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 May 1, 2022

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)

(408) 727-5555
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

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

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

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

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

Large accelerated filer	☑	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 May 1, 2022: 869,947,277

APPLIED MATERIALS, INC.

FORM 10-Q FOR THE QUARTERLY PERIOD ENDED MAY 1, 2022

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		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(Unaudited)			
Net sales	$ 6,245	$ 5,582	$ 12,516	$ 10,744
Cost of products sold	3,318	2,929	6,630	5,742
Gross profit	2,927	2,653	5,886	5,002
Operating expenses:				
Research, development and engineering	686	617	1,340	1,223
Marketing and selling	173	148	340	295
General and administrative	174	149	340	310
Severance and related charges	—	6	(4)	158
Deal termination fee	—	154	—	154
Total operating expenses	1,033	1,074	2,016	2,140
Income from operations	1,894	1,579	3,870	2,862
Interest expense	58	61	115	122
Interest and other income, net	28	27	34	45
Income before income taxes	1,864	1,545	3,789	2,785
Provision for income taxes	328	215	461	325
Net income	$ 1,536	$ 1,330	$ 3,328	$ 2,460
Earnings per share:				
Basic	$ 1.75	$ 1.45	$ 3.77	$ 2.68
Diluted	$ 1.74	$ 1.43	$ 3.74	$ 2.66
Weighted average number of shares:				
Basic	878	918	883	917
Diluted	883	927	890	926

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC.

CONSOLIDATED CONDENSED STATEMENTS OF COMPREHENSIVE INCOME

(In millions)

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(Unaudited)			
Net income	$ 1,536	$ 1,330	$ 3,328	$ 2,460
Other comprehensive income (loss), net of tax:				
Change in unrealized gain (loss) on available-for-sale investments	(33)	(8)	(48)	(10)
Change in unrealized net loss on derivative instruments	36	15	33	19
Other comprehensive income (loss), net of tax	3	7	(15)	9
Comprehensive income	$ 1,539	$ 1,337	$ 3,313	$ 2,469

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC.

CONSOLIDATED CONDENSED BALANCE SHEETS
(In millions)

	May 1, 2022	October 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 3,331	$ 4,995
Short-term investments	591	464
Accounts receivable, net	4,883	4,953
Inventories	5,009	4,309
Other current assets	1,430	1,386
Total current assets	15,244	16,107
Long-term investments	2,102	2,055
Property, plant and equipment, net	2,071	1,934
Goodwill	3,479	3,479
Purchased technology and other intangible assets, net	85	104
Deferred income taxes and other assets	2,478	2,146
Total assets	$ 25,459	$ 25,825
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 4,060	$ 4,268
Contract liabilities	2,590	2,076
Total current liabilities	6,650	6,344
Long-term debt	5,455	5,452
Income taxes payable	962	1,090
Other liabilities	813	692
Total liabilities	13,880	13,578
Stockholders' equity:		
Common stock	9	9
Additional paid-in capital	8,306	8,247
Retained earnings	35,137	32,246
Treasury stock	(31,598)	(27,995)
Accumulated other comprehensive loss	(275)	(260)
Total stockholders' equity	11,579	12,247
Total liabilities and stockholders' equity	$ 25,459	$ 25,825

Amounts as of May 1, 2022 are unaudited. Amounts as of October 31, 2021 are derived from the October 31, 2021 audited consolidated financial statements.

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC

CONSOLIDATED CONDENSED STATEMENTS OF STOCKHOLDERS' EQUITY

(In millions)

Three Months Ended May 1, 2022	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 January 30, 2022	883	$ 9	$ 8,130	$ 33,827	1,131	$ (29,798)	$ (278)	$ 11,890
Net income	—	—	—	1,536	—	—	—	1,536
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	3	3
Dividends declared ($0.26 per common share)	—	—	—	(226)	—	—	—	(226)
Share-based compensation	—	—	101	—	—	—	—	101
Issuance under stock plans	1	—	75	—	—	—	—	75
Common stock repurchases	(15)	—	—	—	15	(1,800)	—	(1,800)
Balance as of May 1, 2022	869	$ 9	$ 8,306	$ 35,137	1,146	$ (31,598)	$ (275)	$ 11,579

Six Months Ended May 1, 2022	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 31, 2021	892	$ 9	$ 8,247	$ 32,246	1,119	$ (27,995)	$ (260)	$ 12,247
Net income	—	—	—	3,328	—	—	—	3,328
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	(15)	(15)
Dividends declared ($0.50 per common share)	—	—	—	(437)	—	—	—	(437)
Share-based compensation	—	—	219	—	—	—	—	219
Issuance under stock plans	4	—	(160)	—	—	—	—	(160)
Common stock repurchases	(27)	—	—	—	27	(3,603)	—	(3,603)
Balance as of May 1, 2022	869	$ 9	$ 8,306	$ 35,137	1,146	$ (31,598)	$ (275)	$ 11,579

APPLIED MATERIALS, INC

CONSOLIDATED CONDENSED STATEMENTS OF STOCKHOLDERS’ EQUITY

(In millions)

	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
Three Months Ended May 2, 2021	**Shares**	**Amount**			**Shares**	**Amount**		
				(Unaudited)				
Balance as of January 31, 2021	918	$ 9	$ 7,869	$ 28,137	1,091	$ (24,245)	$ (297)	$ 11,473
Net income	—	—	—	1,330	—	—	—	1,330
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	7	7
Dividends declared ($0.24 per common share)	—	—	—	(220)	—	—	—	(220)
Share-based compensation	—	—	84	—	—	—	—	84
Issuance under stock plans	2	—	69	—	—	—	—	69
Common stock repurchases	(6)	—	—	—	6	(750)	—	(750)
Balance as of May 2, 2021	914	$ 9	$ 8,022	$ 29,247	1,097	$ (24,995)	$ (290)	$ 11,993

	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
Six Months Ended May 2, 2021	**Shares**	**Amount**			**Shares**	**Amount**		
				(Unaudited)				
Balance as of October 25, 2020	914	$ 9	$ 7,904	$ 27,209	1,091	$ (24,245)	$ (299)	$ 10,578
Net income	—	—	—	2,460	—	—	—	2,460
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	9	9
Dividends declared ($0.46 per common share)	—	—	—	(422)	—	—	—	(422)
Share-based compensation	—	—	191	—	—	—	—	191
Issuance under stock plans	6	—	(73)	—	—	—	—	(73)
Common stock repurchases	(6)	—	—	—	6	(750)	—	(750)
Balance as of May 2, 2021	914	$ 9	$ 8,022	$ 29,247	1,097	$ (24,995)	$ (290)	$ 11,993

See accompanying Notes to Consolidated Condensed Financial Statements.

APPLIED MATERIALS, INC.

CONSOLIDATED CONDENSED STATEMENTS OF CASH FLOWS
(In millions)

	Six Months Ended	
	May 1, 2022	May 2, 2021
	(Unaudited)	
Cash flows from operating activities:		
Net income	$ 3,328	$ 2,460
Adjustments required to reconcile net income to cash provided by operating activities:		
Depreciation and amortization	213	191
Severance and related charges	(4)	149
Share-based compensation	219	191
Deferred income taxes	(256)	24
Other	(8)	(15)
Changes in operating assets and liabilities:		
Accounts receivable	70	(411)
Inventories	(700)	(149)
Other current and non-current assets	(30)	3
Accounts payable and accrued expenses	(140)	(155)
Contract liabilities	514	385
Income taxes payable	(167)	(90)
Other liabilities	34	25
Cash provided by operating activities	3,073	2,608
Cash flows from investing activities:		
Capital expenditures	(354)	(325)
Cash paid for acquisitions, net of cash acquired	—	(12)
Proceeds from sales and maturities of investments	639	624
Purchases of investments	(836)	(722)
Cash used in investing activities	(551)	(435)
Cash flows from financing activities:		
Proceeds from common stock issuances	96	86
Common stock repurchases	(3,603)	(750)
Tax withholding payments for vested equity awards	(256)	(159)
Payments of dividends to stockholders	(425)	(403)
Cash used in financing activities	(4,188)	(1,226)
Increase (decrease) in cash, cash equivalents and restricted cash equivalents	(1,666)	947
Cash, cash equivalents and restricted cash equivalents — beginning of period	5,101	5,466
Cash, cash equivalents and restricted cash equivalents — end of period	$ 3,435	$ 6,413
Reconciliation of cash, cash equivalents, and restricted cash equivalents		
Cash and cash equivalents	$ 3,331	$ 6,305
Restricted cash equivalents included in deferred income taxes and other assets	104	108
Total cash, cash equivalents, and restricted cash equivalents	$ 3,435	$ 6,413
Supplemental cash flow information:		
Cash payments for income taxes	$ 1,031	$ 409
Cash refunds from income taxes	$ 128	$ 23
Cash payments for interest	$ 102	$ 103

See accompanying Notes to Consolidated Condensed Financial Statements.

Note 1 Basis of Presentation

Basis of Presentation

In the opinion of management, the unaudited interim consolidated condensed financial statements of Applied Materials, Inc. and its subsidiaries (Applied or the Company) included herein have been prepared on a basis consistent with the October 31, 2021 audited consolidated financial statements and include all material adjustments, consisting of normal recurring adjustments, necessary to fairly present 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 Applied's Annual Report on Form 10-K for the fiscal year ended October 31, 2021 (2021 Form 10-K). Applied's results of operations for the three and six months ended May 1, 2022 are not necessarily indicative of future operating results. Applied's fiscal year ends on the last Sunday in October of each year. Fiscal 2022 and 2021 contain 52 weeks and 53 weeks, respectively, and the first six months of fiscal 2022 and 2021 contained 26 and 27 weeks, respectively.

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, Applied evaluates its estimates, including those related to standalone selling price (SSP) related to revenue recognition, accounts receivable and sales allowances, fair values of financial instruments, inventories, intangible assets and goodwill, useful lives of intangible assets and property and equipment, fair values of share-based awards, and income taxes, among others. Applied bases its 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.

As of May 1, 2022, the COVID-19 pandemic and worldwide response remains fluid. As a result, many of Applied's estimates and assumptions are subject to increased judgment and volatility. These estimates may differ materially in future periods as the pandemic continues to evolve and additional information becomes available.

Revenue Recognition from Contracts with Customers

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

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

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

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

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

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

The incremental costs to obtain a contract are not material.

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

Recent Accounting Pronouncements

Accounting Standards Adopted

Simplifying the Accounting for Income Taxes. In December 2019, the Financial Accounting Standard Board (FASB) issued an accounting standard update to simplify the accounting for income taxes (Topic 740). This amendment removes certain exceptions and improves consistent application of accounting principles for certain areas in Topic 740. Applied adopted this authoritative guidance in the first quarter of fiscal 2022. The adoption of this guidance did not have a significant impact on Applied's consolidated condensed financial statements.

Accounting Standards Not Yet Adopted

Contract Assets and Contract Liabilities from Revenue Contracts with Customers in a Business Combination. In October 2021, the FASB issued an accounting standard update to improve the accounting for contract assets and contract liabilities from revenue contracts with customers in a business combination (Topic 805). This amendment improves comparability for both the recognition and measurement of acquired revenue contracts with customers at the date of and after a business combination. This authoritative guidance will be effective for Applied in the first quarter of fiscal 2024, with early adoption permitted. Applied is currently evaluating the effect of this new guidance on Applied's 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. Applied's net income has not been adjusted for any period presented for purposes of computing basic or diluted earnings per share due to the Company's non-complex capital structure.

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions, except per share amounts)			
Numerator:				
Net income	$ 1,536	$ 1,330	$ 3,328	$ 2,460
Denominator:				
Weighted average common shares outstanding	878	918	883	917
Effect of weighted dilutive restricted stock units and employee stock purchase plan shares	5	9	7	9
Denominator for diluted earnings per share	883	927	890	926
Basic earnings per share	$ 1.75	$ 1.45	$ 3.77	$ 2.68
Diluted earnings per share	$ 1.74	$ 1.43	$ 3.74	$ 2.66
Potentially weighted dilutive securities	3	—	—	—

Potentially weighted dilutive securities attributable to outstanding restricted stock units are excluded from the calculation of diluted earnings per share where the combined exercise price and average unamortized fair value are greater than the average market price of Applied 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 Applied's cash, cash equivalents and investments by security type:

May 1, 2022	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
		(In millions)		
Cash	$ 1,242	$ —	$ —	$ 1,242
Cash equivalents:				
Money market funds	1,812	—	—	1,812
U.S. Treasury and agency securities	124	—	—	124
Non-U.S. government securities*	40	—	—	40
Municipal securities	23	—	—	23
Commercial paper, corporate bonds and medium-term notes	90	—	—	90
Total Cash equivalents	2,089	—	—	2,089
Total Cash and Cash equivalents	$ 3,331	$ —	$ —	$ 3,331
Short-term and long-term investments:				
U.S. Treasury and agency securities	$ 357	$ —	$ 8	$ 349
Non-U.S. government securities*	7	—	—	7
Municipal securities	378	—	10	368
Commercial paper, corporate bonds and medium-term notes	718	—	14	704
Asset-backed and mortgage-backed securities	476	—	12	464
Total fixed income securities	1,936	—	44	1,892
Publicly traded equity securities	86	77	7	156
Equity investments in privately-held companies	580	79	14	645
Total equity investments	666	156	21	801
Total short-term and long-term investments	$ 2,602	$ 156	$ 65	$ 2,693
Total Cash, Cash equivalents and Investments	$ 5,933	$ 156	$ 65	$ 6,024

* Includes Canadian provincial government debt.

