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 28, 2024

or

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

For the transition period from to

Commission File Number 000-06920

Applied Materials, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**94-1655526**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

3050 Bowers Avenue, P.O. Box 58039, Santa Clara, California 95052-8039
(Address of principal executive offices) (Zip Code)

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

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

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	☑	Accelerated filer	☐	Non-accelerated filer	☐	Smaller reporting company	☐	Emerging growth company	☐

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

Indicate by check mark whether the registrant 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 28, 2024: 824,404,088

APPLIED MATERIALS, INC.

FORM 10-Q FOR THE QUARTERLY PERIOD ENDED JULY 28, 2024

TABLE OF CONTENTS

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 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
	(Unaudited)			
Net revenue	$ 6,778	$ 6,425	$ 20,131	$ 19,794
Cost of products sold	3,573	3,449	10,569	10,579
Gross profit	3,205	2,976	9,562	9,215
Operating expenses:				
Research, development and engineering	836	767	2,375	2,313
Marketing and selling	205	193	621	584
General and administrative	222	214	745	635
Total operating expenses	1,263	1,174	3,741	3,532
Income from operations	1,942	1,802	5,821	5,683
Interest expense	63	60	181	180
Interest and other income (expense), net	81	64	617	41
Income before income taxes	1,960	1,806	6,257	5,544
Provision for income taxes	255	246	811	692
Net income	$ 1,705	$ 1,560	$ 5,446	$ 4,852
Earnings per share:				
Basic	$ 2.06	$ 1.86	$ 6.57	$ 5.76
Diluted	$ 2.05	$ 1.85	$ 6.52	$ 5.73
Weighted average number of shares:				
Basic	826	838	829	842
Diluted	833	843	835	846

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 28, 2024	**July 30, 2023**	**July 28, 2024**	**July 30, 2023**
	(Unaudited)			
Net income	$ 1,705	$ 1,560	$ 5,446	$ 4,852
Other comprehensive income (loss), net of tax:				
Change in unrealized gain (loss) on available-for-sale investments	18	(3)	36	25
Change in unrealized net loss on derivative instruments	8	15	44	(46)
Change in defined and postretirement benefit plans	—	—	(9)	—
Other comprehensive income (loss), net of tax	26	12	71	(21)
Comprehensive income	$ 1,731	$ 1,572	$ 5,517	$ 4,831

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC.

CONSOLIDATED CONDENSED BALANCE SHEETS
(In millions)

	July 28, 2024	October 29, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 8,288	$ 6,132
Short-term investments	815	737
Accounts receivable, net	4,970	5,165
Inventories	5,568	5,725
Other current assets	1,030	1,388
Total current assets	20,671	19,147
Long-term investments	2,981	2,281
Property, plant and equipment, net	3,100	2,723
Goodwill	3,732	3,732
Purchased technology and other intangible assets, net	262	294
Deferred income taxes and other assets	2,901	2,552
Total assets	$ 33,647	$ 30,729
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	$ 99	$ 100
Accounts payable and accrued expenses	4,387	4,297
Contract liabilities	2,742	2,975
Total current liabilities	7,228	7,372
Long-term debt	6,158	5,461
Income taxes payable	671	833
Other liabilities	750	714
Total liabilities	14,807	14,380
Stockholders' equity:		
Common stock	8	8
Additional paid-in capital	9,428	9,131
Retained earnings	48,247	43,726
Treasury stock	(38,697)	(36,299)
Accumulated other comprehensive loss	(146)	(217)
Total stockholders' equity	18,840	16,349
Total liabilities and stockholders' equity	$ 33,647	$ 30,729

Amounts as of July 28, 2024 are unaudited. Amounts as of October 29, 2023 are derived from the October 29, 2023 audited consolidated financial statements.

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC.

CONSOLIDATED CONDENSED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions, except per share amount)

Three Months Ended July 28, 2024	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Retained Earnings	Treasury Stock Shares	Treasury Stock Amount	Accumulated Other Comprehensive Income (Loss)	Total
	(Unaudited)							
Balance as of April 28, 2024	828	$ 8	$ 9,321	$ 46,871	1,200	$ (37,829)	$ (172)	$ 18,199
Net income	—	—	—	1,705	—	—	—	1,705
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	26	26
Dividends declared ($0.40 per common share)	—	—	—	(329)	—	—	—	(329)
Share-based compensation	—	—	132	—	—	—	—	132
Net issuance under stock plans	—	—	(25)	—	—	—	—	(25)
Common stock repurchases	(4)	—	—	—	4	(868)	—	(868)
Balance as of July 28, 2024	824	$ 8	$ 9,428	$ 48,247	1,204	$ (38,697)	$ (146)	$ 18,840

Nine Months Ended July 28, 2024	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Retained Earnings	Treasury Stock Shares	Treasury Stock Amount	Accumulated Other Comprehensive Income (Loss)	Total
	(Unaudited)							
Balance as of October 29, 2023	833	$ 8	$ 9,131	$ 43,726	1,191	$ (36,299)	$ (217)	$ 16,349
Net income	—	—	—	5,446	—	—	—	5,446
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	71	71
Dividends declared ($1.12 per common share)	—	—	—	(925)	—	—	—	(925)
Share-based compensation	—	—	436	—	—	—	—	436
Net issuance under stock plans	4	—	(139)	—	—	—	—	(139)
Common stock repurchases	(13)	—	—	—	13	(2,398)	—	(2,398)
Balance as of July 28, 2024	824	$ 8	$ 9,428	$ 48,247	1,204	$ (38,697)	$ (146)	$ 18,840

APPLIED MATERIALS, INC.

CONSOLIDATED CONDENSED STATEMENTS OF STOCKHOLDERS' EQUITY - (Continued)

(In millions, except per share amount)

Three Months Ended July 30, 2023	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Retained Earnings	Treasury Stock Shares	Treasury Stock Amount	Accumulated Other Comprehensive Income (Loss)	Total
				(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 Shares	Common Stock Amount	Additional Paid-In Capital	Retained Earnings	Treasury Stock Shares	Treasury Stock Amount	Accumulated Other Comprehensive Income (Loss)	Total
				(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

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC.

CONSOLIDATED CONDENSED STATEMENTS OF CASH FLOWS

(In millions)

	Nine Months Ended	
	July 28, 2024	**July 30, 2023**
	(Unaudited)	
Cash flows from operating activities:		
Net income	$ 5,446	$ 4,852
Adjustments required to reconcile net income to cash provided by operating activities:		
Depreciation and amortization	282	385
Share-based compensation	436	375
Deferred income taxes	(385)	(174)
Other	(199)	189
Changes in operating assets and liabilities:		
Accounts receivable	195	838
Inventories	157	123
Other current and non-current assets	353	27
Accounts payable and accrued expenses	(20)	(441)
Contract liabilities	(233)	355
Income taxes payable	46	545
Other liabilities	24	71
Cash provided by operating activities	6,102	7,145
Cash flows from investing activities:		
Capital expenditures	(783)	(797)
Cash paid for acquisitions, net of cash acquired	—	(25)
Proceeds from sales and maturities of investments	1,495	971
Purchases of investments	(1,968)	(1,195)
Cash used in investing activities	(1,256)	(1,046)
Cash flows from financing activities:		
Debt borrowings, net of issuance costs	694	—
Proceeds from issuance of commercial paper	300	892
Repayments of commercial paper	(300)	(700)
Proceeds from common stock issuances	119	111
Common stock repurchases	(2,381)	(1,489)
Tax withholding payments for vested equity awards	(258)	(165)
Payments of dividends to stockholders	(863)	(707)
Repayments of principal on finance leases	(12)	(8)
Cash used in financing activities	(2,701)	(2,066)
Increase (decrease) in cash, cash equivalents and restricted cash equivalents	2,145	4,033
Cash, cash equivalents and restricted cash equivalents — beginning of period	6,233	2,100
Cash, cash equivalents and restricted cash equivalents — end of period	$ 8,378	$ 6,133
Reconciliation of cash, cash equivalents and restricted cash equivalents		
Cash and cash equivalents	$ 8,288	$ 6,025
Restricted cash equivalents included in deferred income taxes and other assets	90	108
Total cash, cash equivalents and restricted cash equivalents	$ 8,378	$ 6,133
Supplemental cash flow information:		
Cash payments for income taxes	$ 819	$ 418
Cash refunds from income taxes	$ 7	$ 51
Cash payments for interest	$ 137	$ 137

See accompanying 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 29, 2023 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 29, 2023 (2023 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 28, 2024 are not necessarily indicative of future operating results. Our fiscal year ends on the last Sunday in October of each year. Fiscal 2024 and 2023 contain 52 weeks each and the first nine months of fiscal 2024 and 2023 each contained 39 weeks.

Certain prior-year amounts have been reclassified to conform to current-year presentation.

Use of Estimates

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

Property, Plant and Equipment

Property, plant and equipment is stated at cost. Depreciation is provided over the estimated useful lives of the assets using the straight-line method. In connection with our periodic review of estimated useful lives of the property, plant, and equipment effective as of the beginning of fiscal 2024, we have increased the estimated useful lives of certain assets. The updated estimated useful lives for financial reporting purposes are as follows: buildings and improvements, 3 to 30 years with certain buildings and improvements' useful lives increased by 5 years; demonstration and manufacturing equipment increased to between 5 to 8 years. The estimated useful lives for the remaining asset categories remained unchanged from fiscal 2023.

The change in accounting estimate is being applied on a prospective basis to the assets on our balance sheet as of October 29, 2023, as well as to subsequent asset purchases. Based on the net carrying amounts of assets in use as of the end of fiscal 2023, the impact of this change was a reduction of $30 million and $97 million in depreciation expense during the three and nine months ended July 28, 2024, respectively, and an increase of $0.03 and $0.09 in both basic and diluted earnings per share for the three and nine months ended July 28, 2024, respectively.

