to the same periods in the prior year due to deferred capacity additions primarily as a result of weakness in demand for consumer electronic products.

Our Applied Global Services net sales in the three and nine months ended July 30, 2023 increased compared to the same periods in the prior year primarily driven by an increase in legacy systems sales, partially offset by a decrease in net sales associated with long-term service agreements and spares 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 the three and nine months ended July 30, 2023 compared to the same periods in the prior year primarily due to lower customer investments in display manufacturing equipment 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 improvements in supply chain performance in the first nine months of fiscal 2023, we expect some shortages to persist through the remainder of fiscal 2023, and managing these supply chain constraints to increase shipments to customers remains a top priority.

In 2022, the United States government announced additional export regulations for U.S. semiconductor technology sold in China. These export regulations resulted in lower net sales in China for our Semiconductor Systems and Applied Global Services segments for the first nine months of fiscal 2023 compared to the same period in the prior year. 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 II, Item 1A, “Risk Factors.”

Results of Operations

Net Sales

Net sales for the periods indicated were as follows:

	Three Months Ended			Nine Months Ended						
	July 30, 2023		July 31, 2022		Change	July 30, 2023		July 31, 2022		Change
	(In millions, except percentages)									
Semiconductor Systems	\$ 4,676	73 %	\$ 4,734	73 %	(1)%	\$ 14,815	75 %	\$ 13,759	72 %	8 %
Applied Global Services	1,464	23 %	1,420	22 %	3 %	4,261	21 %	4,123	22 %	3 %
Display and Adjacent Markets	235	3 %	333	5 %	(29)%	570	3 %	1,080	6 %	(47)%
Corporate and Other	50	1 %	33	— %	52 %	148	1 %	74	— %	100 %
Total	\$ 6,425	100 %	\$ 6,520	100 %	(1)%	\$ 19,794	100 %	\$ 19,036	100 %	4 %

For the three months ended July 30, 2023 compared to the same period in the prior year, net sales remained relatively flat. For the nine months ended July 30, 2023 compared to the same period in the prior year, net sales increased, primarily due to continued customer investment in semiconductor equipment and improvements in our supply chain performance enabling us to better fulfill demand in the first nine months of fiscal 2023 as compared to the same period in the prior year. This increase in net sales was partially offset by the reduction in customer investment in display manufacturing equipment. The Semiconductor Systems segment continued to represent the largest contributor of net sales.

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

	Three Months Ended			Nine Months Ended						
	July 30, 2023		July 31, 2022		Change	July 30, 2023		July 31, 2022		Change
	(In millions, except percentages)									
China	\$ 1,734	27 %	\$ 1,797	27 %	(4)%	\$ 4,284	22 %	\$ 5,917	31 %	(28)%
Korea	988	15 %	1,224	19 %	(19)%	3,864	19 %	3,313	18 %	17 %
Taiwan	1,345	21 %	1,537	24 %	(12)%	4,748	24 %	4,194	22 %	13 %
Japan	478	8 %	438	7 %	9 %	1,394	7 %	1,406	7 %	(1)%
Southeast Asia	180	3 %	270	4 %	(33)%	590	3 %	633	3 %	(7)%
Asia Pacific	4,725	74 %	5,266	81 %	(10)%	14,880	75 %	15,463	81 %	(4)%
United States	1,039	16 %	725	11 %	43 %	3,203	16 %	2,274	12 %	41 %
Europe	661	10 %	529	8 %	25 %	1,711	9 %	1,299	7 %	32 %
Total	\$ 6,425	100 %	\$ 6,520	100 %	(1)%	\$ 19,794	100 %	\$ 19,036	100 %	4 %

The increases in net sales to customers in Europe for the three and nine months ended July 30, 2023 compared to the same periods in the prior year primarily reflected increased investment by customers in semiconductor equipment and increased customer spending on legacy systems and comprehensive service agreements.

The decrease in net sales to customers in China for the three months ended July 30, 2023 compared to the same period in the prior year primarily reflected decreased investment in 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 as a result of weakness in demand for consumer electronic products, partially offset by increased investment by customers in semiconductor equipment.

The decrease in net sales to customers in China for the nine months ended July 30, 2023 compared to the same period in the prior year primarily reflected decreased investment in semiconductor equipment and 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 as a result of weakness in demand for consumer electronic products.

The decrease in net sales to customers in Korea for the three months ended July 30, 2023 compared to the same period in the prior year primarily reflected decreased investment by customers in semiconductor equipment and display manufacturing equipment as a result of weakness in demand for consumer electronic products, partially offset by increased customer spending on comprehensive service agreements and spares.

The increase in net sales to customers in Korea for the nine months ended July 30, 2023 compared to the same period in the prior year 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 as a result of weakness in demand for consumer electronic products.