October 31, 2021	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(In millions)			
Cash	$ 1,407	$ —	$ —	$ 1,407
Cash equivalents:				
Money market funds	3,556	—	—	3,556
Municipal securities	22	—	—	22
Commercial paper, corporate bonds and medium-term notes	10	—	—	10
Total Cash equivalents	3,588	—	—	3,588
Total Cash and Cash equivalents	$ 4,995	$ —	$ —	$ 4,995
Short-term and long-term investments:				
U.S. Treasury and agency securities	$ 314	$ —	$ —	$ 314
Non-U.S. government securities*	5	—	—	5
Municipal securities	367	3	1	369
Commercial paper, corporate bonds and medium-term notes	587	2	2	587
Asset-backed and mortgage-backed securities	555	3	1	557
Total fixed income securities	1,828	8	4	1,832
Publicly traded equity securities	22	39	3	58
Equity investments in privately-held companies	561	82	14	629
Total equity investments	583	121	17	687
Total short-term and long-term investments	$ 2,411	$ 129	$ 21	$ 2,519
Total Cash, Cash equivalents and Investments	$ 7,406	$ 129	$ 21	$ 7,514

*Includes Canadian provincial government debt.

Maturities of Investments

The following table summarizes the contractual maturities of Applied’s investments as of May 1, 2022:

	Cost	Estimated Fair Value
	(In millions)	
Due in one year or less	$ 560	$ 558
Due after one through five years	898	868
Due after five years	2	2
No single maturity date**	1,142	1,265
Total	$ 2,602	$ 2,693

** 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 six months ended May 1, 2022 and May 2, 2021 gross realized gains and losses on investments were not material.

As of May 1, 2022, and October 31, 2021, gross unrealized losses related to Applied’s debt investment portfolio were not material. Applied regularly reviews its debt investment 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 Applied 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, net. Any additional changes in fair value that are not related to credit losses are recognized in accumulated other comprehensive income.

During the three and six months ended May 1, 2022 and May 2, 2021, Applied did not recognize significant credit losses and the ending allowance for credit losses was not material on its debt investment portfolio. Impairment charges on equity investments in privately-held companies during the three and six months ended May 1, 2022 and May 2, 2021 were not material. These impairment charges are included in interest and other income, net in the Consolidated Condensed Statement of Operations.

The components of gain (loss) on equity investments for the three and six months ended May 1, 2022 and May 2, 2021 were as follows:

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions)			
Publicly traded equity securities				
Unrealized gain	$ 17	$ 3	$ 18	$ 11
Unrealized loss	(2)	(2)	(10)	(2)
Realized gain on sales	—	—	2	—
Equity investments in privately-held companies				
Unrealized gain	13	30	25	31
Unrealized loss	—	(5)	—	(8)
Realized gain on sales	2	1	2	3
Realized loss on sales or impairment	—	(7)	(4)	(7)
Total gain (loss) on equity investments, net	$ 30	$ 20	$ 33	$ 28

Note 4 Fair Value Measurements

Applied's 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. Applied's 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

Applied uses 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.

Applied's 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, Applied uses 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, Applied generally obtains non-binding price quotes from brokers. Applied then reviews the information provided by the pricing services or brokers to determine the fair value of its short-term and long-term investments. In addition, to validate pricing information obtained from pricing services, Applied periodically performs supplemental analysis on a sample of securities. Applied reviews any significant unanticipated differences identified through this analysis to determine the appropriate fair value. As of May 1, 2022, substantially all of Applied's available-for-sale, short-term and long-term investments were recognized at fair value that was determined based upon observable inputs.

Applied's 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:

	May 1, 2022			October 31, 2021		
	Level 1	Level 2	Total	Level 1	Level 2	Total
	(In millions)					
Assets:						
Available-for-sale debt security investments						
Money market funds*	$ 1,916	$ —	$ 1,916	$ 3,662	$ —	$ 3,662
U.S. Treasury and agency securities	356	117	473	296	18	314
Non-U.S. government securities	—	47	47	—	5	5
Municipal securities	—	391	391	—	391	391
Commercial paper, corporate bonds and medium-term notes	—	794	794	—	597	597
Asset-backed and mortgage-backed securities	—	464	464	—	557	557
Total available-for-sale debt security investments	$ 2,272	$ 1,813	$ 4,085	$ 3,958	$ 1,568	$ 5,526
Equity investments with readily determinable values						
Publicly traded equity securities	$ 156	$ —	$ 156	$ 58	$ —	$ 58
Total equity investments with readily determinable values	$ 156	$ —	$ 156	$ 58	$ —	$ 58
Total	$ 2,428	$ 1,813	$ 4,241	$ 4,016	$ 1,568	$ 5,584

* Amounts as of May 1, 2022 and October 31, 2021, include $104 million and $106 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.

Applied did not have any financial assets measured at fair value on a recurring basis within Level 3 fair value measurements as of May 1, 2022 or October 31, 2021.

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

Applied’s equity investments without readily determinable values consist of equity investments in privately-held companies. Applied elected the measurement alternative, defined as cost, less impairments, adjusted for subsequent observable price changes on a prospective basis for certain equity investments without readily determinable fair values and is required to account for any subsequent observable changes in fair value within the statements of operations. These investments are classified as Level 3 within the fair value hierarchy and periodically assessed for impairment when an event or circumstance indicates that a decline in value may have occurred. Impairment charges on equity investments in privately-held companies during the three and six months ended May 1, 2022 and May 2, 2021 were not material.

Other

The carrying amounts of Applied’s financial instruments, including cash and cash equivalents, restricted cash equivalents, accounts receivable, notes payable - short term, and accounts payable and accrued expenses, approximate fair value due to their short maturities. As of May 1, 2022, the aggregate principal amount of long-term senior unsecured notes was $5.5 billion and the estimated fair value was $5.4 billion. As of October 31, 2021, the aggregate principal amount of long-term senior unsecured notes was $5.5 billion and the estimated fair value was $6.4 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

Applied conducts 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. Applied uses 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 Applied's 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.

Applied does not use derivative financial instruments for trading or speculative purposes. Derivative instruments and hedging activities, including foreign currency 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 Applied's 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 May 1, 2022 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, Applied promptly recognizes 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 six months ended May 1, 2022 and May 2, 2021.

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

As of May 1, 2022 and October 31, 2021, the total outstanding notional amount of foreign exchange contracts was $3.1 billion and $2.1 billion, respectively. The fair values of foreign exchange derivative instruments as of May 1, 2022 and October 31, 2021 were not material.

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

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions)			
Derivatives in Cash Flow Hedging Relationships:				
Foreign exchange contracts	$ 54	$ 14	$ 59	$ 15
Total	$ 54	$ 14	$ 59	$ 15

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

	Three Months Ended					
	May 1, 2022			May 2, 2021		
		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	$ 6,245	$ 14	$ —	$ 5,582	$ (1)	$ —
Cost of products sold	$ 3,318	(1)	—	$ 2,929	(2)	—
Research, development and engineering	$ 686	(1)	(1)	$ 617	1	—
Marketing and selling	$ 173	(1)	—	$ 148	—	—
Interest Rate Contracts:						
Interest expense	$ 58	(3)	—	$ 61	(3)	—
		$ 8	$ (1)		$ (5)	$ —

	Six Months Ended					
	May 1, 2022			May 2, 2021		
		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	$ 12,516	$ 27	$ —	$ 10,744	$ (5)	$ —
Cost of products sold	$ 6,630	(3)	—	$ 5,742	—	(1)
Research, development and engineering	$ 1,340	—	(1)	$ 1,223	2	—
Marketing and selling	$ 340	(1)	—	$ 295	—	—
Interest Rate Contracts:						
Interest expense	$ 115	(6)	—	$ 122	(6)	—
		$ 17	$ (1)		$ (9)	$ (1)

	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		Six Months Ended	
		May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
		(In millions)			
Derivatives Not Designated as Hedging Instruments					
Foreign exchange contracts	Interest and other income, net	$ 20	$ 16	$ 20	$ 16
Total return swaps - deferred compensation	Cost of products sold	(1)	1	(2)	2
Total return swaps - deferred compensation	Operating expenses	(12)	11	(19)	18
Total		$ 7	$ 28	$ (1)	$ 36

Credit Risk Contingent Features

If Applied's credit rating were to fall below investment grade, it 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 May 1, 2022.

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

Note 6 Accounts Receivable, Net

Applied has agreements with various financial institutions to sell accounts receivable and discount promissory notes from selected customers. Applied sells its accounts receivable generally without recourse. Applied, from time to time, also discounts 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.

Applied sold $365 million and $570 million of account receivables during the three and six months ended May 1, 2022, respectively. Applied sold $302 million and $671 million of account receivables during the three and six months ended May 2, 2021, respectively. Applied did not discount letters of credit issued by customers or discount promissory notes during the three and six months ended May 1, 2022 and May 2, 2021. 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 May 1, 2022 and as of October 31, 2021. Applied sells its products principally to manufacturers within the semiconductor and display industries. While Applied believes that its allowance for credit losses is adequate and represents its best estimate as of May 1, 2022, it continues to closely monitor customer liquidity and industry and economic conditions, which may result in changes to Applied's estimates.

Note 7 Contract Balances

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. Applied's 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:

	May 1, 2022	October 31, 2021
	(In millions)	
Contract assets	$ 173	$ 201
Contract liabilities	$ 2,590	$ 2,076

The decrease in contract assets during the six months ended May 1, 2022 was primarily due to a reduction in goods transferred to customers where payment was conditional upon technical sign off.

During the six months ended May 1, 2022, Applied recognized revenue of approximately $1.5 billion related to contract liabilities at October 31, 2021. Contract liabilities increased during the six month ended May 1, 2022 due to new billings for products and services for which there were unsatisfied performance obligations to customers and revenue had not yet been recognized as of May 1, 2022, partially offset by revenue recognized related to contract liabilities at October 31, 2021.

There were no credit losses recognized on Applied's accounts receivables and contract assets during both the three and six months ended May 1, 2022 and May 2, 2021.

As of May 1, 2022, the amount of remaining unsatisfied performance obligations on contracts with an original estimated duration of one year or more was approximately $1.8 billion, of which approximately 39% is expected to be recognized within 12 months and the remainder is expected to be recognized within the following 24 months thereafter.

Applied has 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

	May 1, 2022	October 31, 2021
	(In millions)	
Inventories		
Customer service spares	$ 1,288	$ 1,251
Raw materials	1,585	1,136
Work-in-process	1,019	873
Finished goods	1,117	1,049
	$ 5,009	$ 4,309

Included in finished goods inventory are $14 million as of May 1, 2022, and $58 million as of October 31, 2021, of newly-introduced systems at customer locations where the sales transaction did not meet Applied's revenue recognition criteria as set forth in Note 1. Finished goods inventory includes $389 million and $380 million of evaluation inventory as of May 1, 2022 and October 31, 2021, respectively.

	May 1, 2022	October 31, 2021
	(In millions)	
Other Current Assets		
Prepaid income taxes and income taxes receivable	$ 633	$ 593
Prepaid expenses and other	797	793
	$ 1,430	$ 1,386

	Useful Life	May 1, 2022	October 31, 2021
	(In years)	(In millions)	
Property, Plant and Equipment, Net			
Land and improvements		$ 381	$ 334
Buildings and improvements	3-30	1,963	1,780
Demonstration and manufacturing equipment	3-5	1,958	1,820
Furniture, fixtures and other equipment	3-5	708	720
Construction in progress		271	326
Gross property, plant and equipment		5,281	4,980
Accumulated depreciation		(3,210)	(3,046)
		$ 2,071	$ 1,934

	May 1, 2022	October 31, 2021
	(In millions)	
Deferred Income Taxes and Other Assets		
Non-current deferred income taxes	$ 1,498	$ 1,623
Operating lease right-of-use assets	392	294
Income tax receivables and other assets	588	229
	$ 2,478	$ 2,146

	May 1, 2022	October 31, 2021
	(In millions)	
Accounts Payable and Accrued Expenses		
Accounts payable	$ 1,558	$ 1,472
Compensation and employee benefits	599	924
Warranty	262	242
Dividends payable	226	214
Income taxes payable	695	734
Other accrued taxes	20	24
Interest payable	39	39
Operating lease liabilities, current	82	73
Other	579	546
	$ 4,060	$ 4,268

	May 1, 2022	October 31, 2021
	(In millions)	
Other Liabilities		
Defined and postretirement benefit plans	$ 178	$ 193
Operating lease liabilities, non-current	313	228
Other	322	271
	$ 813	$ 692

Note 9 Goodwill, Purchased Technology and Other Intangible Assets

Goodwill and Purchased Intangible Assets

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

Goodwill 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 whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. The process of evaluating the potential impairment of goodwill and intangible assets requires significant judgment, especially in emerging markets. When reviewing goodwill for impairment, Applied first performs a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value.

In performing a qualitative assessment, Applied considers business conditions and other factors including, but not limited to (i) adverse industry or economic trends, (ii) restructuring actions and lower projections that may impact future operating results, (iii) sustained decline in share price, and (iv) overall financial performance and other events affecting the reporting units. If Applied concludes that is more likely than not that the fair value of a reporting unit is less than its carrying amount, then a quantitative impairment test is performed by estimating the fair value of the reporting unit and comparing it to its carrying value. If the carrying value of a reporting unit exceeds its fair value, Applied would record an impairment charge equal to the excess of the carrying value of the reporting unit's goodwill over its fair value.