Recent Accounting Pronouncements

Accounting Standards Adopted

Contract Assets and Contract Liabilities from Revenue Contracts with Customers in a Business Combination. In October 2021, the Financial Accounting Standards Board (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. We adopted this authoritative guidance in the first quarter of fiscal 2024 and the impact of the adoption depends on the facts and circumstances of future acquisitions.

Accounting Standards Not Yet Adopted

Improvements to Income Tax Disclosures. In December 2023, the FASB issued an accounting standard update to improve income tax disclosures (Topic 740). The standard prescribes specific categories for the components of the effective tax rate reconciliation, requires disclosure of income taxes paid by jurisdiction, and modifies other income tax-related disclosures. This authoritative guidance will be effective for us beginning with our annual reporting for fiscal year 2026, with early adoption permitted. We are evaluating the effect of this new guidance on our consolidated financial statements and related disclosures.

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

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. The adoption of this guidance is not expected to have a significant impact on our consolidated financial statements.

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 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
	(In millions, except per share amounts)			
Numerator:				
Net income	$ 1,705	$ 1,560	$ 5,446	$ 4,852
Denominator:				
Weighted average common shares outstanding	826	838	829	842
Effect of weighted dilutive restricted stock units and employee stock purchase plan shares	7	5	6	4
Denominator for diluted earnings per share	833	843	835	846
Basic earnings per share	$ 2.06	$ 1.86	$ 6.57	$ 5.76
Diluted earnings per share	$ 2.05	$ 1.85	$ 6.52	$ 5.73
Potentially weighted dilutive securities	—	—	—	2

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

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:

July 28, 2024	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(In millions)			
Cash	$ 1,318	$ —	$ —	$ 1,318
Cash equivalents:				
Money market funds*	2,828	—	—	2,828
Bank certificates of deposit and time deposits	20	—	—	20
U.S. Treasury and agency securities	2,291	—	—	2,291
Municipal securities	73	—	—	73
Commercial paper, corporate bonds and medium-term notes	1,758	—	—	1,758
Total cash equivalents	6,970	—	—	6,970
Total cash and cash equivalents	$ 8,288	$ —	$ —	$ 8,288
Short-term and long-term investments:				
Bank certificates of deposit and time deposits	$ 19	$ —	$ —	$ 19
U.S. Treasury and agency securities	641	1	2	640
Non-U.S. government securities**	5	—	—	5
Municipal securities	445	2	4	443
Commercial paper, corporate bonds and medium-term notes	816	2	3	815
Asset-backed and mortgage-backed securities	632	1	6	627
Total fixed income securities	2,558	6	15	2,549
Publicly traded equity securities	543	422	3	962
Equity investments in privately held companies	246	58	19	285
Total equity investments	789	480	22	1,247
Total short-term and long-term investments	$ 3,347	$ 486	$ 37	$ 3,796
Total cash, cash equivalents and investments	$ 11,635	$ 486	$ 37	$ 12,084

*Excludes $90 million of restricted cash equivalents invested in money market funds related to deferred compensation plans.
**Includes Canadian provincial government debt.

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

*Excludes $101 million of restricted cash equivalents invested in money market funds related to deferred compensation plans.
**Includes Canadian provincial government debt.

During the three months ended July 28, 2024 and July 30, 2023, interest income from our cash, cash equivalents and fixed income securities was $124 million and $73 million, respectively.

During the nine months ended July 28, 2024 and July 30, 2023, interest income from our cash, cash equivalents and fixed income securities was $345 million and $165 million, respectively.

Maturities of Investments

The following table summarizes the contractual maturities of our investments as of July 28, 2024:

	Cost	Estimated Fair Value
	(In millions)	
Due in one year or less	$ 798	$ 796
Due after one through five years	1,124	1,122
Due after five years	4	4
No single maturity date*	1,421	1,874
Total	$ 3,347	$ 3,796

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

Gains and Losses on Investments

During the three and nine months ended July 28, 2024 and July 30, 2023 gross realized gains and losses on our fixed income portfolio were not material.

As of July 28, 2024 and October 29, 2023, gross unrealized losses related to our fixed income portfolio were not material. We regularly review our fixed income portfolio to identify and evaluate investments that have indications of possible impairment from credit losses or other factors. Factors considered in determining whether an unrealized loss is considered to be a credit loss include: the significance of the decline in value compared to the cost basis; the financial condition; credit quality and near-term prospects of the investee; and whether it is more likely than not that we will be required to sell the security prior to recovery. Credit losses related to available-for-sale debt securities are recorded as an allowance for credit losses through interest and other income (expense), net. Any additional changes in fair value that are not related to credit losses are recognized in accumulated other comprehensive income (loss) (AOCI). During the three and nine months ended July 28, 2024 and July 30, 2023, 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 28, 2024 and July 30, 2023 were as follows:

	Three Months Ended		Nine Months Ended	
	July 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
	(In millions)			
Publicly traded equity securities				
Unrealized gain	$ 6	$ 12	$ 318	$ 31
Unrealized loss	(30)	(1)	(33)	(28)
Realized gain on sales and dividends	3	4	5	5
Realized loss on sales or impairment	—	—	(1)	(2)
Equity investments in privately held companies				
Unrealized gain	1	1	2	13
Unrealized loss	(2)	(18)	(12)	(29)
Realized gain on sales and dividends	—	2	3	7
Realized loss on sales or impairment	(19)	(2)	(19)	(119)
Total gain (loss) on equity investments, net	$ (41)	$ (2)	$ 263	$ (122)

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 28, 2024, 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.

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 28, 2024			October 29, 2023		
	Level 1	Level 2	Total	Level 1	Level 2	Total
	(In millions)					
Assets:						
Available-for-sale debt security investments						
Money market funds*	$ 2,918	$ —	$ 2,918	$ 3,361	$ —	$ 3,361
Bank certificates of deposit and time deposits	—	39	39	—	18	18
U.S. Treasury and agency securities	2,909	22	2,931	331	43	374
Non-U.S. government securities	—	5	5	—	6	6
Municipal securities	—	516	516	—	453	453
Commercial paper, corporate bonds and medium-term notes	—	2,573	2,573	—	2,177	2,177
Asset-backed and mortgage-backed securities	—	627	627	—	487	487
Total available-for-sale debt security investments	$ 5,827	$ 3,782	$ 9,609	$ 3,692	$ 3,184	$ 6,876
Equity investments with readily determinable values						
Publicly traded equity securities	$ 962	$ —	$ 962	$ 698	$ —	$ 698
Total equity investments with readily determinable values	$ 962	$ —	$ 962	$ 698	$ —	$ 698
Total	$ 6,789	$ 3,782	$ 10,571	$ 4,390	$ 3,184	$ 7,574

*Amounts as of July 28, 2024 and October 29, 2023 include $90 million and $101 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 28, 2024 or October 29, 2023.

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

Our equity investments without readily determinable values consist of equity investments in privately held companies. We elected the measurement alternative, defined as cost, less impairments, adjusted for subsequent observable price changes on a prospective basis for certain equity investments without readily determinable fair values and are required to account for any subsequent observable changes in fair value within the statements of operations. These investments are classified as Level 3 within the fair value hierarchy and periodically assessed for impairment when an event or circumstance indicates that a decline in value may have occurred. Impairment losses on equity investments in privately held companies were not material during the three and nine months ended July 28, 2024. 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. 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 28, 2024, the aggregate principal amount of long-term senior unsecured notes was $6.2 billion and the estimated fair value was $5.7 billion. As of October 29, 2023, the aggregate principal amount of long-term senior unsecured notes was $5.5 billion and the estimated fair value was $4.7 billion. 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.

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 28, 2024 is expected to be reclassified into earnings within 12 months. Changes in fair value caused by changes in time value of option contracts designated as cash flow hedges are excluded from the assessment of effectiveness. The initial value of this excluded component is amortized on a straight-line basis over the life of the hedging instrument and recognized in the financial statement line item to which the hedge relates. If the transaction being hedged is probable not to occur, we recognize the gain or loss on the associated financial instrument in the consolidated 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 28, 2024 and July 30, 2023.

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 28, 2024 and October 29, 2023, the total outstanding notional amounts of foreign exchange contracts were $1.6 billion and $1.7 billion. The fair values of foreign exchange derivative instruments as of July 28, 2024 and October 29, 2023 were not material.

We are also exposed to interest rate risk associated with our potential future borrowings. During the nine months ended July 28, 2024, we entered into a series of interest rate contracts to hedge against the variability of cash flows due to changes in the benchmark interest rate of fixed rate debt. These instruments were designated as cash flow hedges at inception and were settled in conjunction with the issuance of debt in June 2024.