The increase in net sales to customers in Japan for the three months ended July 30, 2023 compared to the same period in the prior year primarily reflected increased investment in display manufacturing equipment, partially offset by decreased investment by customers in semiconductor equipment.

The decrease in net sales to customers in Japan for the nine months ended July 30, 2023 compared to the same period in the prior year primarily reflected decreased investment by customers in semiconductor equipment, partially offset by increased investment in display manufacturing equipment.

The changes in net sales in all other regions in the three and nine months ended July 30, 2023 compared to the same periods in the prior year primarily reflected changes in semiconductor manufacturing equipment spending.

Gross Margin

Gross margins for the periods indicated were as follows:

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
Gross margin	46.3 %	46.1 %	0.2 points	46.6 %	46.7 %	(0.1) points

Gross margin in the three months ended July 30, 2023 increased compared to the same period in the prior year, primarily driven by favorable changes in product mix and an increase in average selling prices, partially offset by higher inventory charges. Gross margin in the nine months ended July 30, 2023 was approximately flat compared to the same period in the prior year. Gross margin during the three months ended July 30, 2023 and July 31, 2022 included \$42 million and \$34 million of share-based compensation expense, respectively. Gross margin during the nine months ended July 30, 2023 and July 31, 2022 included \$138 million and \$112 million of share-based compensation expense, respectively.

Research, Development and Engineering

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

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
	(In millions)					
Research, development and engineering	\$ 767	\$ 705	\$ 62	\$ 2,313	\$ 2,045	\$ 268

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.

The increases in RD&E expenses during the three and nine months ended July 30, 2023 compared to the same periods in the prior year were primarily due to additional headcount and higher consumable and equipment costs associated with ongoing product development. In addition, the increases in RD&E expenses during the nine months ended July 30, 2023 compared to the same period in the prior year also included a \$30 million impairment of fixed assets. 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 the three months ended July 30, 2023 and July 31, 2022 included \$42 million and \$35 million of share-based compensation expense, respectively. RD&E expense during the nine months ended July 30, 2023 and July 31, 2022 included \$137 million and \$115 million of share-based compensation expense, respectively.

Marketing and Selling

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

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
	(In millions)					
Marketing and selling	\$ 193	\$ 180	\$ 13	\$ 584	\$ 520	\$ 64

Marketing and selling expenses for the three and nine months ended July 30, 2023 increased compared to the same periods in prior year primarily due to additional headcount and higher travel related expenses. Marketing and selling expenses during the three months ended July 30, 2023 and July 31, 2022 included \$13 million and \$11 million of share-based compensation expense, respectively. Marketing and selling expenses during the nine months ended July 30, 2023 and July 31, 2022 included \$42 million and \$37 million of share-based compensation expense, respectively.

General and Administrative

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

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
	(In millions)					
General and administrative	\$ 214	\$ 197	\$ 17	\$ 635	\$ 537	\$ 98

G&A expenses in the three and nine months ended July 30, 2023 increased compared to the same periods in the prior year primarily due to additional headcount and higher professional fees. G&A expenses during the three months ended July 30, 2023 and July 31, 2022 included \$17 million and \$15 million of share-based compensation expense, respectively. G&A expenses during the nine months ended July 30, 2023 and July 31, 2022 included \$58 million and \$50 million of share-based compensation expense, respectively.

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:

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
	(In millions)					
Interest expense	\$ 60	\$ 56	\$ 4	\$ 180	\$ 171	\$ 9
Interest and other income (expense), net	\$ 64	\$ (7)	\$ 71	\$ 41	\$ 27	\$ 14

Interest expense incurred was primarily associated with issued senior unsecured notes. Interest expense in the three and nine months ended July 30, 2023 remained relatively flat compared to the same periods in the prior year.

Interest and other income (expense), net in the three months ended July 30, 2023 increased compared to the same period in the prior year, primarily driven by higher interest income given an increase in market rates of interest and lower net loss on equity investments, compared to the same period in the prior year.

Interest and other income (expense), net in the nine months ended July 30, 2023 increased compared to the same period in the prior year, primarily driven by higher interest income given an increase in market rates of interest, partially offset by higher impairment losses on equity investments, compared to the same period in the prior year.

Income Taxes

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

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
	(In millions, except percentages)					
Provision for income taxes	\$ 246	\$ 255	\$ (9)	\$ 692	\$ 716	\$ (24)
Effective income tax rate	13.6 %	13.7 %	(0.1) points	12.5 %	12.7 %	(0.2) 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.

Our effective tax rates for the third quarter of fiscal 2023 and 2022 were 13.6 percent and 13.7 percent, respectively.

Our effective tax rates for the first nine months of fiscal 2023 and 2022 were 12.5 percent and 12.7 percent, respectively. The effective tax rate for the first nine months of fiscal 2023 was lower than the same period in the prior fiscal year primarily due to a reduction of deferred tax assets related to a new tax incentive in Singapore in fiscal 2022, offset in part by larger excess tax benefits from share-based compensation in fiscal 2022.