As of May 1, 2022, Applied's reporting units include Semiconductor Products Group and Imaging and Process Control Group, which combine to form the Semiconductor Systems reporting segment, Applied Global Services, Display and Adjacent Markets and other reporting units recorded under Corporate and Other.

Details of goodwill as of May 1, 2022 and October 31, 2021 were as follows:

	May 1, 2022	October 31, 2021
	(In millions)	
Semiconductor Systems	$ 2,207	$ 2,207
Applied Global Services	1,032	1,032
Display and Adjacent Markets	199	199
Corporate and Other	41	41
Carrying amount	$ 3,479	$ 3,479

A summary of Applied's purchased technology and intangible assets is set forth below:

	May 1, 2022	October 31, 2021
	(In millions)	
Purchased technology, net	$ 33	$ 46
Intangible assets - finite-lived, net	52	58
Total	$ 85	$ 104

Finite-Lived Purchased Intangible Assets

Applied amortizes purchased intangible assets with finite lives using the straight-line method over the estimated economic lives of the assets, ranging from 1 to 15 years.

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

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

Details of finite-lived intangible assets were as follows:

	May 1, 2022			October 31, 2021		
	Purchased Technology	Other Intangible Assets	Total	Purchased Technology	Other Intangible Assets	Total
	(In millions)					
Gross carrying amount:						
Semiconductor Systems	$ 1,476	$ 256	$ 1,732	$ 1,476	$ 256	$ 1,732
Applied Global Services	35	44	79	35	44	79
Display and Adjacent Markets	163	38	201	163	38	201
Corporate and Other	13	16	29	13	16	29
Gross carrying amount	$ 1,687	$ 354	$ 2,041	$ 1,687	$ 354	$ 2,041
Accumulated amortization:						
Semiconductor Systems	$ (1,454)	$ (208)	$ (1,662)	$ (1,446)	$ (203)	$ (1,649)
Applied Global Services	(33)	(44)	(77)	(32)	(44)	(76)
Display and Adjacent Markets	(163)	(38)	(201)	(161)	(38)	(199)
Corporate and Other	(4)	(12)	(16)	(2)	(11)	(13)
Accumulated amortization	$ (1,654)	$ (302)	$ (1,956)	$ (1,641)	$ (296)	$ (1,937)
Carrying amount	$ 33	$ 52	$ 85	$ 46	$ 58	$ 104

Details of amortization expense by segment were as follows:

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions)			
Semiconductor Systems	$ 6	$ 10	$ 13	$ 22
Applied Global Services	1	—	1	—
Display and Adjacent Markets	1	2	2	3
Corporate & Other	1	1	3	1
Total	$ 9	$ 13	$ 19	$ 26

Amortization expense was charged to the following categories:

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions)			
Cost of products sold	$ 6	$ 7	$ 13	$ 15
Research, development and engineering	—	1	—	1
Marketing and selling	3	5	6	10
Total	$ 9	$ 13	$ 19	$ 26

As of May 1, 2022, future estimated amortization expense is expected to be as follows:

	Amortization Expense
	(In millions)
2022 (remaining 6 months)	$ 14
2023	20
2024	17
2025	15
2026	15
Thereafter	4
Total	$ 85

Note 10 Borrowing Facilities and Debt

Revolving Credit Facilities

In February 2020, Applied 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 Applied 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 2025, 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 Applied, plus an applicable margin, which varies according to Applied's public debt credit ratings.

No amounts were outstanding under the Revolving Credit Agreement as of May 1, 2022 and October 31, 2021.

In addition, Applied has revolving credit facilities with Japanese banks pursuant to which it may borrow up to approximately $62 million in aggregate at any time. Applied's 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 May 1, 2022 and October 31, 2021, no amounts were outstanding under these revolving credit facilities.

Term Loan and Short-term Commercial Paper

Applied has a short-term commercial paper program under which Applied may issue unsecured commercial paper notes of up to a total amount of $1.5 billion. At May 1, 2022 and October 31, 2021, Applied did not have any commercial paper outstanding.

Senior Unsecured Notes

Debt outstanding as of May 1, 2022 and October 31, 2021 was as follows:

	Principal Amount			
	May 1, 2022	October 31, 2021	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
1.750% Senior Notes Due 2030	750	750	1.792%	June 1, December 1
5.100% Senior Notes Due 2035	500	500	5.127%	April 1, October 1
5.850% Senior Notes Due 2041	600	600	5.879%	June 15, December 15
4.350% Senior Notes Due 2047	1,000	1,000	4.361%	April 1, October 1
2.750% Senior Notes Due 2050	750	750	2.773%	June 1, December 1
	5,500	5,500		
Total unamortized discount	(13)	(14)		
Total unamortized debt issuance costs	(32)	(34)		
Total long-term debt	$ 5,455	$ 5,452		

Note 11 Leases

A contract contains a lease when Applied has the right to control the use of an identified asset for a period of time in exchange for consideration. Applied leases 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. Applied's 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, Applied uses 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.

Applied 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, Applied 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		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions, except percentages)			
Operating lease cost	$22	$19	$43	$38
Weighted-average remaining lease term (in years)			6.4	4.8
Weighted-average discount rate			2.8%	1.7%

Supplemental cash flow information related to leases are as follows:

	Six Months Ended	
	May 1, 2022	May 2, 2021
	(In millions)	
Operating cash flows paid for operating leases	$ 43	$ 39
Right-of-use assets obtained in exchange for operating lease liabilities	$ 139	$ 14

As of May 1, 2022, the maturities of lease liabilities are as follows:

Fiscal	Operating Leases (In millions)
2022 (remaining 6 months)	$ 46
2023	90
2024	80
2025	64
2026	33
Thereafter	128
Total lease payments	$ 441
Less imputed interest	(46)
Total	$ 395

Note 12 Severance and Related Charges

Fiscal 2021 Severance Plan

In the first quarter of fiscal 2021, Applied enacted a severance plan to realign its workforce. Under this plan, Applied implemented a one-time voluntary retirement program and other workforce reduction actions. The voluntary retirement program was available to certain U.S. employees who met minimum age and length of service requirements, as well as other business-specific criteria. The payments under this plan are paid at the time of termination and the related costs were not allocated to the segments. In addition, Applied implemented other workforce reduction actions globally across the Display and Adjacent Markets business. These costs were recorded under the Display and Adjacent Markets segment.

During the six months ended May 1, 2022 and May 2, 2021, Applied recorded an adjustment of $4 million and recognized a total expense of $158 million of severance and related charges, respectively, in connection with the Fiscal 2021 Severance Plan.

Severance and related charges and adjustments by segment were as follows:

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions)			
Display and Adjacent Markets	$ —	$ —	$ —	$ 8
Corporate and Other	—	6	(4)	150
Total	$ —	$ 6	$ (4)	$ 158

Changes in severance and related charges reserves related to the Fiscal 2021 Severance Plan described above for the six months ended May 1, 2022 were as follows:

	Severance and Related Charges Reserves
	(In millions)
Balance as of October 31, 2021	$ 17
Adjustment to provision for severance	(4)
Consumption of reserves	(12)
Balance as of January 30, 2022	1
Consumption of reserves	—
Balance as of May 1, 2022	$ 1

Note 13 Stockholders' Equity, Comprehensive Income and Share-Based Compensation

Accumulated Other Comprehensive Income (Loss)

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

	Unrealized Gain (Loss) on Investments, Net	Unrealized Gain (Loss) on Derivative Instruments Qualifying as Cash Flow Hedges	Defined and Postretirement Benefit Plans	Cumulative Translation Adjustments	Total
			(in millions)		
Balance as of October 31, 2021	$ (1)	$ (103)	$ (169)	$ 13	$ (260)
Other comprehensive income (loss) before reclassifications	(38)	46	—	—	8
Amounts reclassified out of AOCI	(10)	(13)	—	—	(23)
Other comprehensive income (loss), net of tax	(48)	33	—	—	(15)
Balance as of May 1, 2022	$ (49)	$ (70)	$ (169)	$ 13	$ (275)

	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 25, 2020	$ 20	$ (133)	$ (199)	$ 13	$ (299)
Other comprehensive income (loss) before reclassifications	(6)	12	—	—	6
Amounts reclassified out of AOCI	(4)	7	—	—	3
Other comprehensive income (loss), net of tax	(10)	19	—	—	9
Balance as of May 2, 2021	$ 10	$ (114)	$ (199)	$ 13	$ (290)

The tax effects on net income of amounts reclassified from AOCI for the three and six months ended May 1, 2022 and May 2, 2021 were not material.

Stock Repurchase Program

In March 2022, Applied's Board of Directors approved a common stock repurchase program authorizing $6.0 billion in repurchases, which supplemented the previously existing $7.5 billion authorization approved in March 2021. As of May 1, 2022, approximately $7.4 billion remained available for future stock repurchases under the repurchase program.

The following table summarizes Applied's stock repurchases for the three and six months ended May 1, 2022 and May 2, 2021:

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(in millions, except per share amount)			
Shares of common stock repurchased	15	6	27	6
Cost of stock repurchased	$ 1,800	$ 750	$ 3,603	$ 750
Average price paid per share	$ 124.84	$ 135.30	$ 134.54	$ 135.30

Applied records 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 Applied reissues treasury stock at an amount below its 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 March 2022 and December 2021, Applied's Board of Directors declared quarterly cash dividends, in the amount of $0.26 and $0.24 per share, respectively. The dividend declared in March 2022 is payable in June 2022. Dividends paid during the six months ended May 1, 2022 and May 2, 2021 totaled $425 million and $403 million, respectively. Applied currently anticipates 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 Applied's 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 Applied's stockholders.

Share-Based Compensation

Applied has 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 of Applied. In addition, Applied currently has an Omnibus Employees' Stock Purchase Plan (ESPP), which enables eligible employees to purchase Applied common stock.

During the three and six months ended May 1, 2022 and May 2, 2021, Applied 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		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions)			
Cost of products sold	$ 36	$ 29	$ 78	$ 65
Research, development and engineering	37	31	80	71
Marketing and selling	12	10	26	23
General and administrative	16	14	35	32
Total share-based compensation	$ 101	$ 84	$ 219	$ 191

The cost associated with share-based awards that are subject solely to time-based vesting requirements, less expected forfeitures, is recognized over the awards' service period for the entire award on a straight-line basis. Share-based awards granted to certain executive officers allow partial accelerated vesting in the event of a qualifying retirement based on age and years of service. The cost associated with performance-based equity awards, which include both performance and market goals, is recognized for each tranche over the service period. The cost of equity awards related to performance goals is based on an assessment of the likelihood that the applicable performance goals will be achieved. For the equity awards based on market goals, the cost is recognized based upon the assumption of 100% achievement of the goal.

As of May 1, 2022, Applied had $753 million in total unrecognized compensation expense, net of estimated forfeitures, related to grants of share-based awards and shares issued under the ESPP, which will be recognized over a weighted average period of 2.8 years. As of May 1, 2022, there were 32 million shares available for grant of share-based awards under the ESIP, and an additional 15 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 any restricted stock units, restricted stock, performance share units and performance units outstanding under Applied's equity compensation plans during the six months ended May 1, 2022 is presented below:

	Shares	Weighted Average Grant Date Fair Value
	(In millions, except per share amounts)	
Outstanding as of October 31, 2021	13	$ 63.29
Granted	4	$ 144.58
Vested	(5)	$ 52.59
Canceled	(1)	$ 76.06
Outstanding as of May 1, 2022	11	$ 91.51

As of May 1, 2022, 0.9 million additional performance-based awards could be earned based upon achievement of certain levels of specified performance goals.

During the first quarter of fiscal 2022, certain executive officers 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 a peer group, comprised of companies in the Standard & Poor's 500 Index. Each metric will be weighted 50% and will be measured over a three-year period.

The awards become eligible to vest only if performance goals are achieved and will vest only if the grantee remains employed by Applied through each applicable vesting date, subject to a qualifying retirement based on age and years of service. The number of shares that may vest in full after three years ranges from 0% to 200% of the target amount. The awards provide for a partial payout 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 adjusted operating margin is estimated on the date of grant. If the performance goals are not met as of the end of the performance period, no compensation expense is recognized and any previously recognized compensation expense is reversed. The expected cost is based on the portion of the awards that is probable to vest and is reflected over the service period and reduced for estimated forfeitures.

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

Employee Stock Purchase Plans

Under the ESPP, substantially all employees may purchase Applied common stock through payroll deductions at a price equal to 85 percent of the lower of the fair market value of Applied common stock at the beginning or end of each 6-month purchase period, subject to certain limits. Applied issued a total of 1 million shares in the three and six months ended May 1, 2022 and a total of 2 million shares in the three and six months ended May 2, 2021. Compensation expense is calculated using the fair value of the employees' purchase rights under the Black-Scholes model.

	Three and Six Months Ended	
	May 1, 2022	May 2, 2021
Dividend yield	0.74%	0.72%
Expected volatility	45.2%	44.6%
Risk-free interest rate	0.60%	0.05%
Expected life (in years)	0.5	0.5
Weighted average estimated fair value	$35.79	$33.48

Note 14 Income Taxes

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

Applied’s effective tax rates for the second quarter of fiscal 2022 and 2021 were 17.6 percent and 13.9 percent, respectively. The effective tax rate for the second quarter of fiscal 2022 was higher than the same period in the prior fiscal year primarily due to a reduction of deferred tax assets related to a new tax incentive in Singapore.