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 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
	(In millions)			
Derivatives in Cash Flow Hedging Relationships:				
Foreign exchange contracts	$ 16	$ 15	$ 44	$ (32)
Interest rate contracts	(8)	—	12	—
Total	$ 8	$ 15	$ 56	$ (32)

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

	Three Months Ended					
	July 28, 2024			July 30, 2023		
		Derivatives in Cash Flow Hedging Relationships			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	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	Total Amount Presented in the Consolidated Condensed Statement of Operations in which the Effects of Cash Flow Hedges are Recorded	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 revenue	$ 6,778	$ 7	$ —	$ 6,425	$ 8	$ —
Cost of products sold	$ 3,573	(3)	—	$ 3,449	—	—
Research, development and engineering	$ 836	(2)	—	$ 767	(5)	—
Marketing and selling	$ 205	—	—	$ 193	(1)	—
General and administrative	$ 222	(1)	—	$ 214	(1)	—
Interest Rate Contracts:						
Interest expense	$ 63	(3)	—	$ 60	(4)	—
		$ (2)	$ —		$ (3)	$ —

	Nine Months Ended					
	July 28, 2024			July 30, 2023		
		Derivatives in Cash Flow Hedging Relationships			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	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	Total Amount Presented in the Consolidated Condensed Statement of Operations in which the Effects of Cash Flow Hedges are Recorded	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	$ 20,131	$ 21	$ (1)	$ 19,794	$ 47	$ —
Cost of products sold	$ 10,569	(4)	—	$ 10,579	2	—
Research, development and engineering	$ 2,375	(6)	—	$ 2,313	(8)	—
Marketing and selling	$ 621	(1)	—	$ 584	(1)	—
General and administrative	$ 745	(1)	—	$ 635	(2)	—
Interest Rate Contracts:						
Interest expense	$ 181	(9)	—	$ 180	(10)	—
		$ —	$ (1)		$ 28	$ —

	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 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
		(In millions)			
Derivatives Not Designated as Hedging Instruments					
Foreign exchange contracts	Interest and other income, net	$ 2	$ 11	$ 20	$ (25)
Total return swaps - deferred compensation	Cost of products sold	1	2	5	3
Total return swaps - deferred compensation	Operating expenses	16	15	55	29
Total return swaps - deferred compensation	Interest and other income, net	(4)	(4)	(11)	(8)
Total		$ 15	$ 24	$ 69	$ (1)

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 28, 2024.

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 $131 million and $395 million of account receivables during the three and nine months ended July 28, 2024, respectively. We sold $90 million and $619 million of account receivables during the three and nine months ended July 30, 2023, respectively. We did not discount letters of credit issued by customers or discount promissory notes during the three and nine months ended July 28, 2024 and July 30, 2023. 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 28, 2024 and as of October 29, 2023. 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 28, 2024, 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.

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

	July 28, 2024	October 29, 2023
	(In millions)	
Contract assets	$ 324	$ 274
Contract liabilities	$ 2,742	$ 2,975

The increase in contract assets during the nine months ended July 28, 2024 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 28, 2024, we recognized revenue of approximately $2.5 billion related to contract liabilities at October 29, 2023. Contract liabilities decreased during the nine months ended July 28, 2024 due to revenue recognized related to contract liabilities at October 29, 2023, partially offset by new billings for products and services for which there were unsatisfied performance obligations to customers and revenue had not yet been recognized as of July 28, 2024.

There were no credit losses recognized on our accounts receivables and contract assets during both the nine months ended July 28, 2024 and July 30, 2023.

Performance Obligations

As of July 28, 2024, 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 $4.2 billion, of which approximately 63% 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

	July 28, 2024	October 29, 2023
	(In millions)	
Inventories		
Customer service spares	$ 1,727	$ 1,589
Raw materials	1,688	1,653
Work-in-process	945	997
Finished goods		
Deferred cost of sales	267	413
Evaluation inventory	487	423
Manufactured on-hand inventory	454	650
Total finished goods	1,208	1,486
Total inventories	$ 5,568	$ 5,725

	July 28, 2024	October 29, 2023
	(In millions)	
Other Current Assets		
Prepaid income taxes and income taxes receivable	$ 51	$ 412
Prepaid expenses and other	979	976
	$ 1,030	$ 1,388

	Useful Life	July 28, 2024	October 29, 2023
	(In years)	(In millions)	
Property, Plant and Equipment, Net			
Land and improvements		$ 436	$ 393
Buildings and improvements	3-30	2,314	2,194
Demonstration and manufacturing equipment	5-8	2,573	2,353
Furniture, fixtures and other equipment	3-5	806	762
Construction in progress		828	672
Gross property, plant and equipment		6,957	6,374
Accumulated depreciation		(3,857)	(3,651)
		$ 3,100	$ 2,723

	July 28, 2024	October 29, 2023
	(In millions)	
Deferred Income Taxes and Other Assets		
Non-current deferred income taxes	$ 2,107	$ 1,729
Operating lease right-of-use assets	355	370
Finance lease right-of-use assets	91	108
Income tax receivables and other assets	348	345
	$ 2,901	$ 2,552

	July 28, 2024	October 29, 2023
	(In millions)	
Accounts Payable and Accrued Expenses		
Accounts payable	$ 1,470	$ 1,478
Compensation and employee benefits	995	1,024
Warranty	347	332
Dividends payable	330	267
Income taxes payable	365	282
Other accrued taxes	74	65
Interest payable	59	38
Operating lease liabilities, current	86	84
Finance lease liabilities, current	89	102
Other	572	625
	$ 4,387	$ 4,297

	July 28, 2024	October 29, 2023
	(In millions)	
Other Liabilities		
Defined and postretirement benefit plans	$ 121	$ 126
Operating lease liabilities, non-current	239	252
Other	390	336
	$ 750	$ 714

Government Assistance

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

We record capital expenditure related incentives as an offset to the associated property, plant and equipment, net within our Consolidated Condensed Balance Sheets and recognize a reduction to depreciation expense over the useful life of the corresponding acquired asset. We record incentives related to operating activities as a reduction to expense in the same line item on the Consolidated Condensed Statements of Operations as the expenditure for which the grant is intended to compensate. Capital expenditure related incentives reduced gross property, plant and equipment, net by $279 million as of July 28, 2024. Contra-depreciation expense was not material during the three and nine months ended July 28, 2024. Operating incentives recognized as a reduction to research, development and engineering expense were $10 million and $32 million in the three and nine months ended July 28, 2024, respectively. Capital expenditure related incentives reduced our income taxes payable by $112 million as of July 28, 2024, of which $105 million is in accounts payable and accrued expenses and $7 million is in income taxes payable, in our Consolidated Condensed Balance Sheets.

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 28, 2024, 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 28, 2024 and October 29, 2023 were as follows:

	July 28, 2024	October 29, 2023
	(In millions)	
Goodwill by reportable segment		
Semiconductor Systems	$ 2,460	$ 2,460
Applied Global Services	1,032	1,032
Display and Adjacent Markets	199	199
Corporate and Other	41	41
	$ 3,732	$ 3,732

Intangible Assets

Details of intangible assets other than goodwill were as follows:

	July 28, 2024			October 29, 2023		
	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	$ 2,001	$ (1,744)	$ 257	$ 2,001	$ (1,714)	$ 287
Applied Global Services	79	(79)	—	79	(78)	1
Display and Adjacent Markets	194	(194)	—	194	(194)	—
Corporate and Other	37	(32)	5	36	(30)	6
Total intangible assets with finite lives	$ 2,311	$ (2,049)	$ 262	$ 2,310	$ (2,016)	$ 294

Amortization expense of intangible assets was $11 million and $33 million during the three and nine months ended July 28, 2024, respectively. Amortization expense of intangible assets was $11 million and $34 million during the three and nine months ended July 30, 2023, respectively.

As of July 28, 2024, future estimated amortization expense of intangible assets with finite lives is expected to be as follows:

	Amortization Expense
	(In millions)
2024 (remaining 3 months)	$ 10
2025	41
2026	40
2027	26
2028	23
Thereafter	122
Total	$ 262

Note 10 Borrowing Facilities and Debt

Revolving Credit Facilities

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

No amounts were outstanding under the Revolving Credit Agreement as of July 28, 2024 and October 29, 2023.

In addition, we have revolving credit facilities with Japanese banks pursuant to which we may borrow up to approximately $52 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 28, 2024 and October 29, 2023, no amounts were outstanding under these revolving credit facilities.

Short-term Commercial Paper

We have a short-term commercial paper program under which we may issue unsecured commercial paper notes of up to a total amount of $1.5 billion. The proceeds from the issuances of commercial paper are used for general corporate purposes. As of July 28, 2024, we had commercial paper notes outstanding with an aggregate principal amount of $100 million, which were recorded as short-term debt with a weighted-average interest rate of 5.34% and maturities of 98 days, and as of October 29, 2023, we had $100 million of commercial paper notes outstanding and recorded as short-term debt with a weighted-average interest rate of 5.39% and maturities of 90 days.

Senior Unsecured Notes

In June 2024, we issued $700 million aggregate principal amount of 4.800% senior unsecured notes due 2029 in a registered public offering. The proceeds from the issuance of the senior unsecured notes are intended for general corporate purposes.