Beginning in our fiscal 2023, the Tax Cuts and Jobs 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 is expected to increase 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 15 of Notes to Consolidated Condensed 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. 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:

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
	(In millions, except percentages and ratios)					
Net sales	\$ 4,676	\$ 4,734	\$ (58) (1)%	\$ 14,815	\$ 13,759	\$ 1,056 8 %
Operating income	\$ 1,618	\$ 1,701	\$ (83) (5)%	\$ 5,299	\$ 5,120	\$ 179 3 %
Operating margin	34.6 %	35.9 %	(1.3) points	35.8 %	37.2 %	(1.4) points

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

	Three Months Ended		Nine Months Ended	
	July 30, 2023	July 31, 2022	July 30, 2023	July 31, 2022
Foundry, logic and other	79 %	66 %	80 %	64 %
Dynamic random-access memory (DRAM)	17 %	15 %	14 %	20 %
Flash memory	4 %	19 %	6 %	16 %
	100 %	100 %	100 %	100 %

Semiconductor equipment customers continued to make strategic investments in new capacity and new technology transitions during the first nine months of fiscal 2023. Foundry and logic customers' spending increased in the three and nine months ended July 30, 2023 compared to the same periods in the prior year primarily driven by customer investment in mature manufacturing nodes. Spending by memory customers decreased in the three and nine months ended July 30, 2023 compared to the same periods in the prior year due to deferred capacity additions primarily as a result of weakness in demand for consumer electronic products.

Operating margin for the three months ended July 30, 2023 decreased compared to the same period in the prior year, primarily driven by higher inventory charges, the impact of export regulations and increased RD&E expenses, partially offset by favorable changes in product mix and an increase in average selling prices. Operating margin for the nine months ended July 30, 2023 decreased compared to the same period in the prior year, primarily driven by higher material costs and inventory charges, unfavorable changes in product mix and the impact of export regulations and increased RD&E expenses, partially offset by an increase in average selling prices and lower freight and logistics costs. In the three months ended July 30, 2023, two customers each accounted for at least 10 percent of this segment's net sales, and together they accounted for approximately 38 percent of this segment's total net sales.

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 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:

	Three Months Ended			Nine Months Ended				
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change		
(In millions, except percentages and ratios)								
Net sales	\$ 1,464	\$ 1,420	\$ 44	3 %	\$ 4,261	\$ 4,123	\$ 138	3 %
Operating income	\$ 429	\$ 434	\$ (5)	(1)%	\$ 1,226	\$ 1,259	\$ (33)	(3)%
Operating margin	29.3 %	30.6 %	(1.3) points	28.8 %	30.5 %	(1.7) points		

Net sales for the three and nine months ended July 30, 2023 increased compared to the same periods in the prior year primarily due to higher customer spending on legacy systems, partially offset by a decrease in net sales associated with long-term service agreements and spares due to additional export regulations issued by the United States government in 2022 and lower customer utilization rates. Operating margin for the three and nine months ended July 30, 2023 decreased compared to the same periods in the prior year primarily due to the impact of the export regulations, higher inventory charges and unfavorable changes in product mix, partially offset by an increase in average selling prices. In the three months ended July 30, 2023, two customers each accounted for at least 10 percent of this segment's net sales.

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:

	Three Months Ended			Nine Months Ended		
	July 30, 2023	July 31, 2022	Change	July 30, 2023	July 31, 2022	Change
	(In millions, except percentages and ratios)					
Net sales	\$ 235	\$ 333	\$ (98) (29)%	\$ 570	\$ 1,080	\$ (510) (47)%
Operating income	\$ 37	\$ 69	\$ (32) (46)%	\$ 66	\$ 226	\$ (160) (71)%
Operating margin	15.7 %	20.7 %	(5.0) points	11.6 %	20.9 %	(9.3) points

Net sales for the three and nine months ended July 30, 2023 decreased compared to the same periods in the prior year primarily due to lower customer investments in display manufacturing equipment as a result of weakness in demand for consumer electronic products. Operating margin for the three and nine months ended July 30, 2023 decreased compared to the same periods in the prior year 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.

Financial Condition, Liquidity and Capital Resources

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

	July 30, 2023	October 30, 2022
	(In millions)	
Cash and cash equivalents	\$ 6,025	\$ 1,995
Short-term investments	510	586
Long-term investments	2,177	1,980
Total cash, cash-equivalents and investments	<u>\$ 8,712</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:

	Nine Months Ended	
	July 30, 2023	July 31, 2022
	(In millions)	
Cash provided by operating activities	\$ 7,145	\$ 4,542
Cash used in investing activities	\$ (1,046)	\$ (1,167)
Cash used in financing activities	\$ (2,066)	\$ (5,416)

Operating Activities

Cash from operating activities for the nine months ended July 30, 2023 was \$7.1 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, and share-based compensation. Cash provided by operating activities increased in the first nine months of fiscal 2023 compared to the same period in the prior year primarily due to lower inventory payments and income taxes and higher cash collections, partially offset by higher payments to vendors.