Applied’s effective tax rates for the first half of fiscal 2022 and 2021 were 12.2 percent and 11.7 percent, respectively. The effective tax rate for the first half of fiscal 2022 was higher than the same period in the prior fiscal year primarily due to a reduction of deferred tax assets related to a new tax incentive in Singapore, partially offset by changes in uncertain tax positions.

Note 15 Warranty, Guarantees, Commitments and Contingencies

Warranty

Changes in the warranty reserves are presented below:

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions)			
Beginning balance	$ 254	$ 196	$ 242	$ 201
Warranties issued	61	52	125	101
Change in reserves related to preexisting warranty	2	3	5	5
Consumption of reserves	(55)	(35)	(110)	(91)
Ending balance	$ 262	$ 216	$ 262	$ 216

Applied 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, Applied provides standby letters of credit or other guarantee instruments to third parties as required for certain transactions initiated by either Applied or its subsidiaries. As of May 1, 2022, the maximum potential amount of future payments that Applied could be required to make under these guarantee agreements was approximately $532 million. Applied has not recorded any liability in connection with these guarantee agreements beyond that required to appropriately account for the underlying transaction being guaranteed. Applied does 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.

Applied also has agreements with various banks to facilitate subsidiary banking operations worldwide, including overdraft arrangements, issuance of bank guarantees, and letters of credit. As of May 1, 2022, Applied has provided parent guarantees to banks for approximately $297 million to cover these arrangements.

Legal Matters

From time to time, Applied receives notification from third parties, including customers and suppliers, seeking indemnification, litigation support, payment of money or other actions by Applied in connection with claims made against them. In addition, from time to time, Applied receives notification from third parties claiming that Applied may be or is infringing or misusing their intellectual property or other rights. Applied also is subject to various other legal proceedings, regulatory investigations or inquires, and claims, both asserted and unasserted, that arise in the ordinary course of business.

Although the outcome of the above-described matters, claims and proceedings cannot be predicted with certainty, Applied does not believe at this time that any will have a material effect on its consolidated financial condition or results of operations.

Note 16 Industry Segment Operations

Applied’s three reportable segments are: Semiconductor Systems, Applied Global Services, and Display and Adjacent Markets. As defined under the accounting literature, Applied’s 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 Applied’s management organization structure as of May 1, 2022 and the distinctive nature of each segment. Future changes to this internal financial structure may result in changes to Applied’s reportable segments.

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

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

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

Each operating segment is separately managed and has separate financial results that are reviewed by Applied’s 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 Applied’s chief operating decision-maker. The chief operating decision-maker does not evaluate operating segments using total asset information.

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

The Corporate and Other category includes revenues from products, as well as costs of products sold, for fabricating solar photovoltaic cells and modules, and certain operating expenses that are not allocated to its reportable segments and are managed separately at the corporate level. These operating expenses include costs related to share-based compensation; certain management, finance, legal, human resources, and research, development and engineering functions provided at the corporate level; and unabsorbed information technology and occupancy. In addition, Applied does not allocate to its 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 sales and operating income (loss) for each reportable segment were as follows:

	Three Months Ended		Six Months Ended	
	Net Sales	Operating Income (Loss)	Net Sales	Operating Income (Loss)
	(In millions)			
May 1, 2022:				
Semiconductor Systems	$ 4,458	$ 1,648	$ 9,025	$ 3,419
Applied Global Services	1,383	422	2,703	825
Display and Adjacent Markets	381	81	747	157
Corporate and Other	23	(257)	41	(531)
Total	$ 6,245	$ 1,894	$ 12,516	$ 3,870
May 2, 2021:				
Semiconductor Systems	$ 3,972	$ 1,542	$ 7,525	$ 2,803
Applied Global Services	1,203	358	2,358	690
Display and Adjacent Markets	375	65	786	130
Corporate and Other	32	(386)	75	(761)
Total	$ 5,582	$ 1,579	$ 10,744	$ 2,862

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.

Operating income (loss) for the six months ended May 1, 2022 and for the three and six months ended May 2, 2021 included severance and related charges as discussed in Note 12, Severance and Related Charges. In addition, operating income (loss) for both of the three and six months ended May 2, 2021 included a $154 million deal termination fee associated with the termination of a Share Purchase Agreement with Kokusai Electric Corporation and KKR HKE Investment L. P. during the second quarter of fiscal 2021.

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

	Three Months Ended					Six Months Ended				
	May 1, 2022		May 2, 2021		Change	May 1, 2022		May 2, 2021		Change
	(In millions, except percentages)									
China	$ 2,133	34 %	$ 1,844	33 %	16 %	$ 4,120	33 %	$ 3,227	30 %	28 %
Korea	968	16 %	1,428	25 %	(32)%	2,089	17 %	2,717	25 %	(23)%
Taiwan	1,408	23 %	1,041	19 %	35 %	2,657	21 %	2,241	21 %	19 %
Japan	407	6 %	442	8 %	(8)%	968	8 %	900	8 %	8 %
Southeast Asia	138	2 %	109	2 %	27 %	363	3 %	299	3 %	21 %
Asia Pacific	5,054	81 %	4,864	87 %	4 %	10,197	82 %	9,384	87 %	9 %
United States	702	11 %	489	9 %	44 %	1,549	12 %	832	8 %	86 %
Europe	489	8 %	229	4 %	114 %	770	6 %	528	5 %	46 %
Total	$ 6,245	100 %	$ 5,582	100 %	12 %	$ 12,516	100 %	$ 10,744	100 %	16 %

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

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
Foundry, logic and other	65 %	56 %	63 %	57 %
Dynamic random-access memory (DRAM)	21 %	14 %	23 %	16 %
Flash memory	14 %	30 %	14 %	27 %
	100 %	100 %	100 %	100 %

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

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
	(In millions)			
Unallocated net sales	$ 23	$ 32	$ 41	$ 75
Unallocated cost of products sold and expenses	(179)	(174)	(357)	(341)
Share-based compensation	(101)	(84)	(219)	(191)
Severance and related charges	—	(6)	4	(150)
Deal termination fee	—	(154)	—	(154)
Total	$ (257)	$ (386)	$ (531)	$ (761)

The following customers accounted for at least 10 percent of Applied’s net sales for the six months ended May 1, 2022, and sales to these customers included products and services from multiple reportable segments.

	Percentage of Net Sales
Taiwan Semiconductor Manufacturing Company Limited	17 %
Samsung Electronics Co., Ltd.	12 %
Intel Corporation	11 %

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 Applied's 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 31, 2021 contained in the Company's Form 10-K filed on December 17, 2021.

This report contains forward-looking statements that involve a number of risks and uncertainties. Examples of forward-looking statements include those regarding Applied's future financial or operating results, customer demand and spending, end-user demand, Applied's and market and industry trends and outlooks, the impact of the ongoing COVID-19 pandemic and responses thereto on Applied's operations and financial results, 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, strategic acquisitions, investments and divestitures, growth opportunities, restructuring and severance activities, backlog, working capital, liquidity, investment portfolio and policies, taxes, supply chain, manufacturing, properties, legal proceedings and claims, 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 Applied's 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 Applied or on its behalf. Forward-looking statements are based on management's estimates, projections and expectations as of the date hereof, and Applied undertakes no obligation to revise or update any such statements.

Applied's Pandemic Response

As the COVID-19 pandemic emerged in 2020, Applied Materials responded quickly to put in place precautionary measures to keep its workplaces healthy and safe, while ensuring compliance with orders and restrictions imposed by government authorities, everywhere Applied operates in the world.

Applied's top priority during the ongoing COVID-19 pandemic remains protecting the health and safety of its employees and their families, customers, suppliers and community. Applied continues to support workplace flexibility such as remote working where possible and follow enhanced safety and health protocols—including screenings, social distancing, and use of personal protective equipment. Applied is keeping its labs and operations active and continuing to support customers.

Applied has implemented a multi-phase plan to return to working on-site, which takes into consideration factors such as Applied's business and employee needs, local government regulations, community case trends, and recommendations from public health officials. The plan involves multiple phases that gradually allow additional workers to return onsite while practicing social distancing and other safety measures.

Applied will continue to monitor and evaluate the ongoing COVID-19 pandemic and will work to respond appropriately to the impact of COVID-19 on its business, its customers' and suppliers' businesses and its communities.

Overview

Applied provides manufacturing equipment, services and software to the semiconductor, display, and related industries. Applied's 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 advanced electronic components. Each of Applied's businesses 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 and market conditions, and the nature and timing of technological advances in fabrication processes.

Applied operates in three reportable segments: Semiconductor Systems, Applied Global Services, and Display and Adjacent Markets. A summary of financial information for each reportable segment is found in Note 16 of Notes to Consolidated Condensed Financial Statements. A discussion of factors that could affect Applied's 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. Applied's broad range of equipment and service products are highly technical and are sold primarily through a direct sales force.

Applied's 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. While certain existing technologies may be adapted to new requirements, some applications create the need for an entirely different technological approach. 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, Applied's 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			Six Months Ended		
	May 1, 2022	**May 2, 2021**	**Change**	**May 1, 2022**	**May 2, 2021**	**Change**
	(In millions, except per share amounts and percentages)					
Net sales	$ 6,245	$ 5,582	$ 663	$ 12,516	$ 10,744	$ 1,772
Gross margin	46.9 %	47.5 %	(0.6) points	47.0 %	46.6 %	0.4 points
Operating income	$ 1,894	$ 1,579	$ 315	$ 3,870	$ 2,862	$ 1,008
Operating margin	30.3 %	28.3 %	2.0 points	30.9 %	26.6 %	4.3 points
Net income	$ 1,536	$ 1,330	$ 206	$ 3,328	$ 2,460	$ 868
Earnings per diluted share	$ 1.74	$ 1.43	$ 0.31	$ 3.74	$ 2.66	$ 1.08

Fiscal 2022 and 2021 contain 52 weeks and 53 weeks, respectively, and the first six months of fiscal 2022 and 2021 contained 26 and 27 weeks, respectively.

Semiconductor equipment customers continued to make strategic investments in new technology transitions and new capacity during the six months ended May 1, 2022. Foundry and logic spending increased in the three and six months ended May 1, 2022 compared to the same periods in the prior year driven by customer investment in both advanced and mature nodes. Spending by memory customers continued as the industry made investments to maintain balance between supply and demand and invested in new technology. Spending by DRAM customers increased and flash memory customers decreased in the three and six months ended May 1, 2022 compared to the same periods in the prior year.

While customer demand increased during the six months ended May 1, 2022 compared to the same period in the prior year, supply chain and logistics constraints including COVID-19 related lockdowns in a key region impacted Applied's ability to fulfill demand in the first half of fiscal 2022. Applied expects demand to remain strong and supply shortages to persist during fiscal 2022, and managing these near-term supply chain constraints is a top priority.

Applied saw continued growth in its services business compared to the same periods in the prior year driven by an increase in the installed base of equipment, long-term service agreements and spares and legacy systems sales. Applied's Display and Adjacent Markets revenue decreased in the six months ended May 1, 2022 compared to the same period in the prior year primarily due to decreased investment in display manufacturing equipment for mobile products.

In response to the ongoing COVID-19 pandemic and evolving conditions and worldwide response, Applied made adjustments to its global operations and is actively managing its responses in collaboration with its employees, customers and suppliers. However, the situation remains fluid and uncertain. For additional risks associated with the ongoing COVID-19 pandemic, see the risk factor entitled "*The ongoing COVID-19 pandemic and global measures taken in response thereto have adversely impacted, and may continue to adversely impact, Applied's operations and financial results*" in Part II, Item 1A, "Risk Factors."

Results of Operations

Net Sales

Net sales for the periods indicated were as follows:

	Three Months Ended					Six Months Ended				
	May 1, 2022		May 2, 2021		Change	May 1, 2022		May 2, 2021		Change
	(In millions, except percentages)									
Semiconductor Systems	$ 4,458	72 %	$ 3,972	71 %	12 %	$ 9,025	72 %	$ 7,525	70 %	20 %
Applied Global Services	1,383	22 %	1,203	22 %	15 %	2,703	22 %	2,358	22 %	15 %
Display and Adjacent Markets	381	6 %	375	7 %	2 %	747	6 %	786	7 %	(5)%
Corporate and Other	23	— %	32	— %	(28)%	41	— %	75	1 %	(45)%
Total	$ 6,245	100 %	$ 5,582	100 %	12 %	$ 12,516	100 %	$ 10,744	100 %	16 %

For the three and six months ended May 1, 2022 compared to the same periods in the prior year, net sales increased primarily due to increased customer investments in semiconductor equipment as well as spend on spares and comprehensive service agreements. The Semiconductor Systems segment continued to represent the largest contributor of net sales.