Debt outstanding as of July 28, 2024 and October 29, 2023 was as follows:

	Principal Amount			
	July 28, 2024	October 29, 2023	Effective Interest Rate	Interest Pay Dates
	(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
4.800% Senior Notes Due 2029	700	—	4.844%	June 15, December 15
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
	6,200	5,500		
Total unamortized discount	(11)	(11)		
Total unamortized debt issuance costs	(31)	(28)		
Total long-term debt	$ 6,158	$ 5,461		

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 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
	(In millions, except percentages)			
Operating lease cost	$ 27	$ 25	$ 81	$ 78
Finance lease cost:				
Amortization of right-of-use assets	$ 1	$ —	$ 2	$ 1
Interest on lease liabilities	$ 1	$ 1	$ 3	$ 2
Weighted-average remaining lease term (in years) - operating leases			5.5	5.8
Weighted-average remaining lease term (in years) - finance leases			0.2	1.1
Weighted-average discount rate - operating leases			3.2%	2.9%
Weighted-average discount rate - finance leases			4.6%	4.6%

Supplemental cash flow information related to leases are as follows:

	Nine Months Ended	
	July 28, 2024	July 30, 2023
	(In millions)	
Operating cash flows paid for operating leases	$ 80	$ 89
Operating cash flows paid for finance leases	$ 3	$ 2
Financing cash flows paid for finance leases	$ 12	$ 8
Right-of-use assets obtained in exchange for operating lease liabilities	$ 73	$ 83
Right-of-use assets obtained in exchange for finance lease liabilities	$ —	$ 109

As of July 28, 2024, the maturities of lease liabilities are as follows:

Fiscal	Operating Leases	Finance Leases
	(In millions)	
2024 (remaining 3 months)	$ 21	$ 90
2025	96	—
2026	60	—
2027	47	—
2028	39	—
Thereafter	93	—
Total lease payments	$ 356	$ 90
Less imputed interest	(31)	(1)
Total	$ 325	$ 89

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 29, 2023	$ (50)	$ (118)	$ (62)	$ 13	$ (217)
Other comprehensive income (loss) before reclassifications	27	44	—	—	71
Amounts reclassified out of AOCI	9	—	(9)	—	—
Other comprehensive income (loss), net of tax	36	44	(9)	—	71
Balance as of July 28, 2024	$ (14)	$ (74)	$ (71)	$ 13	$ (146)

	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)

The tax effects on net income of amounts reclassified from AOCI for the three and nine months ended July 28, 2024 and July 30, 2023 were not material.

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 28, 2024, approximately $10.3 billion remained available for future stock repurchases under the repurchase program.

The following table summarizes our stock repurchases, including and excluding excise tax, for the three and nine months ended July 28, 2024 and July 30, 2023:

	Three Months Ended		Nine Months Ended	
	July 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
	(in millions, except per share amount)			
Shares of common stock repurchased	4	4	13	13
Cost of stock repurchased (including excise tax)*	$ 868	$ 443	$ 2,398	$ 1,497
Average price paid per share (including excise tax)*	$ 222.82	$ 131.09	$ 189.90	$ 117.35
Cost of stock repurchased (excluding excise tax)	$ 861	$ 439	$ 2,381	$ 1,489
Average price paid per share (excluding excise tax)	$ 221.27	$ 129.86	$ 188.60	$ 116.70

(*) Stock repurchase 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.

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 2024, March 2024 and December 2023, our Board of Directors declared quarterly cash dividends in the amount of $0.40, $0.40 and $0.32 per share, respectively. The dividend declared in June 2024 is payable in September 2024. Dividends paid during the nine months ended July 28, 2024 and July 30, 2023 totaled $863 million and $707 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.

During the three and nine months ended July 28, 2024 and July 30, 2023, 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 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
	(In millions)			
Cost of products sold	$ 33	$ 42	$ 98	$ 138
Research, development and engineering	53	42	163	137
Marketing and selling	17	13	53	42
General and administrative	29	17	122	58
Total share-based compensation	$ 132	$ 114	$ 436	$ 375

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

As of July 28, 2024, we had $977 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 28, 2024, there were 21 million shares available for grant of share-based awards under the ESIP, and an additional 11 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 28, 2024 is presented below:

	Shares	Weighted Average Grant Date Fair Value
	(In millions, except per share amounts)	
Outstanding as of October 29, 2023	12	$ 106.24
Granted	4	$ 148.07
Vested	(4)	$ 97.11
Canceled	(1)	$ 119.91
Outstanding as of July 28, 2024	11	$ 127.04

As of July 28, 2024, 0.7 million additional performance-based awards could be earned based upon achievement of certain levels of specified performance and/or market goals.

During the first half of fiscal 2024, 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 number of shares that may vest in full after three years ranges from 0% to 200% of the target amount. The awards become eligible to vest only if the goals are achieved and will vest only if the grantee remains employed by us through each applicable vesting date, subject to a qualifying retirement based on age and years of service. The awards provide for a partial vesting based on actual performance at the conclusion of the three-year performance period in the event of a qualifying retirement.

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.

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.

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 28, 2024 and July 30, 2023. 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 28, 2024	July 30, 2023
Dividend yield	0.76%	1.09%
Expected volatility	35.6%	43.3%
Risk-free interest rate	5.27%	5.14%
Expected life (in years)	0.5	0.5
Weighted average estimated fair value	$53.98	$32.47

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 2024 and 2023 were 13.0 percent and 13.6 percent, respectively. The effective tax rate for the third quarter of fiscal 2024 was lower than the same period in the prior fiscal year primarily due to larger excess tax benefits from share-based compensation in fiscal 2024.

Our effective tax rates for the first nine months of fiscal 2024 and 2023 were 13.0 percent and 12.5 percent, respectively. The effective tax rate for the first nine months of fiscal 2024 was higher than the same period in the prior fiscal year primarily due to lower tax credits in fiscal 2024, partially offset by larger excess tax benefits from share-based compensation in fiscal 2024.

Note 14 Warranty, Guarantees, Commitments and Contingencies

Warranty

Changes in the warranty reserves are presented below:

	Three Months Ended		Nine Months Ended	
	July 28 2024	July 30 2023	July 28 2024	July 30 2023
	(In millions)			
Beginning balance	$ 346	$ 310	$ 332	$ 286
Provisions for warranty	62	62	181	186
Changes in reserves related to preexisting warranty	(8)	(2)	(14)	—
Consumption of reserves	(53)	(57)	(152)	(159)
Ending balance	$ 347	$ 313	$ 347	$ 313

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 28, 2024, the maximum potential amount of future payments that we could be required to make under these guarantee agreements was approximately $308 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 28, 2024, we have provided parent guarantees to banks for approximately $292 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 legal proceedings, government investigations or inquiries, and claims, both asserted and unasserted, that arise in the ordinary course of business. These matters are subject to uncertainties, and we cannot predict the outcome of these matters, or governmental inquiries or proceedings that may occur. Although the outcome of the above-described matters, claims and proceedings cannot be predicted with certainty, we do not believe at this time that any of the above-described matters will have a material effect on our consolidated financial condition or results of operations.

Since 2022, we have received multiple subpoenas from government authorities requesting information relating to certain China customer shipments and export controls compliance, including from the U.S. Department of Justice, the U.S. Commerce Department Bureau of Industry and Security, and the U.S. Securities and Exchange Commission. We also have received subpoenas from the U.S. Department of Justice requesting information related to certain federal award applications and information submitted to the federal government. We are cooperating fully with the U.S. government in these matters. We have continued to receive related subpoenas, as well as requests for information, and may in the future receive additional related subpoenas and requests for information from such or other government authorities. Any such matters are subject to uncertainties, and we cannot predict the outcome, nor reasonably estimate a range of loss or penalties, if any, relating to these matters.

Note 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 28, 2024 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, 200mm 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. Effective in the first quarter of fiscal 2024, management began including share-based compensation expense in the evaluation of reportable segments' performance. Prior-year numbers have been recast to conform to the current-year presentation. 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 revenue 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 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.

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

	Three Months Ended		Nine Months Ended	
	Net Revenue	Operating Income (Loss)	Net Revenue	Operating Income (Loss)
	(In millions)			
July 28, 2024:				
Semiconductor Systems	$ 4,924	$ 1,712	$ 14,734	$ 5,157
Applied Global Services	1,580	467	4,586	1,320
Display and Adjacent Markets	251	16	674	46
Corporate and Other	23	(253)	137	(702)
Total	$ 6,778	$ 1,942	$ 20,131	$ 5,821
July 30, 2023:				
Semiconductor Systems	$ 4,676	$ 1,568	$ 14,815	$ 5,138
Applied Global Services	1,464	399	4,261	1,128
Display and Adjacent Markets	235	32	570	51
Corporate and Other	50	(197)	148	(634)
Total	$ 6,425	$ 1,802	$ 19,794	$ 5,683

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 revenue 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 28, 2024		July 30, 2023		Change	July 28, 2024		July 30, 2023		Change
	(In millions, except percentages)									
China	$ 2,153	32 %	$ 1,734	27 %	24 %	$ 7,981	40 %	$ 4,284	22 %	86 %
Korea	1,102	16 %	988	15 %	12 %	3,321	16 %	3,864	19 %	(14)%
Taiwan	1,148	17 %	1,345	21 %	(15)%	2,726	14 %	4,748	24 %	(43)%
Japan	555	8 %	478	8 %	16 %	1,573	8 %	1,394	7 %	13 %
Southeast Asia	428	6 %	180	3 %	138 %	827	4 %	590	3 %	40 %
Asia Pacific	5,386	79 %	4,725	74 %	14 %	16,428	82 %	14,880	75 %	10 %
United States	1,053	16 %	1,039	16 %	1 %	2,665	13 %	3,203	16 %	(17)%
Europe	339	5 %	661	10 %	(49)%	1,038	5 %	1,711	9 %	(39)%
Total	$ 6,778	100 %	$ 6,425	100 %	5 %	$ 20,131	100 %	$ 19,794	100 %	2 %

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

	Three Months Ended		Nine Months Ended	
	July 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
Foundry, logic and other	72 %	79 %	66 %	80 %
Dynamic random-access memory (DRAM)	24 %	17 %	30 %	14 %
Flash memory	4 %	4 %	4 %	6 %
	100 %	100 %	100 %	100 %

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

	Three Months Ended		Nine Months Ended	
	July 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
	(In millions)			
Unallocated net revenue	$ 23	$ 50	$ 137	$ 148
Unallocated cost of products sold and expenses	(276)	(247)	(839)	(782)
Total	$ (253)	$ (197)	$ (702)	$ (634)

The following customer accounted for at least 10 percent of our net revenue for the nine months ended July 28, 2024, and sales to this customer included products and services from multiple reportable segments.

	Percentage of Net Revenue
Samsung Electronics Co., Ltd.	12 %

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 29, 2023 contained in our Form 10-K filed on December 15, 2023.