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 \$619 million and \$821 million of account receivables during the nine months ended July 30, 2023 and July 31, 2022, respectively. We did not discount letters of credit issued by customers or discount promissory notes during the nine months ended July 30, 2023 and July 31, 2022, respectively.

Our working capital was \$10.7 billion as of July 30, 2023 and \$8.5 billion as of October 30, 2022.

Days sales outstanding of our accounts receivable for the three months ended July 30, 2023 and July 31, 2022 were 74 days and 69 days, respectively. Days sales outstanding varies due to the timing of shipments and payment terms. The increase in days sales outstanding was primarily due to a higher accounts receivable balance as a result of timing of customer payments and lower accounts receivable factoring compared to the same period in the prior year.

Investing Activities

We used \$1.0 billion of cash in investing activities during the nine months ended July 30, 2023. Capital expenditures totaled \$797 million, net cash paid for acquisitions was \$25 million, and purchases of investments, net of proceeds from sales and maturities of investments were \$224 million, during the nine months ended July 30, 2023.

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 \$2.1 billion of cash in financing activities during the nine months ended July 30, 2023, consisting primarily of cash used for repurchases of common stock of \$1.5 billion, dividends to stockholders of \$707 million, and tax withholding payments for vested equity awards of \$165 million, partially offset by net proceeds from issuances of commercial paper notes of \$192 million and common stock issuance of \$111 million.

In June 2023, March 2023 and December 2022, our Board of Directors declared quarterly cash dividends, in the amount of \$0.32, \$0.32 and \$0.26 per share, respectively. The dividend declared in June 2023 is payable in September 2023. 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.

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. As of July 30, 2023, approximately \$13.4 billion remained available for future stock repurchases under the repurchase program.

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. In February 2023, we entered into an agreement with our lenders to extend the termination date of the Revolving Credit Agreement to February 2026. The termination date may be further 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 July 30, 2023.

Remaining credit facilities in the amount of approximately \$57 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.

No amounts were outstanding under any of these facilities at both July 30, 2023 and October 30, 2022.

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. As of July 30, 2023, we had commercial paper notes outstanding with an aggregate principal amount of \$200 million and may issue commercial paper notes under this program from time to time in the future. The proceeds from the issuances of the commercial paper program are used for general corporate purposes. 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 July 30, 2023. See Note 10 of the Notes to the Consolidated Condensed 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, general corporate purposes and the availability of financing.

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 July 30, 2023, the maximum potential amount of future payments that we could be required to make under these guarantee agreements was approximately \$422 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 July 30, 2023, we have provided parent guarantees to banks for approximately \$296 million to cover these arrangements.

Others

On December 22, 2017, the U.S. government enacted the Tax Cuts and Jobs Act (Tax Act). The Tax Act 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 July 30, 2023, we had \$694 million of total payments remaining, payable in installments in the next four 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 is expected to increase 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.

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 Condensed Statements of Cash Flows in this report.

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 in our Annual Report on Form 10-K and as updated as applicable in Note 1 of Notes to Consolidated Condensed Financial Statements in this report describe 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. There have been no significant changes to our critical accounting policies and estimates as described in our Annual Report on Form 10-K for fiscal year ended October 30, 2022.

Item 3: Quantitative and Qualitative Disclosures About Market Risk

We are exposed to financial market risks, including fluctuations in interest rate and foreign currency exchange rates. For information about our exposure to market risks as of October 30, 2022, see Part II, Item 7A, Quantitative and Qualitative Disclosures About Market Risk in our Annual Report on Form 10-K for the fiscal year ended October 30, 2022.

Interest Rate Risk

Available-for-sale Debt Securities - The market value of our investments in available-for-sale securities was approximately \$1.9 billion at July 30, 2023. An immediate hypothetical 100 basis point increase in interest rates would result in a decrease in the fair value of investments as of July 30, 2023 of approximately \$25 million.

Debt - At July 30, 2023, the aggregate principal of long-term senior unsecured notes issued by us was \$5.5 billion with an estimated fair value of \$5.1 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 \$466 million at July 30, 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 (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 \$164 million at July 30, 2023.

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

Item 4. 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.

Changes in Internal Control over Financial Reporting

During the third quarter of fiscal 2023, there were no changes in the internal control over financial reporting, as such term is defined in Rule 13a-15(f) of the Exchange Act, 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.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

The information set forth under “Legal Matters” in Note 14 in Notes to Consolidated Condensed Financial Statements is incorporated herein by reference. See also “*Legal, Compliance, and Other Risks – We are exposed to various risks related to legal proceedings, claims and investigations.*” in Part II, Item 1A, “Risk Factors.”