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

	Three Months Ended					Six Months Ended				
	May 1, 2022		May 2, 2021		Change	May 1, 2022		May 2, 2021		Change
	(In millions, except percentages)									
China	$ 2,133	34 %	$ 1,844	33 %	16 %	$ 4,120	33 %	$ 3,227	30 %	28 %
Korea	968	16 %	1,428	25 %	(32)%	2,089	17 %	2,717	25 %	(23)%
Taiwan	1,408	23 %	1,041	19 %	35 %	2,657	21 %	2,241	21 %	19 %
Japan	407	6 %	442	8 %	(8)%	968	8 %	900	8 %	8 %
Southeast Asia	138	2 %	109	2 %	27 %	363	3 %	299	3 %	21 %
Asia Pacific	5,054	81 %	4,864	87 %	4 %	10,197	82 %	9,384	87 %	9 %
United States	702	11 %	489	9 %	44 %	1,549	12 %	832	8 %	86 %
Europe	489	8 %	229	4 %	114 %	770	6 %	528	5 %	46 %
Total	$ 6,245	100 %	$ 5,582	100 %	12 %	$ 12,516	100 %	$ 10,744	100 %	16 %

The changes in net sales in all regions in the three and six months ended May 1, 2022 compared to the same periods in the prior year primarily reflected changes in semiconductor equipment spending and customer spending on comprehensive service agreements. The decrease in net sales to customers in Korea for the three and six months ended May 1, 2022 compared to the same periods in the prior year primarily reflected decreased investment in semiconductor equipment.

Gross margins for the periods indicated were as follows:

	Three Months Ended			Six Months Ended		
	May 1, 2022	May 2, 2021	Change	May 1, 2022	May 2, 2021	Change
Gross margin	46.9 %	47.5 %	(0.6) points	47.0 %	46.6 %	0.4 points

Gross margin in the three months ended May 1, 2022 decreased compared to the same period in the prior year primarily driven by higher freight, logistics and material costs, higher personnel costs due to an increase in headcount to provide manufacturing capacity and flexibility, partially offset by the increase in net sales and favorable changes in customer and product mix. Gross margin in the six months ended May 1, 2022 increased compared to the same period in the prior year primarily driven by the increase in net sales and favorable changes in customer and product mix, partially offset by higher freight, logistics and material costs and higher personnel costs due to an increase in headcount to provide manufacturing capacity and flexibility. Gross margin during the three months ended May 1, 2022 and May 2, 2021 included $36 million and $29 million of share-based compensation expense, respectively. Gross margin during the six months ended May 1, 2022 and May 2, 2021 included $78 million and $65 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			Six Months Ended		
	May 1, 2022	May 2, 2021	Change	May 1, 2022	May 2, 2021	Change
	(In millions)					
Research, development and engineering	$ 686	$ 617	$ 69	$ 1,340	$ 1,223	$ 117

Applied's future operating results depend to a considerable extent on its ability to maintain a competitive advantage in the equipment and service products it provides. 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 Applied's existing products resulted from internal development activities and innovations involving new technologies, materials and processes. In certain instances, Applied acquires technologies, either in existing or new product areas, to complement its existing technology capabilities and to reduce time to market.

Management believes 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 its customers' most advanced designs. Applied has maintained and intends to continue its commitment to investing in RD&E in order to continue to offer new products and technologies.

The increases in RD&E expenses during the three and six months ended May 1, 2022 compared to the same periods in the prior year were primarily due to additional headcount and higher variable compensation expense. These increases reflect Applied's ongoing investments in product development initiatives, consistent with the Company's strategy. Applied 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 May 1, 2022 and May 2, 2021 included $37 million and $31 million of share-based compensation expense, respectively. RD&E expense during the six months ended May 1, 2022 and May 2, 2021 included $80 million and $71 million of share-based compensation expense, respectively.

Marketing and Selling

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

	Three Months Ended			Six Months Ended		
	May 1, 2022	May 2, 2021	Change	May 1, 2022	May 2, 2021	Change
			(In millions)			
Marketing and selling	$ 173	$ 148	$ 25	$ 340	$ 295	$ 45

Marketing and selling expenses for the three and six months ended May 1, 2022 increased compared to the same periods in prior year primarily due to additional headcount. Marketing and selling expenses during the three months ended May 1, 2022 and May 2, 2021 included $12 million and $10 million of share-based compensation expense, respectively. Marketing and selling expenses during the six months ended May 1, 2022 and May 2, 2021 included $26 million and $23 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			Six Months Ended		
	May 1, 2022	May 2, 2021	Change	May 1, 2022	May 2, 2021	Change
			(In millions)			
General and administrative	$ 174	$ 149	$ 25	$ 340	$ 310	$ 30

G&A expenses in the three and six months ended May 1, 2022 increased compared to the same periods in the prior year primarily due to additional headcount. In addition, the increase in the six months ended May 1, 2022 compared to the same period in the prior year was partially offset by higher expense associated with business combination activities during the first quarter of fiscal 2021. G&A expenses during the three months ended May 1, 2022 and May 2, 2021 included $16 million and $14 million of share-based compensation expense, respectively. G&A expenses during the six months ended May 1, 2022 and May 2, 2021 included $35 million and $32 million of share-based compensation expense, respectively.

Severance and Related Charges

Severance and related charges for the periods indicated were as follows:

	Three Months Ended			Six Months Ended		
	May 1, 2022	May 2, 2021	Change	May 1, 2022	May 2, 2021	Change
			(In millions)			
Severance and related charges	$ —	$ 6	$ (6)	$ (4)	$ 158	$ (162)

In the first quarter of fiscal 2021, Applied enacted a severance plan (Fiscal 2021 Severance Plan) to realign its workforce. Under this plan, Applied implemented a one-time voluntary retirement program and other workforce reduction actions. The voluntary retirement program was available to certain U.S. employees who met minimum age and length of service requirements, as well as other business-specific criteria. In addition, Applied implemented other workforce reduction actions globally across the Display and Adjacent Markets business.

Deal Termination Fee

Operating income (loss) for both of the three and six months ended May 2, 2021 included a $154 million deal termination fee associated with the termination of a Share Purchase Agreement with Kokusai Electric Corporation and KKR HKE Investment L. P. during the second quarter of fiscal 2021.

Interest Expense and Interest and Other Income (Loss), net

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

	Three Months Ended			Six Months Ended		
	May 1, 2022	May 2, 2021	Change	May 1, 2022	May 2, 2021	Change
			(In millions)			
Interest expense	$ 58	$ 61	$ (3)	$ 115	$ 122	$ (7)
Interest and other income (loss), net	$ 28	$ 27	$ 1	$ 34	$ 45	$ (11)

Interest expense incurred was primarily associated with issued senior unsecured notes. Interest expense in the three and six months ended May 1, 2022 remained relatively flat compared to the same periods in the prior year.

Interest and other income, net in the three months ended May 1, 2022 remained relatively flat compared to the same period in the prior year, primarily driven by impairment of certain strategic investments in the second quarter of fiscal 2021, offset by the impact of unfavorable foreign exchange fluctuation in the second quarter of fiscal 2022. Interest and other income, net in the six months ended May 1, 2022 decreased compared to the same period in the prior year, primarily driven by the impact of unfavorable foreign exchange fluctuation during the six months ended May 1, 2022 compared to the same period in the prior year.

Income Taxes

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

	Three Months Ended			Six Months Ended		
	May 1, 2022	May 2, 2021	Change	May 1, 2022	May 2, 2021	Change
			(In millions, except percentages)			
Provision for income taxes	$ 328	$ 215	$ 113	$ 461	$ 325	$ 136
Effective tax rate	17.6 %	13.9 %	3.7 points	12.2 %	11.7 %	0.5 points

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

Applied’s effective tax rates for the second quarter of fiscal 2022 and 2021 were 17.6 percent and 13.9 percent, respectively. The effective tax rate for the second quarter of fiscal 2022 was higher than the same period in the prior fiscal year primarily due to a reduction of deferred tax assets related to a new tax incentive in Singapore.

Applied’s effective tax rates for the first half of fiscal 2022 and 2021 were 12.2 percent and 11.7 percent, respectively. The effective tax rate for the first half of fiscal 2022 was higher than the same period in the prior fiscal year primarily due to a reduction of deferred tax assets related to a new tax incentive in Singapore, partially offset by changes in uncertain tax positions.

Segment Information

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

The Corporate and Other category includes revenues from products, as well as costs of products sold, for fabricating solar photovoltaic cells and modules and certain operating expenses that are not allocated to its reportable segments and are managed separately at the corporate level. These operating expenses include costs for share-based compensation; certain management, finance, legal, human resource, and RD&E functions provided at the corporate level; and unabsorbed information technology and occupancy. In addition, Applied does not allocate to its 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 advanced electronic products, including smartphones and other mobile devices, servers, personal computers, automotive electronics, storage, and other products, and the nature and timing of technological advances in fabrication processes, and as a result is subject to variable industry conditions. Development efforts are focused on solving customers' key technical challenges in transistor, interconnect, patterning and packaging performance.

Certain significant measures for the periods indicated were as follows:

	Three Months Ended				Six Months Ended			
	May 1, 2022	May 2, 2021	Change		May 1, 2022	May 2, 2021	Change	
	(In millions, except percentages and ratios)							
Net sales	$ 4,458	$ 3,972	$ 486	12 %	$ 9,025	$ 7,525	$ 1,500	20 %
Operating income	$ 1,648	$ 1,542	$ 106	7 %	$ 3,419	$ 2,803	$ 616	22 %
Operating margin	37.0 %	38.8 %	(1.8) points		37.9 %	37.2 %	0.7 points	

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

	Three Months Ended		Six Months Ended	
	May 1, 2022	May 2, 2021	May 1, 2022	May 2, 2021
Foundry, logic and other	65 %	56 %	63 %	57 %
Dynamic random-access memory (DRAM)	21 %	14 %	23 %	16 %
Flash memory	14 %	30 %	14 %	27 %
	100 %	100 %	100 %	100 %

Net sales for the three and six months ended May 1, 2022 increased compared to the same periods in the prior year. Semiconductor equipment customers continued to make strategic investments in new technology transitions during the first six months of fiscal 2022. Foundry and logic spending increased in the three and six months ended May 1, 2022 compared to the same periods in the prior year driven by customer investment in both advanced and mature nodes. Spending by DRAM customers increased and flash memory customers decreased in the three and six months ended May 1, 2022 compared to the same periods in the prior year due to changes in investments in new technology and capacity.

Operating margin for the three months ended May 1, 2022 decreased compared to the same period in the prior year, primarily driven by higher freight, logistics and material costs and higher personnel costs due to the hiring of additional headcount to provide manufacturing capacity and flexibility, partially offset by higher net sales and favorable changes in customer and product mix. Operating margin for the six months ended May 1, 2022 increased compared to the same period in the prior year, primarily reflecting higher net sales and favorable changes in customer and product mix, partially offset by higher personnel costs due to the hiring of additional headcount to provide manufacturing capacity and flexibility and higher freight, logistics and material costs. In the three months ended May 1, 2022, three customers each accounted for at least 10 percent of this segment's net sales, and together they accounted for approximately 45 percent of this segment's total net sales.

The following regions accounted for at least 30 percent of total net sales for the Semiconductor Systems segment for one or more of the periods presented.

	Three Months Ended					Six Months Ended				
	May 1, 2022		May 2, 2021		Change	May 1, 2022		May 2, 2021		Change
	(In millions, except percentages)									
Korea	$ 776	17%	$ 1,237	31%	(37)%	$ 1,734	19%	$ 2,363	31%	(27)%
China	$ 1,422	32%	$ 1,214	31%	17 %	$ 2,708	30%	$ 1,924	26%	41 %

Applied Global Services Segment

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

Demand for Applied Global Services' solutions are driven by Applied's 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 increases in semiconductor manufacturers' wafer starts and continued strong utilization rates, growth of the installed base of equipment, growing service intensity of newer tools, and the Company's ability to sell more comprehensive service agreements.

Certain significant measures for the periods indicated were as follows:

	Three Months Ended				Six Months Ended			
	May 1, 2022	May 2, 2021	Change		May 1, 2022	May 2, 2021	Change	
	(In millions, except percentages and ratios)							
Net sales	$ 1,383	$ 1,203	$ 180	15 %	$ 2,703	$ 2,358	$ 345	15 %
Operating income	$ 422	$ 358	$ 64	18 %	$ 825	$ 690	$ 135	20 %
Operating margin	30.5 %	29.8 %		0.7 points	30.5 %	29.3 %		1.2 points

Net sales for the three and six months ended May 1, 2022 increased compared to the same periods in the prior year primarily due to higher customer spending on comprehensive service agreements, spares and legacy systems. Operating margin for the three and six months ended May 1, 2022 increased compared to the same periods in the prior year primarily due to higher net sales, partially offset by higher expense related to an increase in headcount to support business growth and higher freight costs. In the three months ended May 1, 2022, two customers accounted for at least 10 percent of this segment's net sales.

There was no single region that accounted for at least 30 percent of total net sales for the Applied Global Services segment for any of the periods presented.

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, and other consumer-oriented devices and equipment upgrades. 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				Six Months Ended			
	May 1, 2022	May 2, 2021	Change		May 1, 2022	May 2, 2021	Change	
	(In millions, except percentages and ratios)							
Net sales	$ 381	$ 375	$ 6	2 %	$ 747	$ 786	$ (39)	(5)%
Operating income	$ 81	$ 65	$ 16	25 %	$ 157	$ 130	$ 27	21 %
Operating margin	21.3 %	17.3 %	4.0 points		21.0 %	16.5 %	4.5 points	

Net sales for the three months ended May 1, 2022 remained relatively flat compared to the same period in the prior year. Net sales for the six months ended May 1, 2022 decreased compared to the same period in the prior year primarily due to lower customer investments in display manufacturing equipment for mobile products, partially offset by an increase in customer investment in display manufacturing equipment for TVs. Operating margin for the three and six months ended May 1, 2022 increased compared to the same periods in the prior year primarily due to favorable product mix. In the three months ended May 1, 2022, three customers each accounted for at least 10 percent of this segment’s net sales, and together they accounted for approximately 69 percent of this segment’s total net sales.