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 28, 2024	July 30, 2023	Change	July 28, 2024	July 30, 2023	Change
	(In millions, except per share amounts and percentages)					
Net revenue	$ 6,778	$ 6,425	$ 353	$ 20,131	$ 19,794	$ 337
Gross margin	47.3 %	46.3 %	1.0 point	47.5 %	46.6 %	0.9 points
Operating income	$ 1,942	$ 1,802	$ 140	$ 5,821	$ 5,683	$ 138
Operating margin	28.7 %	28.0 %	0.7 points	28.9 %	28.7 %	0.2 points
Net income	$ 1,705	$ 1,560	$ 145	$ 5,446	$ 4,852	$ 594
Earnings per diluted share	$ 2.05	$ 1.85	$ 0.20	$ 6.52	$ 5.73	$ 0.79

Fiscal 2024 and 2023 each contain 52 weeks and the first nine months of fiscal 2024 and 2023 each contained 39 weeks.

Semiconductor equipment customers continued to make strategic investments in new capacity and new technology transitions during the three and nine months ended July 28, 2024. Semiconductor Systems revenue increased for the three months and decreased for the nine months ended July 28, 2024 as compared to the same periods in the prior year. Foundry and logic customers’ spending decreased in the three and nine months ended July 28, 2024 compared to the same periods in the prior year driven primarily by lower customer investments in leading-edge manufacturing technologies, partially offset by increased customer investments in mature manufacturing technologies. Memory customers’ spending in the three and nine months ended July 28, 2024 was higher as compared to the same periods in the prior year due to increased investments in DRAM technology transitions. Investments by semiconductor equipment customers are expected to remain strong with growth in the adoption of high-bandwidth memory and other forms of advanced packaging, continued demand for AI and data center computing, and for mature nodes.

Our Applied Global Services net revenue in the three and nine months ended July 28, 2024 increased compared to the same periods in the prior year primarily due to an increase in net revenue associated with long-term service agreements and customer spending on spares. Demand for services is expected to grow as the installed base of systems and chambers increases and customers renew long-term service agreements.

Our Display and Adjacent Markets net revenue increased in the three and nine months ended July 28, 2024 compared to the same periods in the prior year primarily due to higher customer investments in display manufacturing equipment for IT products including laptops, monitors and tablets, partially offset by lower customer investments in display manufacturing equipment for TVs and products in the mobile market.

The United States government has implemented export regulations for U.S. semiconductor items sold or provided to customers in China, which have limited our ability to provide certain products and services to customers in China, particularly in the past two years. The U.S. government is continually considering updates to export regulations, and may issue new or additional updates and other requirements that may have the effect of further limiting our ability to provide certain products and services to customers outside the U.S., including in China. For a description of these risks, 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 and services relative to local and global competitors*" in Part II, Item 1A, "Risk Factors."

Results of Operations

Net Revenue

Net revenue for the periods indicated were as follows:

	Three Months Ended					Nine Months Ended				
	July 28, 2024		July 30, 2023		Change	July 28, 2024		July 30, 2023		Change
	(In millions, except percentages)									
Semiconductor Systems	$ 4,924	73 %	$ 4,676	73 %	5 %	$ 14,734	73 %	$ 14,815	75 %	(1)%
Applied Global Services	1,580	23 %	1,464	23 %	8 %	4,586	23 %	4,261	21 %	8 %
Display and Adjacent Markets	251	4 %	235	3 %	7 %	674	3 %	570	3 %	18 %
Corporate and Other	23	— %	50	1 %	(54)%	137	1 %	148	1 %	(7)%
Total	$ 6,778	100 %	$ 6,425	100 %	5 %	$ 20,131	100 %	$ 19,794	100 %	2 %

For the three months ended July 28, 2024, net revenue increased as compared to the same period in the prior year primarily due to higher customer investment in semiconductor equipment and increases in net revenue associated with long-term service agreements and customer spending on spares. For the nine months ended July 28, 2024, net revenue increased as compared to the same period in the prior year primarily due to increases in revenue associated with long-term service agreements, customer spending on spares and customer investments in display manufacturing equipment for IT products including laptops, monitors and tablets, partially offset by the decrease in net revenue from customer investment in semiconductor equipment. The Semiconductor Systems segment continued to represent the largest contributor of net revenue.

Net revenue 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 28, 2024		July 30, 2023		Change	July 28, 2024		July 30, 2023		Change
	(In millions, except percentages)									
China	$ 2,153	32 %	$ 1,734	27 %	24 %	$ 7,981	40 %	$ 4,284	22 %	86 %
Korea	1,102	16 %	988	15 %	12 %	3,321	16 %	3,864	19 %	(14)%
Taiwan	1,148	17 %	1,345	21 %	(15)%	2,726	14 %	4,748	24 %	(43)%
Japan	555	8 %	478	8 %	16 %	1,573	8 %	1,394	7 %	13 %
Southeast Asia	428	6 %	180	3 %	138 %	827	4 %	590	3 %	40 %
Asia Pacific	5,386	79 %	4,725	74 %	14 %	16,428	82 %	14,880	75 %	10 %
United States	1,053	16 %	1,039	16 %	1 %	2,665	13 %	3,203	16 %	(17)%
Europe	339	5 %	661	10 %	(49)%	1,038	5 %	1,711	9 %	(39)%
Total	$ 6,778	100 %	$ 6,425	100 %	5 %	$ 20,131	100 %	$ 19,794	100 %	2 %

The changes in net revenue to customers in all regions, other than Korea, in the three months ended July 28, 2024 compared to the same period in the prior year primarily reflected changes in semiconductor manufacturing equipment spending. The increase in net revenue to customers in Korea for the three months ended July 28, 2024 compared to the same period in the prior year primarily reflected increased customer investments in display manufacturing equipment.

The changes in net revenue to customers in all regions in the nine months ended July 28, 2024 compared to the same period 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 28, 2024	July 30, 2023	Change	July 28, 2024	July 30, 2023	Change
Gross margin	47.3 %	46.3 %	1.0 point	47.5 %	46.6 %	0.9 points

Gross margin in the three months ended July 28, 2024 increased compared to the same period in the prior year, primarily driven by lower material, freight, logistics and manufacturing costs. Gross margin in the nine months ended July 28, 2024 increased compared to the same period in the prior year, primarily driven by lower material, freight, logistics and manufacturing costs and a decrease in inventory reserves, partially offset by unfavorable changes in customer and product mix and an increase in labor costs. Gross margin during the three months ended July 28, 2024 and July 30, 2023 included $33 million and $42 million of share-based compensation expense, respectively. Gross margin during the nine months ended July 28, 2024 and July 30, 2023 included $98 million and $138 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 28, 2024	July 30, 2023	Change	July 28, 2024	July 30, 2023	Change
	(In millions)					
Research, development and engineering	$ 836	$ 767	$ 69	$ 2,375	$ 2,313	$ 62

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 changes in RD&E expenses during the three and nine months ended July 28, 2024 compared to the same periods in the prior year were primarily due to additional headcount to support our ongoing investments in product development initiatives, consistent with our growth strategy, offset by lower depreciation expense as a result of changes in certain assets' useful lives effective as of the beginning of fiscal 2024. 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 28, 2024 and July 30, 2023 included $53 million and $42 million of share-based compensation expense, respectively. RD&E expense during the nine months ended July 28, 2024 and July 30, 2023 included $163 million and $137 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 28, 2024	July 30, 2023	Change	July 28, 2024	July 30, 2023	Change
	(In millions)					
Marketing and selling	$ 205	$ 193	$ 12	$ 621	$ 584	$ 37

Marketing and selling expenses for the three and nine months ended July 28, 2024 increased compared to the same periods in the prior year primarily due to additional headcount. Marketing and selling expenses during the three months ended July 28, 2024 and July 30, 2023 included $17 million and $13 million of share-based compensation expense, respectively. Marketing and selling expenses during the nine months ended July 28, 2024 and July 30, 2023 included $53 million and $42 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 28, 2024	July 30, 2023	Change	July 28, 2024	July 30, 2023	Change
	(In millions)					
General and administrative	$ 222	$ 214	$ 8	$ 745	$ 635	$ 110

G&A expenses in the three and nine months ended July 28, 2024 increased compared to the same periods in the prior year primarily due to the increases in share-based compensation expense, labor costs and professional fees. G&A expenses during the three months ended July 28, 2024 and July 30, 2023 included $29 million and $17 million of share-based compensation expense, respectively. G&A expenses during the nine months ended July 28, 2024 and July 30, 2023 included $122 million and $58 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 28, 2024	**July 30, 2023**	**Change**	**July 28, 2024**	**July 30, 2023**	**Change**
			(In millions)			
Interest expense	$ 63	$ 60	$ 3	$ 181	$ 180	$ 1
Interest and other income (expense), net	$ 81	$ 64	$ 17	$ 617	$ 41	$ 576

Interest expense incurred was primarily associated with issued senior unsecured notes. Interest expense in the three and nine months ended July 28, 2024 remained relatively flat compared to the same periods in the prior year.

Interest and other income (expense), net in the three months ended July 28, 2024 increased compared to the same period in the prior year, primarily driven by higher cash balances and an increase in market rates resulting in higher interest income, offset by higher net loss and higher impairment on equity investments, compared to the prior year.