Item 1A: Risk Factors

The risk factors set forth below include any material changes to, and supersede the description of, the risk factors disclosed in Part I, Item 1A of our 2022 Form 10-K. These 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 that we serve can be volatile and difficult to predict.

As a supplier to the global semiconductor and display and related industries, we are subject to variable industry conditions, since demand for manufacturing equipment and services can change depending on several factors, including the nature and timing of technology inflections and advances in fabrication processes, the timing and requirements of 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, consumer buying patterns and general economic and political conditions. The industries we serve historically have been cyclical, and are subject to volatility and sudden changes in customer requirements for new manufacturing capacity and advanced technology. These changes can affect the timing and amounts of customer investments in technology and manufacturing equipment and can have a significant impact on our net sales, operating expenses, gross margins and net income. The amount and mix of capital equipment spending between different products and technologies can have a significant impact on our results of operations.

To meet rapidly changing demand in the industries we serve, we must accurately forecast demand and effectively manage our resources and production capacity across our businesses, and we may incur unexpected or additional costs to align our business operations with changes in demand. During periods of increasing demand for our products, we must have sufficient manufacturing capacity and inventory to meet customer demand; effectively manage our supply chain; attract, retain and motivate a sufficient number of qualified employees; and continue to control costs. During periods of decreasing demand, we must reduce costs and align our cost structure with prevailing market conditions; effectively manage our supply chain; and motivate and retain key employees. If we do not effectively manage these challenges during periods of changing demand, our business performance and results of operations may be adversely impacted. Even with effective allocation of resources and management of costs, during periods of decreasing demand, our gross margins, cash flows and earnings may be adversely impacted.

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 in various regions, bank failures, and economic recession, could materially 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. Such decreases in spending and demand have in the past 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 adversely impact our operating results.

Similarly, changes that result in sudden increases in consumer demand for electronic products have resulted in, and may continue to result in, a shortage of parts and materials needed to manufacture our products. Such shortages, as well as shipment delays due to transportation capacity and interruptions, have adversely impacted, and may continue to adversely impact, our suppliers' ability to meet our demand requirements. Accelerated digital transformation may further increase consumer demand and exacerbate such shortages and also strain our manufacturing capacity, which may adversely impact our ability to meet customer demands and thus have an adverse impact on our revenues, results of operations and financial condition.

Uncertain or adverse economic and market conditions, difficulties in obtaining capital, increased costs or reduced profitability may also cause some customers to scale back operations, exit businesses, merge with other manufacturers, or file for bankruptcy protection and potentially cease operations, which can also result in lower sales, additional inventory or bad debt expense. Economic and industry uncertainty may similarly affect suppliers, which could impair their ability 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 continued supply chain disruptions also make it more challenging for us to 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 significant 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 affect our ability to capitalize on opportunities. Even during periods of economic uncertainty or lower revenues, 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 margins and earnings.

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, economic recession or impacts of the COVID-19 pandemic and, as a result, the value and liquidity of the investment portfolio, as well as 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 becomes 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 distributed throughout many countries, and some of our business activities are concentrated in certain geographic areas. Moreover, in the three-month period ended July 30, 2023, approximately 84% 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 demands;
- 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 and/or security issues posed by the development, sale or export of certain 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 that we serve;
- political and social attitudes, laws, rules, regulations and policies within countries that favor domestic companies over non-domestic companies, including customer- or government-supported efforts to promote the development and growth of local competitors;
- policies and financial incentives by governments in China, the United States, and countries in Europe and Asia designed to reduce dependence on foreign semiconductor equipment and manufacturing capabilities;
- customer- or government-supported efforts to influence us to conduct more or less of our operations and sourcing in a particular country;
- variations among, and changes in, 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 such 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 or increasing costs of raw material, commodity, energy and shipping or volatility in such costs;
- delays or restrictions on personnel travel and in shipping materials or finished products between and within countries;
- 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;
- failure to effectively manage a diverse workforce with different experience levels, languages, cultures, customs, business practices and worker expectations, and differing employment practices and labor issues;

- variations in 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 sufficient levels of technical support in different locations around the world;
- performance of third-party providers of outsourced functions, including certain engineering, software development, manufacturing, information technology and other activities;
- service interruptions from utilities, transportation, data hosting or telecommunications providers, or other events beyond our control;
- impacts of climate change on our operations and those of our customers and suppliers;
- impacts of cybersecurity incidents on our operations and those of our customers and suppliers;
- challenges in hiring and integration of an increasing number of workers in new countries;
- the increasing need for a mobile workforce to work in or 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 issues 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 also 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 manufacturing costs, decrease margins, reduce the competitiveness of our products, or prohibit our ability to sell products, provide services or purchase necessary equipment and supplies, any or all of which could have a material 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 October 2022, 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 that we will be issued licenses that we apply for 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 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 governmental agencies may in the future promulgate new or additional export licensing or other requirements that have the effect of further limiting our ability to provide certain of our products and services to customers outside the U.S., including China. These and other regulatory changes that may occur in the future 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. For example, 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. We are cooperating fully with the government. These inquiries are subject to uncertainties, and we cannot predict the outcome of this inquiry, 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 reputation, and could have a significant 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 intellectual property, or engage in other efforts to promote local businesses and local competitors, which could have a significant 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.