The following region accounted for at least 30 percent of total net sales for the Display and Adjacent Markets segment for one or more of the periods presented:

	Three Months Ended					Six Months Ended				
	May 1, 2022		May 2, 2021		Change	May 1, 2022		May 2, 2021		Change
	(In millions, except percentages)									
China	$ 321	84%	$ 315	84%	2%	$ 656	88%	$ 652	83%	1%

Financial Condition, Liquidity and Capital Resources

Applied's cash, cash equivalents and investments consist of the following:

	May 1, 2022	October 31, 2021
	(In millions)	
Cash and cash equivalents	$ 3,331	$ 4,995
Short-term investments	591	464
Long-term investments	2,102	2,055
Total cash, cash-equivalents and investments	$ 6,024	$ 7,514

Sources and Uses of Cash

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

	Six Months Ended	
	May 1, 2022	May 2, 2021
	(In millions)	
Cash provided by operating activities	$ 3,073	$ 2,608
Cash used in investing activities	$ (551)	$ (435)
Cash used in financing activities	$ (4,188)	$ (1,226)

Operating Activities

Cash from operating activities for the six months ended May 1, 2022 was $3.1 billion, which reflects net income adjusted for the effect of non-cash charges and changes in working capital components. Non-cash charges included depreciation, amortization, severance and related charges, share-based compensation and deferred income taxes. Cash provided by operating activities increased in the first six months of fiscal 2022 compared to the same period in the prior year primarily due to higher net income and cash collections, partially offset by higher inventory and income tax payments.

Applied has agreements with various financial institutions to sell accounts receivable and discount promissory notes from selected customers. Applied sells its accounts receivable generally without recourse. Applied, from time to time, also discounts 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. Applied sold $570 million and $671 million of account receivables during the six months ended May 1, 2022 and May 2, 2021, respectively. Applied did not discount letters of credit issued by customers or discount promissory notes during the six months ended May 1, 2022 and May 2, 2021, respectively.

Applied's working capital was $8.6 billion as of May 1, 2022 and $9.8 billion as of October 31, 2021.

Days sales outstanding for the three months ended May 1, 2022 and May 2, 2021 were 71 days and 55 days, respectively. Days sales outstanding varies due to the timing of shipments and payment terms. The increase in days sales outstanding was primarily due to unfavorable revenue linearity and lower accounts receivables factoring compared to the same period in the prior year.

Investing Activities

Applied used $551 million of cash in investing activities during the six months ended May 1, 2022. Capital expenditures totaled $354 million and purchases of investments, net of proceeds from sales and maturities of investments were $197 million, during the six months ended May 1, 2022.

Applied's 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. Applied regularly monitors the credit risk in its investment portfolio and takes appropriate measures, which may include the sale of certain securities, to manage such risks prudently in accordance with its investment policies.

Financing Activities

Applied used $4.2 billion of cash in financing activities during the six months ended May 1, 2022, consisting primarily of cash used for repurchases of common stock of $3.6 billion, dividends to stockholders of $425 million and tax withholding payments for vested equity awards of $256 million, partially offset by proceeds from common stock issuance of $96 million.

In March 2022 and December 2021, Applied's Board of Directors declared quarterly cash dividends, in the amount of $0.26 and $0.24 per share, respectively. The dividend declared in March 2022 is payable in June 2022. Applied currently anticipates 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 Applied's 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 Applied's stockholders.

In March 2022, Applied's Board of Directors approved a common stock repurchase program authorizing $6.0 billion in repurchases, which supplemented the previously existing $7.5 billion authorization approved in March 2021. As of May 1, 2022, approximately $7.4 billion remained available for future stock repurchases under the repurchase program.

Applied has 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 Applied 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 2025, 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 Applied, plus an applicable margin, which varies according to Applied's public debt credit ratings. The Revolving Credit Agreement includes financial and other covenants with which Applied was in compliance as of May 1, 2022.

Remaining credit facilities in the amount of approximately $62 million are with Japanese banks. Applied's 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 May 1, 2022 and October 31, 2021.

Applied has a short-term commercial paper program under which Applied may issue unsecured commercial paper notes of up to a total amount of $1.5 billion. As of May 1, 2022, Applied did not have any commercial paper outstanding but may issue commercial paper notes under this program from time to time in the future. The commercial paper program is backstopped by the Revolving Credit Agreement and borrowings under the Revolving Credit Agreement reduce the amount of commercial paper notes Applied can issue.

Applied had senior unsecured notes in the aggregate principal amount of $5.5 billion outstanding as of May 1, 2022. See Note 10 of the Notes to the Consolidated Condensed Financial Statements for additional discussion of existing debt. Applied may seek to refinance its existing debt and may incur additional indebtedness depending on Applied's capital requirements and the availability of financing.

In the ordinary course of business, Applied provides standby letters of credit or other guarantee instruments to third parties as required for certain transactions initiated by either Applied or its subsidiaries. As of May 1, 2022, the maximum potential amount of future payments that Applied could be required to make under these guarantee agreements was approximately $532 million. Applied has not recorded any liability in connection with these guarantee agreements beyond that required to appropriately account for the underlying transaction being guaranteed. Applied does 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.

Applied also has agreements with various banks to facilitate subsidiary banking operations worldwide, including overdraft arrangements, issuance of bank guarantees, and letters of credit. As of May 1, 2022, Applied has provided parent guarantees to banks for approximately $297 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 May 1, 2022, Applied had $694 million of total payments remaining, payable in installments in the next four years. Before the Tax Act, U.S. income tax had not been provided for certain unrepatriated earnings that were considered indefinitely reinvested. Income tax is now provided for all unrepatriated earnings.

Beginning in fiscal 2023, the Tax Act eliminates the option to deduct research and development expenditures currently and requires taxpayers to capitalize and amortize them over five or fifteen years. Although Congress is considering legislation that would defer the capitalization and amortization requirement, there is no assurance that the provision will be repealed or otherwise modified. If the requirement is not modified, it may reduce our cash flows beginning in fiscal 2023.

Although cash requirements will fluctuate based on the timing and extent of factors such as those discussed above, Applied's management believes that cash generated from operations, together with the liquidity provided by existing cash balances and borrowing capability, will be sufficient to satisfy Applied's liquidity requirements for the next 12 months. For further details regarding Applied's 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 Applied's Annual Report on Form 10-K and 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.

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

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

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

Revenue Recognition

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

Warranty Costs

Applied provides for the estimated cost of warranty when revenue is recognized. Estimated warranty costs are determined by analyzing specific product, current and historical configuration statistics and regional warranty support costs. Applied's warranty obligation is affected by product and component failure rates, material usage and labor costs incurred in correcting product failures during the warranty period. As Applied's customer engineers and process support engineers are highly trained and deployed globally, labor availability is a significant factor in determining labor costs. The quantity and availability of critical replacement parts is another significant factor in estimating warranty costs. Unforeseen component failures or exceptional component performance can also result in changes to warranty costs. If actual warranty costs differ substantially from Applied's estimates, revisions to the estimated warranty liability would be required, which could have a material adverse effect on Applied's business, financial condition and results of operations.

Allowance for Credit Losses

Applied maintains an allowance for credit losses for estimated losses resulting from the inability of its customers to make required payments. This allowance is based on historical experience, credit evaluations, specific customer collection history and any customer-specific issues Applied has identified. Changes in circumstances, such as an unexpected material adverse change in a major customer's ability to meet its financial obligation to Applied or its payment trends, may require Applied to further adjust its estimates of the recoverability of amounts due to Applied, which could have a material adverse effect on Applied's business, financial condition and results of operations.

Inventory Valuation

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

Goodwill and Intangible Assets

Applied reviews goodwill and intangible assets 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. The process of evaluating the potential impairment of goodwill and intangible assets requires significant judgment, especially in emerging markets. When reviewing goodwill for impairment, Applied first performs a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value.

In performing a qualitative assessment, Applied considers business conditions and other factors including, but not limited to (i) adverse industry or economic trends, (ii) restructuring actions and lower projections that may impact future operating results, (iii) sustained decline in share price, and (iv) overall financial performance and other events affecting the reporting units. If Applied concludes that is more likely than not that the fair value of a reporting unit is less than its carrying amount, then a quantitative impairment test is performed by estimating the fair value of the reporting unit and comparing it to its carrying value. If the carrying value of a reporting unit exceeds its fair value, Applied would record an impairment charge equal to the excess of the carrying value of the reporting unit's goodwill over its fair value.

Applied determines the fair value of each reporting unit based on a weighting of an income and a market approach. Applied bases the fair value estimates on assumptions that it believes to be reasonable but that are unpredictable and inherently uncertain. Under the income approach, Applied estimates the fair value based on discounted cash flow method.

The estimates used in the impairment testing are consistent with the discrete forecasts that Applied uses to manage its business, and considers any significant developments during the period. Under the discounted cash flow method, cash flows beyond the discrete forecasts are estimated using a terminal growth rate, which considers the long-term earnings growth rate specific to the reporting units. The estimated future cash flows are discounted to present value using each reporting unit's weighted average cost of capital. The weighted average cost of capital measures a reporting unit's cost of debt and equity financing weighted by the percentage of debt and equity in a reporting unit's target capital structure. In addition, the weighted average cost of capital is derived using both known and estimated market metrics, and is adjusted to reflect both the timing and risks associated with the estimated cash flows. The tax rate used in the discounted cash flow method is the median tax rate of comparable companies and reflects Applied's current international structure, which is consistent with the market participant perspective. Under the market approach, Applied uses the guideline company method which applies market multiples to forecasted revenues and earnings before interest, taxes, depreciation and amortization. Applied uses market multiples that are consistent with comparable publicly-traded companies and considers each reporting unit's size, growth and profitability relative to its comparable companies.

Intangible assets, such as purchased technology, are generally recorded in connection with a business acquisition. The value assigned to intangible assets is usually based on estimates and judgments regarding expectations for the success and life cycle of products and technology acquired. If actual product acceptance differs significantly from the estimates, Applied may be required to record an impairment charge to reduce the carrying value of the reporting unit to its estimated fair value.

Income Taxes

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

Applied recognizes a current tax liability for the estimated amount of income tax payable on tax returns for the current fiscal year. Deferred tax assets and liabilities are recognized for the estimated future tax effects of temporary differences between the book and tax bases of assets and liabilities. Deferred tax assets are also recognized for net operating loss and tax credit carryforwards. Deferred tax assets are offset by a valuation allowance to the extent it is more likely than not that they are not expected to be realized.

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

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

Non-GAAP Adjusted Financial Results

Management uses non-GAAP adjusted financial measures to evaluate the Company's operating and financial performance and for planning purposes, and as performance measures in its executive compensation program. Applied believes these measures enhance an overall understanding of its performance and investors' ability to review the Company's business from the same perspective as the Company's management and facilitate comparisons of this period's results with prior periods on a consistent basis by excluding items that management does not believe are indicative of Applied's ongoing operating performance.

The non-GAAP adjusted financial measures presented below are adjusted to exclude the impact of certain costs, expenses, gains and losses, including certain items related to mergers and acquisitions; restructuring and severance charges and any associated adjustments; certain incremental expenses related to COVID-19; impairments of assets; gain or loss on strategic investments; certain income tax items and other discrete adjustments. On a non-GAAP basis, the tax effect related to share-based compensation is recognized ratably over the fiscal year. Reconciliations of these non-GAAP measures to the most directly comparable financial measures calculated and presented in accordance with GAAP are provided in the financial tables presented below. There are limitations in using non-GAAP financial measures because the non-GAAP financial measures are not prepared in accordance with generally accepted accounting principles, may be different from non-GAAP financial measures used by other companies, and may exclude certain items that may have a material impact upon our reported financial results. The presentation of this additional information is not meant to be considered in isolation or as a substitute for the directly comparable financial measures prepared in accordance with GAAP.