Interest and other income (expense), net in the nine months ended July 28, 2024 increased compared to the same period in the prior year, primarily driven by higher net gain and lower impairment on equity investments and higher interest income due to higher cash balances and an increase in market rates, compared to 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 28, 2024	**July 30, 2023**	**Change**	**July 28, 2024**	**July 30, 2023**	**Change**
			(In millions, except percentages)			
Provision for income taxes	$ 255	$ 246	$ 9	$ 811	$ 692	$ 119
Effective income tax rate	13.0 %	13.6 %	(0.6) points	13.0 %	12.5 %	0.5 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 2024 and 2023 were 13.0 percent and 13.6 percent, respectively. The effective tax rate for the third quarter of fiscal 2024 was lower than the same period in the prior fiscal year primarily due to larger excess tax benefits from share-based compensation in fiscal 2024.

Our effective tax rates for the first nine months of fiscal 2024 and 2023 were 13.0 percent and 12.5 percent, respectively. The effective tax rate for the first nine months of fiscal 2024 was higher than the same period in the prior fiscal year primarily due to lower tax credits in fiscal 2024, partially offset by larger excess tax benefits from share-based compensation in fiscal 2024.

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.

Effective in the first quarter of fiscal 2024, management began including share-based compensation expense in the evaluation of reportable segments' performance. Prior-year numbers have been recast to conform to the current-year presentation.

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 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 for AI and data center computing, personal computers, automotive electronics, storage, and other products, and the nature and timing of technological advances in fabrication processes, and as a result is subject to variable industry conditions. Spending can also depend on customer facility readiness and timeline for installation of capital equipment at customer sites. Development efforts are focused on solving customers' key technical challenges in transistor, interconnect, patterning and packaging performance.

Certain significant measures for the periods indicated were as follows:

	Three Months Ended				Nine Months Ended			
	July 28, 2024	July 30, 2023	Change		July 28, 2024	July 30, 2023	Change	
	(In millions, except percentages and ratios)							
Net revenue	$ 4,924	$ 4,676	$ 248	5 %	$ 14,734	$ 14,815	$ (81)	(1)%
Operating income	$ 1,712	$ 1,568	$ 144	9 %	$ 5,157	$ 5,138	$ 19	— %
Operating margin	34.8 %	33.5 %	1.3 points		35.0 %	34.7 %	0.3 points	

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

	Three Months Ended		Nine Months Ended	
	July 28, 2024	July 30, 2023	July 28, 2024	July 30, 2023
Foundry, logic and other	72 %	79 %	66 %	80 %
Dynamic random-access memory (DRAM)	24 %	17 %	30 %	14 %
Flash memory	4 %	4 %	4 %	6 %
	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 2024. Semiconductor Systems revenue increased for the three months and decreased for the nine months ended July 28, 2024 as compared to the same periods in the prior year. Foundry and logic customers' spending decreased in the three and nine months ended July 28, 2024 compared to the same periods in the prior year driven primarily by lower customer investments in leading-edge manufacturing technologies, partially offset by increased customer investments in mature manufacturing technologies. Memory customers' spending in the three and nine months ended July 28, 2024 was higher as compared to the same periods in the prior year primarily due to increased investments in DRAM technology transitions.

Operating margin for the three and nine months ended July 28, 2024 increased compared to the same periods in the prior year primarily driven by lower material, freight, logistics and manufacturing costs and lower depreciation expense as a result of changes in certain assets’ useful lives effective as of the beginning of fiscal 2024, partially offset by increased RD&E expenses.

Applied Global Services Segment

The Applied Global Services segment provides integrated solutions to optimize equipment and fab performance and productivity, including spares, upgrades, services, 200mm 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 28, 2024	July 30, 2023	Change		July 28, 2024	July 30, 2023	Change	
	(In millions, except percentages and ratios)							
Net revenue	$ 1,580	$ 1,464	$ 116	8 %	$ 4,586	$ 4,261	$ 325	8 %
Operating income	$ 467	$ 399	$ 68	17 %	$ 1,320	$ 1,128	$ 192	17 %
Operating margin	29.6 %	27.3 %	2.3 points		28.8 %	26.5 %	2.3 points	

Net revenue for the three and nine months ended July 28, 2024 increased compared to the same periods in the prior year primarily due to an increase in net revenue associated with long-term service agreements and customer spending on spares. The increase in net revenue for the three months ended July 28, 2024 was also partially offset by lower customer spending on 200mm generation equipment. Operating margin for the three and nine months ended July 28, 2024 increased compared to the same periods in the prior year primarily due to the increase in net revenue and favorable change in product mix.

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 28, 2024	July 30, 2023	Change		July 28, 2024	July 30, 2023	Change	
	(In millions, except percentages and ratios)							
Net revenue	$ 251	$ 235	$ 16	7 %	$ 674	$ 570	$ 104	18 %
Operating income	$ 16	$ 32	$ (16)	(50)%	$ 46	$ 51	$ (5)	(10)%
Operating margin	6.4 %	13.6 %		(7.2) points	6.8 %	8.9 %		(2.1) points

Net revenue for the three and nine months ended July 28, 2024 increased compared to the same periods in the prior year primarily due to higher customer investments in display manufacturing equipment for IT products including laptops, monitors and tablets, partially offset by lower customer investments in display manufacturing equipment for TVs and products in the mobile market. Operating margin for the three and nine months ended July 28, 2024 decreased compared to the same periods in the prior year primarily due to unfavorable changes in product mix.

Financial Condition, Liquidity and Capital Resources

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

	July 28, 2024	October 29, 2023
	(In millions)	
Cash and cash equivalents	$ 8,288	$ 6,132
Short-term investments	815	737
Long-term investments	2,981	2,281
Total cash, cash-equivalents and investments	$ 12,084	$ 9,150

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 28, 2024	July 30, 2023
	(In millions)	
Cash provided by operating activities	$ 6,102	$ 7,145
Cash used in investing activities	$ (1,256)	$ (1,046)
Cash used in financing activities	$ (2,701)	$ (2,066)

Operating Activities

Cash from operating activities for the nine months ended July 28, 2024 was $6.1 billion, which reflects net income adjusted for the effect of non-cash items and changes in working capital components. Significant non-cash items included depreciation, amortization, gain on investments, and share-based compensation. Cash provided by operating activities decreased in the first nine months of fiscal 2024 compared to the same period in the prior year primarily due to lower new billings for products and services for which there were unsatisfied performance obligations, lower collections of customer receivable balances and higher payments for income taxes, partially offset by lower 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 $395 million and $619 million of account receivables during the nine months ended July 28, 2024 and July 30, 2023, respectively. We did not discount letters of credit issued by customers or discount promissory notes during the nine months ended July 28, 2024 and July 30, 2023, respectively.

Our working capital was $13.4 billion as of July 28, 2024 and $11.8 billion as of October 29, 2023.

Days sales outstanding of our accounts receivable for the three months ended July 28, 2024 and July 30, 2023 were 67 days and 74 days, respectively. Days sales outstanding varies due to the timing of shipments and payment terms. The decrease in days sales outstanding was primarily due to favorable revenue linearity and lower accounts receivable balance as a result of the timing of customer payments.

Investing Activities

We used $1,256 million of cash in investing activities during the nine months ended July 28, 2024. Capital expenditures totaled $783 million and purchases of investments, net of proceeds from sales and maturities of investments were $473 million, during the nine months ended July 28, 2024.

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 $2.7 billion of cash in financing activities during the nine months ended July 28, 2024, consisting primarily of cash used for repurchases of common stock of $2.4 billion, dividends to stockholders of $863 million, tax withholding payments for vested equity awards of $258 million and net payments of principal on financing leases of $12 million, partially offset by net proceeds received from the issuance of senior unsecured notes of $694 million and proceeds received from common stock issuances of $119 million under our employee stock purchase plan.

In June 2024, March 2024 and December 2023, our Board of Directors declared quarterly cash dividends in the amount of $0.40, $0.40 and $0.32 per share, respectively. The dividend declared in June 2024 is payable in September 2024. 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 28, 2024, approximately $10.3 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. The Revolving Credit Agreement is scheduled to expire in February 2026, unless extended as permitted under the Revolving Credit Agreement. The Revolving Credit Agreement provides for borrowings in United States dollars that bear interest for each advance at one of two rates selected by us, plus an applicable margin, which varies according to our public debt credit ratings. The Revolving Credit Agreement includes financial and other covenants with which we were in compliance as of July 28, 2024.

Remaining credit facilities in the amount of approximately $52 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 28, 2024 and October 29, 2023.

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 28, 2024, we had commercial paper notes outstanding with an aggregate principal amount of $100 million. The proceeds from the issuances of commercial paper are used for general corporate purposes. The commercial paper is backstopped by the Revolving Credit Agreement and borrowings under the Revolving Credit Agreement reduce the amount of commercial paper notes we can issue.

In June 2024, we issued $700 million aggregate principal amount of 4.800% senior unsecured notes due 2029 in a registered public offering. The proceeds from the issuance of the senior unsecured notes are intended for general corporate purposes.

We had senior unsecured notes in the aggregate principal amount of $6.2 billion outstanding as of July 28, 2024. 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 28, 2024, the maximum potential amount of future payments that we could be required to make under these guarantee agreements was approximately $308 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 28, 2024, we have provided parent guarantees to banks for approximately $292 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 28, 2024, we had $459 million of total payments remaining, payable in installments in the next two years.

On August 9, 2022, the U.S. government enacted the U.S. CHIPS and Science Act (“CHIPS Act”). The CHIPS Act creates a 25% investment tax credit for certain investments in domestic semiconductor manufacturing. The credit is provided for qualifying property, which is placed in service after December 31, 2022, for which construction begins before January 1, 2027, and is treated as a government grant. We recognize this investment tax credit when there is reasonable assurance that we will qualify for the credit and the benefit will be received. Investments related to the 25% investment tax credit reduced our income taxes payable by $112 million as of July 28, 2024.