Our customer base is highly concentrated and has become increasingly so as a result of continued consolidation. Our customer base is also geographically concentrated, particularly in China, Taiwan, Korea and Japan. A relatively limited number of manufacturers account for a substantial portion of our business. 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 results of operations 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 net sales, gross margins and net income. 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 significant 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 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 also 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 technical and volume requirements of our customers, which depends in part on the timely delivery of parts, materials and services, including components and subassemblies, from suppliers and contract manufacturers. Significant and sudden increases in demand for our products, as well as worldwide demand for electronic products, 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 suppliers' ability to meet our demand requirements. Difficulties in obtaining sufficient and timely supply of parts, materials or services, and 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. Our operating results may be adversely impacted if we are unable to obtain parts, materials or services needed to manufacture our products, or if we are unable to do so on a timely manner or on favorable terms. 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. Such increase in costs may lead to reduced demand for our products and materially adversely impact our operating results. Some key parts are subject to long lead-times or available only from a single supplier or limited group of suppliers, and some sourcing or subassembly is provided by suppliers located in countries other than the countries where we conduct our manufacturing. 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. Volatility of demand for manufacturing equipment can also increase our capital, technical, operational and other risks, as well as for companies throughout our supply chain, and may cause

some suppliers to exit businesses, or scale back or cease operations, which could impact our ability to meet customer demand.

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 also 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, and international trade disputes, including new and changing export regulations for certain exports 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 sufficient quantities of 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 technically and commercially feasible alternatives to a class of chemicals known as 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;
- 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, including the COVID-19 pandemic, 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, as well as the intellectual property rights of our customers and other third parties. These outcomes could have an adverse impact on our business and competitive position and subject us to legal proceedings and claims. In addition, 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.

In addition, 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. Moreover, if actual demand for our products is different than expected, 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 risks as a result of ongoing changes in the various industries in which we operate.

The global semiconductor, display and related industries in which we operate are characterized by ongoing changes affecting some or all of these industries that impact demand for and the profitability of our products and our consolidated results of operations, including:

- the nature, timing and degree of visibility of changes in end 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 incentive policies 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 increasing importance of establishing, improving and maintaining strong relationships with customers;
- the increasing cost and complexity for customers to move from product design to volume manufacturing, which may slow the adoption rate of new manufacturing technology;
- the need for customers to continually reduce the total cost of manufacturing system ownership;
- the heightened 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 increasing importance of, and difficulties in, 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 corresponding effect on demand for such products;
- the increasing importance of the availability of spare parts to maximize the time that customers' systems are available for production;
- increasing government incentives for local suppliers and domestic semiconductor research, development and manufacturing capabilities;
- the increasing role for and complexity of software in our products; and
- the increasing focus on reducing energy usage and improving the environmental impact and sustainability associated with manufacturing operations.

We are exposed to risks as a result of 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. In addition, 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 increasing frequency and complexity of technology transitions and inflections, and our ability to timely and effectively anticipate and adapt to these changes;
- the increasing 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 increasing cost and complexity of integrated manufacturing processes;
- the need to reduce product development time, despite the increasing difficulty of technical challenges;
- the growing number of types and varieties of semiconductors and number of applications across multiple substrate sizes;
- the increasing cost and complexity for semiconductor manufacturers to move more technically advanced capability and smaller geometries to volume manufacturing, and the resulting impact on the rates of technology transition and investment in capital equipment;
- challenges in generating organic growth given 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;

- customer investment in semiconductor manufacturing capabilities in China, which has been affected by changes in economic conditions and governmental regulations, including trade policies and export regulations;
- 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 adversely impacted.

We are exposed to risks as a result of ongoing changes specific to the display industry.

The global display industry historically 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 larger substrate sizes for TVs and to new display technologies for TVs, information technology products and mobile applications, and the resulting effect on capital intensity in the industry and on our product differentiation, gross margin and return on investment; and
- fluctuations in customer spending quarter over quarter and year over year for display manufacturing equipment, concentration of display manufacturer customers and their ability to successfully commercialize new products and technologies, and uncertainty with respect to future display technology end-use applications and growth drivers.