The following tables present a reconciliation of the GAAP and non-GAAP adjusted consolidated results:

APPLIED MATERIALS, INC.
UNAUDITED RECONCILIATION OF GAAP TO NON-GAAP ADJUSTED RESULTS

	Three Months Ended		Six Months Ended	
(In millions, except percentages)	**May 1, 2022**	**May 2, 2021**	**May 1, 2022**	**May 2, 2021**
Non-GAAP Adjusted Gross Profit				
Reported gross profit - GAAP basis	$ 2,927	$ 2,653	$ 5,886	$ 5,002
Certain items associated with acquisitions[1]	7	7	13	15
Certain incremental expenses related to COVID-19[2]	—	—	—	12
Other charges	—	2	—	2
Non-GAAP adjusted gross profit	$ 2,934	$ 2,662	$ 5,899	$ 5,031
Non-GAAP adjusted gross margin	47.0 %	47.7 %	47.1 %	46.8 %
Non-GAAP Adjusted Operating Income				
Reported operating income - GAAP basis	$ 1,894	$ 1,579	$ 3,870	$ 2,862
Certain items associated with acquisitions[1]	10	12	19	25
Acquisition integration and deal costs	9	11	13	35
Certain incremental expenses related to COVID-19[2]	—	—	—	24
Severance and related charges[3]	—	6	(4)	158
Deal termination fee	—	154	—	154
Other charges	—	6	—	6
Non-GAAP adjusted operating income	$ 1,913	$ 1,768	$ 3,898	$ 3,264
Non-GAAP adjusted operating margin	30.6 %	31.7 %	31.1 %	30.4 %
Non-GAAP Adjusted Net Income				
Reported net income - GAAP basis	$ 1,536	$ 1,330	$ 3,328	$ 2,460
Certain items associated with acquisitions[1]	10	12	19	25
Acquisition integration and deal costs	12	12	16	36
Certain incremental expenses related to COVID-19[2]	—	—	—	24
Severance and related charges[3]	—	6	(4)	158
Deal termination fee	—	154	—	154
Realized loss (gain) on strategic investments, net	(2)	6	—	4
Unrealized loss (gain) on strategic investments, net	(28)	(26)	(33)	(32)
Other charges	—	6	—	6
Income tax effect of share-based compensation[4]	14	6	(44)	(23)
Income tax effects related to intra-entity intangible asset transfers	81	17	99	37
Resolution of prior years' income tax filings and other tax items	7	(10)	(55)	(13)
Income tax effect of non-GAAP adjustments[5]	6	(4)	6	(45)
Non-GAAP adjusted net income	$ 1,636	$ 1,509	$ 3,332	$ 2,791

1 These items are incremental charges attributable to completed acquisitions, consisting of amortization of purchased intangible assets.
2 Temporary incremental employee compensation during the COVID-19 pandemic.
3 The severance and related charges primarily related to a one-time voluntary retirement program offered to certain eligible employees.
4 GAAP basis tax benefit related to share-based compensation is recognized ratably over the fiscal year on a non-GAAP basis.
5 Adjustment to provision for income taxes related to non-GAAP adjustments reflected in income before income taxes.

Table of Contents

APPLIED MATERIALS, INC.
UNAUDITED RECONCILIATION OF GAAP TO NON-GAAP ADJUSTED RESULTS

	Three Months Ended		Six Months Ended	
(In millions, except per share amounts)	**May 1, 2022**	**May 2, 2021**	**May 1, 2022**	**May 2, 2021**
Non-GAAP Adjusted Earnings Per Diluted Share				
Reported earnings per diluted share - GAAP basis	$ 1.74	$ 1.43	$ 3.74	$ 2.66
Certain items associated with acquisitions	0.01	0.01	0.02	0.02
Acquisition integration and deal costs	0.01	0.01	0.02	0.03
Certain incremental expenses related to COVID-19	—	—	—	0.02
Severance and related charges	—	0.01	—	0.13
Deal termination fee	—	0.17	—	0.17
Realized loss (gain) on strategic investments, net	—	0.01	—	—
Unrealized loss (gain) on strategic investments, net	(0.03)	(0.03)	(0.04)	(0.02)
Income tax effect of share-based compensation	0.02	0.01	(0.05)	(0.02)
Income tax effects related to intra-entity intangible asset transfers	0.09	0.02	0.11	0.04
Resolution of prior years' income tax filings and other tax items	0.01	(0.01)	(0.06)	(0.01)
Non-GAAP adjusted earnings per diluted share	$ 1.85	$ 1.63	$ 3.74	$ 3.02
Weighted average number of diluted shares	883	927	890	926

The following table presents a reconciliation of the GAAP and non-GAAP adjusted segment results:

APPLIED MATERIALS, INC.
UNAUDITED RECONCILIATION OF GAAP TO NON-GAAP ADJUSTED RESULTS

	Three Months Ended		Six Months Ended	
(In millions, except percentages)	**May 1, 2022**	**May 2, 2021**	**May 1, 2022**	**May 2, 2021**
Semiconductor Systems Non-GAAP Adjusted Operating Income				
Reported operating income - GAAP basis	$ 1,648	$ 1,542	$ 3,419	$ 2,803
Certain items associated with acquisitions[1]	8	10	15	20
Acquisition integration costs	—	—	—	(2)
Certain incremental expenses related to COVID-19[2]	—	—	—	12
Other charges	—	3	—	3
Non-GAAP adjusted operating income	$ 1,656	$ 1,555	$ 3,434	$ 2,836
Non-GAAP adjusted operating margin	37.1 %	39.1 %	38.0 %	37.7 %
AGS Non-GAAP Adjusted Operating Income				
Reported operating income - GAAP basis	$ 422	$ 358	$ 825	$ 690
Certain incremental expenses related to COVID-19[2]	—	—	—	8
Other charges	—	1	—	1
Non-GAAP adjusted operating income	$ 422	$ 359	$ 825	$ 699
Non-GAAP adjusted operating margin	30.5 %	29.8 %	30.5 %	29.6 %
Display and Adjacent Markets Non-GAAP Adjusted Operating Income				
Reported operating income - GAAP basis	$ 81	$ 65	$ 157	$ 130
Certain items associated with acquisitions[1]	1	1	2	2
Certain incremental expenses related to COVID-19[2]	—	—	—	1
Severance and related charges[3]	—	—	—	8
Non-GAAP adjusted operating income	$ 82	$ 66	$ 159	$ 141
Non-GAAP adjusted operating margin	21.5 %	17.6 %	21.3 %	17.9 %

1 These items are incremental charges attributable to completed acquisitions, consisting of amortization of purchased intangible assets.

2 Temporary incremental employee compensation during the COVID-19 pandemic.

3 The severance and related charges related to workforce reduction actions globally across the Display and Adjacent Markets business.

Note: The reconciliation of GAAP and non-GAAP adjusted segment results above does not include certain revenues, costs of products sold and operating expenses that are reported within corporate and other and included in consolidated operating income.

Item 3: *Quantitative and Qualitative Disclosures About Market Risk*

Applied is 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 31, 2021, 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 31, 2021.

Interest Rate Risk

Available-for-sale Debt Securities - The market value of Applied's investments in available-for-sales securities was approximately $1.9 billion at May 1, 2022. An immediate hypothetical 100 basis point increase in interest rates would result in a decrease in the fair value of investments as of May 1, 2022 of approximately $25 million.

Debt - At May 1, 2022, the aggregate principal of long-term senior unsecured notes issued by Applied was $5.5 billion with an estimated fair value of $5.4 billion. A hypothetical decrease in interest rates of 100 basis points would result in an increase in the fair value of Applied's long-term senior notes issuances of approximately $553 million at May 1, 2022. From time to time Applied uses 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 operations of Applied 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.

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

Applied uses 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 Applied's net sales, cost of products sold, and operating expenses. A hypothetical 10% adverse change in foreign currency exchange rates relative to the U.S. Dollar would result in a decrease in the fair value of these hedging contracts of $165 million at May 1, 2022.

Applied does 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, management of Applied conducted an evaluation, under the supervision and with the participation of Applied's Chief Executive Officer and Chief Financial Officer, of the effectiveness of Applied's 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, Applied's Chief Executive Officer and Chief Financial Officer concluded that Applied's 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 Applied in such reports is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

Due to the ongoing COVID-19 pandemic, Applied continues to support workplace flexibility such as remote working where possible. Business continuity plans are in effect in order to mitigate potential impact on Applied's control environment and its operating and disclosure controls and procedures. The design of business continuity plans, which include remote access to secure data when needed, allow for remote and reliable execution of Applied's operating and disclosure controls and procedures.

Applied evaluated the impact of the ongoing COVID-19 pandemic on its internal control over financial reporting. During the second quarter of fiscal 2022, 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, Applied's 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 15 in Notes to Consolidated Condensed Financial Statements is incorporated herein by reference.

Item 1A: *Risk Factors*

The risk factors set forth below include any material changes to, and supersede the description of, the risk factors disclosed in Part I, Item 1A of Applied's 2021 Form 10-K. These factors could materially and adversely affect Applied's business, financial condition or results of operations and cause reputational harm, and should be carefully considered in evaluating the Company and its business, in addition to other information presented elsewhere in this report. Many of the risk factors described below may be exacerbated by the ongoing COVID-19 pandemic and global measures taken in response thereto and any worsening of the global business and economic conditions as a result.

Risks Related to the COVID-19 Pandemic

The ongoing COVID-19 pandemic and global measures taken in response thereto have adversely impacted, and may continue to adversely impact, Applied's operations and financial results.

The ongoing COVID-19 pandemic and measures taken in response by governments and businesses worldwide to contain its spread have adversely impacted and are expected to continue to adversely impact Applied's supply chain, manufacturing, logistics, workforce and operations, as well as the operations of Applied's customers, suppliers and partners globally. There is considerable uncertainty regarding the duration, scope and severity of the pandemic, particularly with the emergence of new variants and subvariants of COVID-19 and periodic spikes in COVID-19 cases in various geographic regions, and the impacts on our business and the global economy from the effects of the ongoing pandemic and response measures. Travel and logistics restrictions, shelter-in-place orders, including recent lockdowns imposed in certain parts of China, vaccine requirements and other measures implemented by foreign and domestic authorities have resulted in, and are expected to continue to result in, supply chain and transportation disruptions, production delays and capacity limitations at Applied and some of its customers, suppliers and partners, as well as reduced workforce availability or productivity at Applied and customer sites, and additional data, information and cyber security risks associated with an extensive workforce now working remotely full-time.

While economic activity and business operations in certain regions continue to recover, there may be periods of significant or sudden increases in demand for Applied's products, as well as worldwide demand for electronic products. Significant or sudden demand increases have resulted in, and may continue to result in, a shortage of parts, materials or services needed to manufacture Applied's products. We have also experienced, and are likely to continue to experience, shipment delays due to transportation interruptions or capacity constraints. Such shortages or delays have adversely impacted, and could continue to adversely impact, our suppliers' ability to meet our demand requirements and do so on favorable terms, and our ability to meet our customer demand. There can be no assurance that Applied or its suppliers will be able to maintain manufacturing operations at current levels or at increased levels that may be necessary to adequately address demand for Applied products. In addition, the pandemic and global measures taken in response thereto have had, and may continue to have a significant adverse impact on the global economic activity and could also result in a reduced demand for our products, delayed deliveries or installation, cancelled orders or increase in logistics and operating costs, and materially and adversely affect Applied's business, financial condition and results of operations.

The degree to which the ongoing pandemic ultimately impacts Applied's business, financial condition and results of operations and the global economy will depend on future developments beyond our control, which are highly uncertain and difficult to predict, including the severity, duration and any resurgence of the pandemic, the extent, duration and effectiveness of periodic lockdowns and other containment actions, the availability, public adoption and efficacy of COVID vaccines, how quickly and to what extent normal economic and operating activity can resume, and the severity and duration of the global economic volatility that results from the ongoing pandemic. Additionally, Applied has a multi-phase plan to return to working on-site, which gradually allows additional workers to return onsite while practicing social distancing and other safety measures. However, there is no assurance that such plan and safety measures will be effective in preventing the inadvertent transmission of COVID-19 within the workplace. Further, implementation of such plan could adversely impact Applied's operations.

Risks Associated with Operating a Global Business

Applied is exposed to the risks of operating a global business.

Applied has product development, engineering, manufacturing, sales and other operations distributed throughout many countries, and some of its business activities are concentrated in certain geographic areas. Moreover, in the three months ended May 1, 2022, approximately 89% of Applied's net sales were to customers in regions outside the United States. As a result of the global nature of its operations, Applied's business performance and results of operations may be adversely affected by a number of factors, including:

- uncertain global economic and political business conditions and demands;
- political and social attitudes, laws, rules, regulations and policies within countries that favor domestic companies over non-domestic companies, including customer- or government-supported efforts to promote the development and growth of local competitors;
- direct and indirect global trade issues and changes in and uncertainties with respect to trade policies, trade sanctions, tariffs, and international trade disputes, including the rules and interpretations promulgated by the U.S. Department of Commerce expanding export license requirements for certain products sold to certain entities in China;
- customer- or government-supported efforts to influence Applied to conduct more of its operations and sourcing in a particular country, such as Korea and China;
- variations among, and changes in, local, regional, national or international laws and regulations, including contract, intellectual property, cybersecurity, data privacy, labor, tax, and import/export laws, and the interpretation and application of such laws and regulations;
- ineffective or inadequate legal protection of intellectual property rights in certain countries;
- positions taken by governmental agencies regarding possible national commercial and/or security issues posed by international business operations;
- an increase in raw material, commodity, energy and shipping costs, as well as volatility in such costs;
- delays or restrictions on personnel travel and in shipping materials or finished products between and within countries;
- geographically diverse operations and projects, and our ability to maintain appropriate business processes, procedures and internal controls, and comply with environmental, health and safety, anti-corruption and other regulatory requirements;
- supply chain interruptions;
- service interruptions from utilities, transportation, data hosting or telecommunications providers, or other events beyond our control;
- failure to effectively manage a diverse workforce with different experience levels, languages, cultures, customs, business practices and worker expectations, and differing employment practices and labor issues;
- variations in the ability to develop relationships with local customers, suppliers and governments;
- fluctuations in interest rates and currency exchange rates, including the relative strength or weakness of the U.S. dollar against the Japanese yen, Israeli shekel, euro, Taiwanese dollar, Singapore dollar, Chinese yuan or Korean won;
- the need to provide sufficient levels of technical support in different locations around the world;
- performance of third-party providers of outsourced functions, including certain engineering, software development, manufacturing, information technology and other activities;
- political instability, natural disasters, regional or global health epidemics, social unrest, terrorism, acts of war or other geopolitical turmoil, or cyber-attacks in locations where Applied has operations, suppliers or sales, or that may influence the value chain of the industries that Applied serves;
- impacts of climate change on the operations of Applied, its customers and suppliers;
- challenges in hiring and integration of an increasing number of workers in new countries;
- the increasing need for a mobile workforce to work in or travel to different regions; and
- uncertainties with respect to economic growth rates in various countries, including for the manufacture and sale of semiconductors and displays in the developing economies of certain countries.