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 are allowed to claim a credit for the minimum tax paid against regular tax in future years. We are subject to the minimum tax in fiscal 2024 and expect to claim a credit for the minimum tax in future years.

Several countries where we do business have enacted global minimum tax regimes based on the Organization for Economic Cooperation and Development (“OECD”) Base Erosion and Profit Shifting Project. This will change various aspects of the existing framework under which our global tax obligations are determined and is expected to increase our tax liabilities beginning in fiscal 2025. The OECD continues to release additional guidance on this new global minimum tax framework. We will continue to monitor these developments, as each jurisdiction incorporates changes into its tax laws.

Our conditional reduced tax rates in Singapore will expire in fiscal 2025, excluding potential renewal and subject to certain conditions with which we expect to comply.

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 29, 2023.

Recent Accounting Pronouncements

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

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 29, 2023, 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 29, 2023.

Interest Rate Risk

Available-for-sale Debt Securities - The market value of our investments in available-for-sale securities was approximately $2.5 billion at July 28, 2024. An immediate hypothetical 100 basis point increase in interest rates would result in a decrease in the fair value of investments as of July 28, 2024 of approximately $33 million.

Debt - At July 28, 2024, the aggregate principal of long-term senior unsecured notes issued by us was $6.2 billion with an estimated fair value of $5.7 billion. A hypothetical decrease in interest rates of 100 basis points would result in an increase in the fair value of our long-term senior notes issuances of approximately $449 million at July 28, 2024. From time to time we use interest rate swaps or rate lock agreements to mitigate the potential impact of changes in benchmark interest rates on interest expense and cash flows.

Foreign Currency Risk

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

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

We use foreign currency forward and option contracts to hedge a portion of anticipated non-U.S. dollar denominated revenues and expenses expected to occur within the next 24 months. Gains and losses on these hedging contracts generally mitigate the effect of currency movements on our net revenue, 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 $141 million at July 28, 2024.

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 2024, 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 II, Item 1A of our most recent Form 10-Q. 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 we serve can be volatile and difficult to predict.

We are a supplier to the global semiconductor and display and related industries, which historically have been cyclical and are subject to volatility and sudden changes in customer demand. Factors that impact demand for our products and services include technology inflections and advances in fabrication processes, new and emerging technologies and market drivers, such as demand for high-bandwidth memory and other forms of advanced packaging and technologies related to artificial intelligence and data center computing, production capacity relative to demand for chips and display technologies, end-user demand, customers' capacity utilization, production volumes, access to affordable capital, business and consumer buying patterns and general economic and political conditions. Artificial intelligence is evolving rapidly and is a relatively new demand driver for semiconductors and semiconductor equipment, and it is difficult to accurately forecast such demand. Changes in demand can affect the timing and amounts of customer investments in technology and manufacturing equipment and can significantly impact our operating results. The amount and mix of our customers' capital equipment spending between different products and technologies can also significantly impact our operating results.

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

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

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

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

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

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

We maintain an investment portfolio that is subject to general credit, liquidity, market and interest rate risks. The risks to our investment portfolio may be exacerbated if financial market conditions deteriorate due to rising inflation, rising interest rates, bank failures or economic recession and, as a result, the value and liquidity of the investment portfolio and returns on pension assets, could be negatively impacted and lead to impairment charges. We also maintain cash balances in various bank accounts globally in order to fund normal operations. If any of these financial institutions become insolvent, it could limit our ability to access cash in the affected accounts, which could affect our ability to manage our operations.

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

We have product development, engineering, manufacturing, sales and other operations distributed throughout many countries, and some of our business activities are concentrated in certain geographic areas. Moreover, in the three-month period ended July 28, 2024, approximately 84% of our net revenue were to customers in regions outside the United States. As a result of the global nature of our operations, our business performance and results of operations may be adversely affected by a number of factors, including:

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

- performance of geographically diverse third-party providers, including certain engineering, software development, manufacturing, information technology and other functions;
- service interruptions from utilities, transportation, data hosting or telecommunications providers;
- impacts of natural disasters and extreme and chronic weather events on our operations and those of our customers and suppliers, which may be exacerbated by climate change;
- the increasing need for a mobile workforce and travel to different regions; and
- uncertainties with respect to economic growth rates in various countries, including for the manufacture and sale of semiconductors and displays in the developing economies of certain countries.

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

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

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

As a global business with customers, suppliers and operations in many countries around the world, from time to time we may receive inquiries from government authorities about transactions between us and certain foreign entities. For example, since 2022, we have received multiple subpoenas from government authorities requesting information relating to certain China customer shipments and export controls compliance, including from the U.S. Department of Justice, the U.S. Commerce Department Bureau of Industry and Security, and the U.S. Securities and Exchange Commission. We are cooperating fully with the U.S. government in these matters. We have continued to receive related subpoenas, as well as requests for information, and may in the future receive additional related subpoenas and requests for information from such or other government authorities. Any such inquiries are subject to uncertainties, and we cannot predict the outcome of these inquiries, or any other governmental inquires or proceedings that may occur. Any violation or alleged violation of law or regulations could result in significant legal costs or in legal proceedings in which we or our employees could be subjected to fines and penalties and could result in restrictions on our business and damage to our global brand and reputation, and could have a material and adverse impact on our business operations, financial condition and results of operations.

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

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

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

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

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

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

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

- global trade issues and changes in and uncertainties with respect to trade and export regulations, trade policies and sanctions, tariffs, international trade disputes, and new and changing regulations for exports of certain technologies to China, where a significant portion of our supply chain is located, and any retaliatory measures, that adversely impact us or our direct or sub-tier suppliers;
- political instability, social unrest, terrorism, acts of war or other geopolitical turmoil, such as the conflict in the Middle East, in locations where we or our customers or suppliers have manufacturing, research, engineering or other operations;
- regional or global health epidemics;
- the failure or inability to accurately forecast demand and obtain quality parts on a cost-effective basis;
- volatility in the availability and cost of parts, commodities, energy and shipping related to our products, including increased costs due to rising inflation or interest rates or other market conditions;
- difficulties or delays in obtaining required import or export licenses and approvals;
- shipment delays due to transportation interruptions or capacity constraints;
- a worldwide shortage of semiconductor components as a result of sharp increases in demand for semiconductor products in general;
- limited availability of feasible alternatives to per- and polyfluoroalkyl substances, which are found in parts, components, process chemicals and other materials supplied to us or used in the operations of our products;
- information technology or infrastructure failures within our operations or those of a third-party supplier or service provider, including failures caused by cybersecurity incidents; and
- impacts of natural disasters, extreme and chronic weather events (which may be exacerbated by climate change), or other events beyond our control (such as earthquakes, utility interruptions, tsunamis, hurricanes, typhoons, floods, storms or fires).

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

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

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

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

- the nature, timing and degree of visibility of changes in end-user demand for electronic products, including those related to fluctuations in consumer buying patterns tied to general economic conditions, seasonality or the introduction of new products, and the effects of these changes on customers' businesses and on demand for our products;
- increasing capital requirements for building and operating new fabrication plants and customers' ability to raise the necessary capital;
- trade, regulatory, tax or government incentives impacting the timing of customers' investment in new or expanded fabrication plants;
- differences in growth rates among the semiconductor, display and other industries in which we operate;
- the importance of establishing, improving and maintaining strong relationships with customers;

- the cost and complexity for customers to move from product design to volume manufacturing, which may slow the adoption rate of new manufacturing technology;
- the importance of reducing the total cost of manufacturing system ownership;
- the importance to customers of system reliability and productivity and the effect on demand for fabrication systems as a result of their increasing productivity, device yield and reliability;
- manufacturers' ability to reconfigure and re-use fabrication systems which can reduce demand for new equipment;
- the importance of developing products with sufficient differentiation to influence customers' purchasing decisions;
- requirements for shorter cycle times for the development, manufacture and installation of manufacturing equipment;
- price and performance trends for semiconductor devices and displays, and the impact on demand for such products;
- the importance of the availability of spare parts to maximize the time that customers' systems are available for production;
- government incentives for local suppliers and domestic semiconductor research, development and manufacturing capabilities;
- the increasing role for and complexity of software in our products; and
- the focus on reducing energy usage and improving the environmental impact and sustainability associated with manufacturing operations, and the availability of adequate and reliable sources of energy.

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

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

- the frequency and complexity of technology transitions and inflections, and our ability to timely and effectively anticipate and adapt to these changes;
- the cost of research and development due to many factors, including shrinking geometries, the use of new materials, new and more complex device structures, more applications and process steps, increasing chip design costs, and the cost and complexity of integrated manufacturing processes;
- the need to reduce product development time and meet technical challenges;
- the number of types and varieties of semiconductors and number of applications;
- the cost and complexity for semiconductor manufacturers to move more technically advanced capability and smaller geometries to volume manufacturing, and the impact on investment in capital equipment;
- semiconductor manufacturers' levels of capital expenditures and the allocation of capital investment to market segments that we do not serve, such as lithography, or segments where our products have lower relative market presence;
- delays in installation of manufacturing equipment delivered to customers;
- the importance of increasing market positions in segments with growing demand;
- semiconductor manufacturers' ability to reconfigure and re-use equipment, resulting in diminished need to purchase new equipment and services from us, and challenges in providing parts for reused equipment;
- shorter cycle times between order placements by customers and product shipment require greater reliance on forecasting of customer investment, which may lead to inventory write-offs and manufacturing inefficiencies that decrease gross margin;
- competitive factors that make it difficult to enhance position, including challenges in securing development-tool-of-record (DTOR) and production-tool-of-record (PTOR) positions with customers;
- consolidation in the semiconductor industry, including among semiconductor manufacturers and among manufacturing equipment suppliers;

- shifts in sourcing strategies by computer and electronics companies, and manufacturing processes for advanced circuit technologies, that impact the equipment requirements of our foundry customers;
- the concentration of new wafer starts in Korea and Taiwan, where our service penetration and service-revenue-per-wafer-start have been lower than in other regions;
- the increasing fragmentation of semiconductor markets, leading certain markets to become too small to support the cost of a new fabrication plant, while others require less technologically advanced products; and
- the growing importance of specialty markets (such as Internet of Things, communications, automotive, power and sensors) that use mature process technologies and have a low barrier to entry.