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 slows, our business and our results of operations may 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 a broadening set of products in a geographically diverse and competitive environment increasingly require greater collaboration with customers and other industry participants, and this trend has grown more complex and expensive over time. Furthermore, 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 implement artificial intelligence strategies for our product and service offerings, which may be costly or ineffective, and may raise complex regulatory compliance, intellectual property and other issues;
- maintain operating flexibility to enable responses to changing markets, applications, customers 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 results of operations may be 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 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, cultivate relationships with new customers and meet different customer service requirements;
- 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.

In addition, 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.

The effects of the COVID-19 pandemic and global measures taken in response have adversely impacted and from time to time may adversely impact our operations and financial results.

The effects of the COVID-19 pandemic and measures taken in response by governments and businesses worldwide to contain its spread have adversely impacted, and may adversely impact our supply chain, manufacturing, logistics, workforce and operations, as well as the operations of our customers, suppliers and partners globally. In addition, the pandemic and measures taken in response thereto have had, and from time to time may have, a significant adverse impact on the global economic activity and could also result in a reduced demand for our products, delayed deliveries or installation, cancelled orders or increase in logistics and operating costs, and materially and adversely affect our business, financial condition and results of operations. The degree to which the pandemic ultimately impacts our business, financial condition and results of operations and the global economy will depend on future developments beyond our control, which are highly uncertain and difficult to predict.

Operational and Financial Risks

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

Our success depends in significant part 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 for our company. 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, as well as 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. In addition, 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.

In addition, 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 significant adverse impact on our business and results of operations.

We are exposed to risks related 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, as well as 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. These 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. Globally, 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. In addition, 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 also 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 continuously 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. Depending on their nature and scope, 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. Further, customers and third-party providers increasingly demand rigorous contractual provisions regarding privacy, cybersecurity, data protection, confidentiality, and intellectual property, which may also increase our overall compliance burden.

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

We engage in acquisitions of or investments in companies, technologies or products in existing, related or new markets for our company. Business combinations, acquisitions and investments involve numerous risks to our business, financial condition and operating results, including but not limited to:

- 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 potential impact of the announcement or consummation of a proposed transaction on relationships with third parties;
- potential changes in our credit rating, which could adversely impact our access to and cost of capital;
- reductions in cash balances or 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 or non-compliance with laws, regulations or policies; and
- the inappropriate scale of acquired entities' critical resources or facilities for business needs.

We also 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 continually assess the strategic fit of our businesses and from time to time may seek to divest portions of our business that are not deemed to fit with our strategic plan. Some divestitures may take the form of our contributing assets to a joint venture, and thus are subject to the joint venture risks discussed above. In addition, divestitures involve significant risks and uncertainties, such as ability to sell such businesses on satisfactory price and terms and in a timely manner (including long and costly sales processes and the possibility of lengthy and potentially unsuccessful attempts by a buyer to receive required regulatory approvals), 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 (including, among other things, those arising from representations and warranties made to a buyer regarding the businesses) 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, competitiveness and ability to execute on our global strategies and maintain a culture of innovation depend 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 in the markets, availability of career development opportunities, the ability to obtain necessary authorizations for workers to provide services outside their home countries, and the attractiveness of our compensation and benefit programs, including our share-based programs, and our employment policies, including the flexibility of our remote-work arrangements. We have experienced, and may continue to experience, increasing costs to attract and retain needed talent, driven by macro-economic conditions and a highly competitive labor market. 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 or retirement of employees presents particular challenges to the extent they involve the departure of knowledgeable and experienced employees and the resulting need to identify and train existing or new candidates to perform necessary functions, which may result in unexpected costs, reduced productivity, and/or difficulties with respect to internal processes and controls.

We are exposed to risks associated with operating 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 adverse impact on our results of operations and financial condition. For example, the current administration has made several corporate income tax proposals that, if enacted, could have a material impact on our effective tax rate. In addition, the Organization for Economic Cooperation and Development has been working on a Base Erosion and Profit Shifting Project that, if implemented, would change various aspects of the existing framework under which our global tax obligations are determined. 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 certain foreign jurisdictions, conditional reduced income tax rates have been granted to us. To obtain the benefit of these tax incentives, we must meet requirements relating to various activities. Our ability to realize benefits from these incentives could be materially affected if, among other things, applicable requirements are not met or we incur net losses in these jurisdictions.

In addition, 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 that 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.

We have \$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 July 30, 2023, we may borrow amounts in the future under this credit facility. We may also 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. Significant changes in our credit rating, disruptions in the global financial markets or changes in the interest rate environment could have a material adverse consequence on our access to and cost of capital for future financings, and financial condition. 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 also constitute a default under other of our 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.

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

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, such as our ability to track orders, timely manufacture and ship products, project inventory requirements, effectively manage our supply chain and allocate human resources, aggregate financial data and report operating results, and otherwise effectively manage our business, all of 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 that 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.

There can be no assurance that we will continue to declare cash dividends or repurchase our shares.

Our intent 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 all laws and agreements applicable to the declaration and payment of cash dividends or the repurchasing of shares by us. Future dividends and share repurchases may also be affected by, among other factors, our cash flow; potential future capital requirements for investments, acquisitions, infrastructure projects, and research and development; changes in federal, state, and international tax laws or corporate 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 at all or in any particular amounts. 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 various 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 also 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 that 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. There can be no assurance regarding the outcome of current or future legal proceedings, claims or investigations.

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

As a public company with global operations, 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, 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 commitments could result in additional costs, and our inability to achieve them could have an adverse impact on our reputation and performance.

From time to time we communicate our strategies, commitments and targets related to sustainability, carbon emissions, diversity and inclusion, human rights, and other environmental, social and governance matters. These strategies, commitments 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 from time to time cause us to alter our manufacturing, operations or equipment designs and processes, incur substantial additional expense and make substantial technology innovations to meet such requirements and targets. 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 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, commitments and targets, or our ability to achieve them. Any scrutiny of our carbon emissions or other sustainability disclosures or our failure to achieve related strategies, commitments and targets 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 development, manufacture, sale, shipping and use of our products; handling, discharge, recycling 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 also be required to alter our manufacturing, operations and product design, 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 adversely affect our business, financial condition and results of operations.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds**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. As of July 30, 2023, approximately \$13.4 billion remained available for future stock repurchases under the repurchase program.

Period	Total Number of Shares Purchased	Average Price Paid per Share *	Aggregate Price Paid*	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Dollar Value of Shares That May Yet be Purchased Under the Program*
(In millions, except per share amounts)					
Month #1 (May 1, 2023 to May 28, 2023)	1.1	\$ 115.53	\$ 125	1.1	\$ 13,743
Month #2 (May 29, 2023 to June 25, 2023)	1.1	\$ 137.78	155	1.1	\$ 13,588
Month #3 (June 26, 2023 to July 30, 2023)	1.2	\$ 139.09	163	1.2	\$ 13,425
Total	3.4	\$ 131.09	\$ 443	3.4	

* 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 3. Defaults Upon Senior Securities

None

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

During the three months ended July 30, 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 6. Exhibits

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

Exhibit No.	Description	Incorporated by Reference			
		Form	File No.	Exhibit No.	Filing Date
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002†				
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002†				
32.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002‡				
32.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002‡				
101.SCH	Inline XBRL Taxonomy Extension Schema Document‡				
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document‡				
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document‡				
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document‡				
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document‡				
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

† Filed herewith.

‡ Furnished herewith.

SIGNATURES

Pursuant to the requirements 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.

August 24, 2023	By:	APPLIED MATERIALS, INC. _____ <i>/s/ BRICE HILL</i> <i>Brice Hill</i> <i>Senior Vice President, Chief Financial Officer</i> <i>(Principal Financial Officer)</i>
August 24, 2023	By:	_____ <i>/s/ JEFF BODNER</i> <i>Jeff Bodner</i> <i>Corporate Vice President,</i> <i>Corporate Controller</i> <i>and Chief Accounting Officer</i> <i>(Principal Accounting Officer)</i>

CERTIFICATION

I, Gary E. Dickerson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Applied Materials, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 24, 2023

/s/ GARY E. DICKERSON

Gary E. Dickerson

President, Chief Executive Officer

CERTIFICATION

I, Brice Hill, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Applied Materials, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 24, 2023

/s/ BRICE HILL

Brice Hill
Senior Vice President, Chief Financial Officer

SARBANES-OXLEY ACT SECTION 906 CERTIFICATION

In connection with this Quarterly Report on Form 10-Q of Applied Materials, Inc. for the period ended July 30, 2023, I, Gary E. Dickerson, President, Chief Executive Officer of Applied Materials, Inc., hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. this Form 10-Q for the period ended July 30, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. the information contained in this Form 10-Q for the period ended July 30, 2023 fairly presents, in all material respects, the financial condition and results of operations of Applied Materials, Inc. for the periods presented therein.

Date: August 24, 2023

/s/ GARY E. DICKERSON

Gary E. Dickerson
President, Chief Executive Officer

SARBANES-OXLEY ACT SECTION 906 CERTIFICATION

In connection with this Quarterly Report on Form 10-Q of Applied Materials, Inc. for the period ended July 30, 2023, I, Brice Hill, Senior Vice President, Chief Financial Officer of Applied Materials, Inc., hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. this Form 10-Q for the period ended July 30, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. the information contained in this Form 10-Q for the period ended July 30, 2023 fairly presents, in all material respects, the financial condition and results of operations of Applied Materials, Inc. for the periods presented therein.

Date: August 24, 2023

/s/ BRICE HILL

Brice Hill
Senior Vice President, Chief Financial Officer