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

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

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

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

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

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

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

- identify and address technology inflections, market changes, competitor innovations, new applications, customer requirements and end-use demand in a timely and effective manner;

- develop new products and disruptive technologies, improve and develop new applications for existing products, and adapt products for use by customers in different applications and markets with varying technical requirements;
- complete major infrastructure projects on schedule and on budget, and realize the anticipated benefits of those projects;
- differentiate our products from those of competitors, meet customers' performance specifications (including those related to energy consumption and environmental impact more broadly), appropriately price products, and achieve market acceptance;
- maintain operating flexibility to enable responses to changing markets, applications and customer requirements;
- enhance our worldwide operations across our businesses to reduce cycle time, enable continuous quality improvement, reduce costs, and enhance design for manufacturability and serviceability;
- focus on product development and sales and marketing strategies that address customers' high value problems and strengthen customer relationships;
- effectively allocate resources between our existing products and markets, the development of new products, and expanding into new and adjacent markets;
- improve the productivity of capital invested in R&D activities;
- accurately forecast demand, work with suppliers and meet production schedules for our products;
- improve our manufacturing processes and achieve cost efficiencies across product offerings;
- adapt to changes in value offered by companies in different parts of the supply chain;
- qualify products for evaluation and volume manufacturing with our customers; and
- implement changes in our design engineering methodology to reduce material costs and cycle time, increase commonality of platforms and types of parts used in different systems, and improve product life cycle management.

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

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

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

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

- the need to comply with, or work to establish, industry standards and practices.

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

We are exposed to risks related to the use of artificial intelligence by us and our competitors.

We are increasingly incorporating artificial intelligence capabilities into the development of technologies and our business operations, and into our products and services. Artificial intelligence technology is complex and rapidly evolving, and may subject us to significant competitive, legal, regulatory, operational and other risks. The implementation of artificial intelligence can be costly and there is no guarantee that our use of artificial intelligence will enhance our technologies, benefit our business operations, or produce products and services that are preferred by our customers. Our competitors may be more successful in their artificial intelligence strategy and develop superior products and services with the aid of artificial intelligence technology. Additionally, artificial intelligence algorithms or training methodologies may be flawed, and datasets may contain irrelevant, insufficient or biased information, which can cause errors in outputs. This may give rise to legal liability, damage our reputation, and materially harm our business. The use of artificial intelligence in the development of our products and services could also cause loss of intellectual property, as well as subject us to risks related to intellectual property infringement or misappropriation, data privacy and cybersecurity. Additionally, artificial intelligence technology may also create ethical issues, which could impair market adoption of such technology and impair demand for our products and services. Furthermore, the United States and other countries may adopt laws and regulations related to artificial intelligence. Such laws and regulations could cause us to incur greater compliance costs and limit the use of artificial intelligence in the development of our products and services. Any failure or perceived failure by us to comply with such regulatory requirements could subject us to legal liabilities, damage our reputation, or otherwise have a material and adverse impact on our business.

Operational and Financial Risks

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

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

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

We are exposed to cybersecurity threats and incidents.

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

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

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

- inability to complete proposed transactions timely or at all due to the failure to obtain regulatory or other approvals, litigation or other disputes, and any ensuing obligation to pay a termination fee;
- diversion of management's attention and disruption of ongoing businesses;
- the failure to realize expected revenues, gross and operating margins, net income and other returns from acquired businesses;
- requirements imposed by government regulators in connection with their review of a transaction, which may include, among other things, divestitures and restrictions on the conduct of our existing business or the acquired business;
- following completion of acquisitions, ineffective integration of businesses, operations, systems, digital and physical security, technologies, products, employees, compliance programs, changes in laws or regulations, including tax laws, or other factors, may impact the ability to realize anticipated synergies or other benefits;
- failure to commercialize technologies from acquired businesses or developed through strategic investments;
- dependence on unfamiliar supply chains or relatively small supply partners;

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

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

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

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

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

We operate in jurisdictions with complex and changing tax laws.

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

There have been a number of proposed changes in the tax laws that, if enacted, would increase our tax liability. While it is too early to predict the outcome of these proposals, if enacted, they could have a material impact on our provision for income taxes and effective tax rate. An increase in our provision for income taxes and effective tax rate could, in turn, have a material and adverse impact on our results of operations and financial condition. For example, several countries where we do business have enacted global minimum tax regimes based on the Organization for Economic Cooperation and Development ("OECD") Base Erosion and Profit Shifting Project. This will change various aspects of the existing framework under which our global tax obligations are determined, and will unfavorably impact our existing tax incentives and effective tax rate, beginning in fiscal 2025. The OECD continues to release additional guidance on this new global minimum tax framework. We will continue to monitor these developments, as each jurisdiction incorporates changes into its tax laws.

Our conditional reduced tax rates in Singapore will expire in fiscal 2025, excluding potential renewal and subject to certain conditions with which we expect to comply. There is risk our conditional reduced tax rates may not be renewed.

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

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

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

We have $6.2 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 28, 2024, we may borrow amounts in the future under this credit facility or enter into new financing arrangements. Our ability to satisfy our debt obligations is dependent upon the results of our business operations and subject to other risks discussed in this section. If we fail to satisfy our debt obligations, or comply with financial and other debt covenants, we may be in default and any borrowings may become immediately due and payable, and such default may constitute a default under our other obligations. There can be no assurance that we would have sufficient financial resources or be able to arrange financing to repay any borrowings at such time. Significant changes in our credit rating, disruptions in the global financial markets, or incurrence of new or refinancing of existing indebtedness at higher interest rates could have a material and adverse impact on our access to and cost of capital for future financings, and financial condition.

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

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

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

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

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

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

Legal, Compliance, and Other Risks

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

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

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

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

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

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

We periodically communicate our strategies and targets related to sustainability, greenhouse gas emissions, diversity and inclusion, human rights, and other environmental, social and governance matters. These strategies and targets, and their underlying assumptions and projections, reflect our current plans and aspirations, and we may be unable to achieve them. Changing customer and shareholder sustainability expectations and regulatory requirements, as well as our sustainability targets, could cause us to incur substantial expense and alter our manufacturing, operations or equipment designs and processes.

Any failure or perceived failure to timely meet these sustainability requirements, expectations or targets, or a failure to realize the anticipated benefits of planned investments and technology innovations related to sustainability, could adversely impact the demand for our products and subject us to significant costs and liabilities and reputational risks that could in turn adversely affect our business, financial condition and results of operations. In addition, standards and processes for measuring and reporting greenhouse gas emissions and other sustainability metrics may change over time, and may result in inconsistent data, or could result in significant revisions to our strategies and targets, or our ability to achieve them. Any scrutiny of our greenhouse gas emissions or other sustainability disclosures, our failure to achieve related strategies and targets, or our failure to disclose our sustainability measures consistent with applicable laws and regulations or to the satisfaction of our stakeholders could negatively impact our reputation or performance.

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

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

Item 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 28, 2024, approximately $10.3 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					
(April 29, 2024 to May 26, 2024)	1.2	$ 211.24	$ 262	1.2	$ 10,928
Month #2					
(May 27, 2024 to June 23, 2024)	1.0	$ 228.28	222	1.0	$ 10,706
Month #3					
(June 24, 2024 to July 28, 2024)	1.7	$ 228.20	384	1.7	$ 10,322
Total	3.9	$ 222.82	$ 868	3.9	

* 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 28, 2024, 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
4.1	Indenture, dated as of June 11, 2024, by and between Applied Materials, Inc. and The Bank of New York Mellon Trust Company, N.A.	8-K	000-06920	4.1	06/11/2024
4.2	Supplemental Indenture, dated as of June 11, 2024, by and between Applied Materials, Inc. and The Bank of New York Mellon Trust Company, N.A.	8-K	000-06920	4.2	06/11/2024
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.

		APPLIED MATERIALS, INC.
August 22, 2024	By:	/s/ BRICE HILL
		Brice Hill *Senior Vice President, Chief Financial Officer* *(Principal Financial Officer)*
August 22, 2024	By:	/s/ ADAM SANDERS
		Adam Sanders *Vice President,* *Corporate Controller and* *Chief Accounting Officer* *(Principal Accounting Officer)*

EXHIBIT 31.1

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 22, 2024

/s/ GARY E. DICKERSON

Gary E. Dickerson
President, Chief Executive Officer

EXHIBIT 31.2

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 22, 2024

/s/ BRICE HILL

Brice Hill
Senior Vice President, Chief Financial Officer

EXHIBIT 32.1

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 28, 2024, 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 28, 2024 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 28, 2024 fairly presents, in all material respects, the financial condition and results of operations of Applied Materials, Inc. for the periods presented therein.

Date: August 22, 2024

/s/ GARY E. DICKERSON

Gary E. Dickerson
President, Chief Executive Officer

EXHIBIT 32.2

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 28, 2024, 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 28, 2024 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 28, 2024 fairly presents, in all material respects, the financial condition and results of operations of Applied Materials, Inc. for the periods presented therein.

Date: August 22, 2024

/s/ BRICE HILL

Brice Hill

Senior Vice President, Chief Financial Officer