As more fully discussed in the risk factor "The ongoing COVID-19 pandemic and global measures taken in response thereto have adversely impacted, and may continue to adversely impact, Applied's operations and financial results" above, the ongoing COVID-19 pandemic and measures taken in response by governments and businesses worldwide to contain its spread have adversely impacted and are expected to continue to adversely impact Applied's supply chain, manufacturing, logistics, workforce and operations, as well as the operations of Applied's customers, suppliers and partners globally.

International trade disputes could result in increases in tariffs and other trade restrictions and protectionist measures that could adversely impact our operations and reduce the competitiveness of our products relative to local and global competitors.

We sell a significant majority of our products into countries outside of the United States including China, Taiwan, Japan and Korea. 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 influences might lead to trade disputes, impacts and/or disruptions, in particular, with respect to those affecting the semiconductor industry. The United States and other countries have imposed and may continue to impose trade restrictions, and have also levied tariffs and taxes on certain goods. Increases in tariffs, additional taxes or other trade restrictions and retaliatory measures may increasingly impact end-user demand and customer investment in manufacturing equipment, increase our manufacturing costs, decrease margins, reduce the competitiveness of our products, or inhibit our ability to sell products or purchase necessary equipment and supplies, which could have a material adverse effect on our business, results of operations, or financial condition.

For example, certain international sales depend on our ability to obtain export licenses, and our inability to obtain such licenses has limited and could further limit our markets and impact our business. The U.S. Department of Commerce has promulgated several rules and interpretations expanding export license requirements for U.S. companies that sell certain products to entities in China whose actions or functions are intended to support military end uses, eliminated certain export license exceptions that applied to exports of certain items to China, and added certain Chinese companies, including one of the Company's customers, to its "entity list". These rules and interpretations require us to obtain additional export licenses to supply certain of our products to such customer in China. Obtaining export licenses may be difficult, costly and time-consuming, and our inability to obtain such licenses could limit our markets in China and adversely affect our results of operations. The implementation and interpretation of these rules are ongoing and their impact on our business is uncertain, and these rules and other regulatory changes that have occurred and may occur in the future could materially and adversely affect our results of operations. The U.S. and other governmental agencies may in the future promulgate new or additional export licensing or other requirements that have the effect of further limiting the Company's ability to provide certain of its products to customers outside the U.S., including China.

In addition, government authorities may impose conditions that require the use of local suppliers or partnerships with local companies, require the license or other transfer of intellectual property, or engage in other efforts to promote local businesses and local competitors, which could have a significant adverse impact on Applied's business. Many of these challenges are present in China and Korea, markets that represent a significant portion of Applied's current business as well as long-term growth opportunities.

Applied is exposed to risks associated with an uncertain global economy.

Uncertain or adverse economic and business conditions, including uncertainties and volatility in the financial markets, national debt, fiscal or monetary concerns, rising inflation and interest rates in various regions, could materially adversely impact Applied's 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, including rising inflation and interest rates, could result in decreases in consumer spending and demand or cause us to pass on increased costs to our customers. Such decreases in spending and demand or increases in costs may cause our customers to push out, cancel or refrain from purchasing our equipment or services, which could materially adversely impact demand for our products and our operating results. In addition, the COVID-19 pandemic, and transportation interruptions and other measures taken in response thereto, have had, and may continue to have, a significant adverse impact on the global and regional economic activity, as well as our ability to meet our customer demand.

Similarly, changes that result in sudden increases in consumer demand for electronic products (for example, as a result of the reopening of the economy with the easing of COVID-19 related restrictions) have resulted in, and may continue to result in, a shortage of parts and materials needed to manufacture our products. Such shortages, as well as shipment delays due to transportation interruptions, have adversely impacted, and may continue to adversely impact, our suppliers' ability to meet our demand requirements. Accelerated digital transformation may further increase consumer demand and exacerbate such shortages and also strain our manufacturing capacity, which may adversely impact our ability to meet customer demands and thus have an adverse impact on our revenues, results of operations and financial condition.

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

Uncertain economic and industry conditions and continued supply chain disruptions also make it more challenging for Applied to forecast its operating results, make business decisions, and identify and prioritize the risks that may affect its businesses, sources and uses of cash, financial condition and results of operations. If Applied does not appropriately manage its business operations in response to changing economic and industry conditions, it could have a significant negative impact on its business performance and financial condition. Applied may be required to implement additional cost reduction efforts, including restructuring activities, which may adversely affect Applied’s ability to capitalize on opportunities. Even during periods of economic uncertainty or lower revenues, Applied must continue to invest in research and development and maintain a global business infrastructure to compete effectively and support its customers, which can have a negative impact on its operating margins and earnings.

Applied maintains an investment portfolio that is subject to general credit, liquidity, market and interest rate risks. The risks to Applied’s investment portfolio may be exacerbated if financial market conditions deteriorate due to rising inflation, rising interest rates, and impacts of the ongoing COVID-19 pandemic and, as a result, the value and liquidity of the investment portfolio, as well as returns on pension assets, could be negatively impacted and lead to impairment charges. Applied also maintains cash balances in various bank accounts globally in order to fund normal operations. If any of these financial institutions becomes insolvent, it could limit Applied’s ability to access cash in the affected accounts, which could affect its ability to manage its operations.

Risks Associated with Applied’s Industry

The industries that Applied serves can be volatile and difficult to predict.

As a supplier to the global semiconductor and display and related industries, Applied is subject to variable industry conditions, since demand for manufacturing equipment and services can change depending on several factors, including the nature and timing of technology inflections and advances in fabrication processes, the timing and requirements of new and emerging technologies and market drivers, production capacity relative to demand for chips and display technologies, end-user demand, customers’ capacity utilization, production volumes, access to affordable capital, consumer buying patterns and general economic conditions. Applied’s industries historically have been cyclical, and are subject to volatility and sudden changes in customer requirements for new manufacturing capacity and advanced technology. These changes can affect the timing and amounts of customer investments in technology and manufacturing equipment and can have a significant impact on Applied’s net sales, operating expenses, gross margins and net income. The amount and mix of capital equipment spending between different products and technologies can have a significant impact on Applied’s results of operations.

To meet rapidly changing demand in the industries it serves, Applied must accurately forecast demand and effectively manage its resources and production capacity across its businesses, and may incur unexpected or additional costs to align its business operations. During periods of increasing demand for its products, Applied must have sufficient manufacturing capacity and inventory to meet customer demand; effectively manage its supply chain; attract, retain and motivate a sufficient number of qualified employees; and continue to control costs. During periods of decreasing demand, Applied must reduce costs and align its cost structure with prevailing market conditions; effectively manage its supply chain; and motivate and retain key employees. If Applied does not effectively manage these challenges during periods of changing demand, including as a result of the ongoing COVID-19 pandemic and its effects, its business performance and results of operations may be adversely impacted. Even with effective allocation of resources and management of costs, during periods of decreasing demand, Applied’s gross margins and earnings may be adversely impacted.

Applied is exposed to risks associated with a highly concentrated customer base.

Applied's customer base is highly concentrated and has become increasingly so as a result of continued consolidation. Applied's customer base is also geographically concentrated, particularly in China, Taiwan and Korea. A relatively limited number of manufacturers account for a substantial portion of Applied's business. As a result, the actions of even a single customer can expose Applied's business and results of operations to greater volatility. The geographic concentration of Applied's 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 Applied's net sales, gross margins and net income. Applied's 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 the ongoing COVID-19 pandemic or our inability to fulfill orders due to a shortage of parts, transportation interruptions or any other reason), Applied may not be able to replace the business, which may have a significant adverse impact on its results of operations and financial condition. The concentration of Applied's customer base increases its risks related to the financial condition of its customers, and the deterioration in financial condition of a single customer or the failure of a single customer to perform its obligations could have a material adverse effect on Applied's results of operations and cash flow. To the extent its customers experience liquidity constraints, Applied may incur bad debt expense, which may have a significant impact on its results of operations. Major customers may also seek pricing, payment, intellectual property-related, or other commercial terms that are less favorable to Applied, which may have a negative impact on Applied's business, cash flow, revenue and gross margins.

Applied is exposed to risks as a result of ongoing changes in the various industries in which it operates.

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

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

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

Applied is exposed to risks as a result of ongoing changes specific to the semiconductor industry.

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

- the increasing frequency and complexity of technology transitions and inflections, and Applied’s ability to timely and effectively anticipate and adapt to these changes;
- the increasing cost of research and development due to many factors, including shrinking geometries, the use of new materials, new and more complex device structures, more applications and process steps, increasing chip design costs, and the increasing cost and complexity of integrated manufacturing processes;
- the need to reduce product development time, despite the increasing difficulty of technical challenges;
- the growing number of types and varieties of semiconductors and number of applications across multiple substrate sizes;
- the increasing cost and complexity for semiconductor manufacturers to move more technically advanced capability and smaller geometries to volume manufacturing, and the resulting impact on the rates of technology transition and investment in capital equipment;
- challenges in generating organic growth given semiconductor manufacturers’ levels of capital expenditures and the allocation of capital investment to market segments that Applied does not serve, such as lithography, or segments where Applied’s products have lower relative market presence;
- the importance of increasing market positions in segments with growing demand;
- semiconductor manufacturer’s 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 Applied’s foundry customers;
- the concentration of new wafer starts in Korea and Taiwan, where Applied’s service penetration and service-revenue-per-wafer-start have been lower than in other regions;
- investment in semiconductor manufacturing capabilities in China, which may be affected by changes in economic conditions and governmental regulations and policies in China and the United States;
- 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 Applied does 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, its business and results of operations may be adversely impacted.

Applied is exposed to risks as a result of ongoing changes specific to the display industry.

The global display industry historically has experienced considerable volatility in capital equipment investment levels, due in part to the limited number of display manufacturers, the concentrated nature of end-use applications, production capacity relative to end-use demand, and panel manufacturer profitability. Industry growth depends primarily on consumer demand for increasingly larger and more advanced TVs, and on demand for advanced smartphones and mobile device displays, which demand is highly sensitive to cost and improvements in technologies and features. The display industry is characterized by ongoing changes particular to this industry that impact demand for and the profitability of Applied’s 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 Applied’s 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 local economic conditions and governmental policies in China, Korea, Japan and the United States;
- the importance of increasing market positions in products and technologies with growing demand;
- the rate of transition to larger substrate sizes for TVs and to new display technologies for TVs. IT products and mobile applications, and the resulting effect on capital intensity in the industry and on Applied’s product differentiation, gross margin and return on investment; and
- fluctuations in customer spending quarter over quarter and year over year for display manufacturing equipment, concentration of display manufacturer customers and their ability to successfully commercialize new products and technologies, and uncertainty with respect to future display technology end-use applications and growth drivers.

If Applied does not successfully develop and commercialize products to meet demand for new and emerging display technologies, or if industry demand for display manufacturing equipment and technologies slows, Applied’s business and its results of operations may be adversely impacted.

The industries in which Applied operates are highly competitive and subject to rapid technological and market changes.

Applied operates in a highly competitive environment in which innovation is critical, and its future success depends on many factors, including the development of new technologies and effective commercialization and customer acceptance of its equipment, services and related products, and its ability to increase its position in its current markets, expand into adjacent and new markets, and optimize operational performance. The development, introduction and support of a broadening set of products in a geographically diverse and competitive environment, and that may require greater collaboration with customers and other industry participants, have grown more complex and expensive over time. Furthermore, new or improved products may entail higher costs, longer development cycles, lower profits and may have unforeseen product design or manufacturing defects. To compete successfully, Applied 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;
- differentiate its 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, customers and customer requirements;
- enhance its worldwide operations across its 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 its 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 its products;
- improve its 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 its customers; and
- implement changes in its 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 Applied does not successfully anticipate technology inflections, develop and commercialize new products and technologies, and respond to changes in customer requirements and market trends, its business performance and results of operations may be adversely impacted.

Risks Related to Applied's Business, Finance and Operations

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

Applied's business depends on its timely supply of equipment, services and related products to meet the changing technical and volume requirements of its customers, which depends in part on the timely delivery of parts, materials and services, including components and subassemblies, from suppliers and contract manufacturers. Significant and sudden increases in demand for Applied's products, as well as worldwide demand for electronic products, have resulted in, and may continue to result in, a shortage of parts, materials and services needed to manufacture Applied's products. Such shortages, as well as delays in and unpredictability of shipments due to transportation interruptions, have adversely impacted, and may continue to adversely impact, our suppliers' ability to meet our demand requirements. Difficulties in obtaining sufficient and timely supply of parts, materials or services, and delays in and unpredictability of shipments due to transportation interruptions, have adversely impacted, and may continue to adversely impact, Applied's manufacturing operations and its ability to meet customer demand. Moreover and as more fully discussed in the risk factor "The ongoing COVID-19 pandemic and global measures taken in response thereto have adversely impacted, and may continue to adversely impact, Applied's operations and financial results" above, recent lockdowns imposed in certain parts of China and related travel and logistics restrictions have resulted in, and are expected to continue to result in, additional supply chain and transportation disruptions, production delays, capacity limitations and cost increases. Our operating results may be adversely impacted if we are unable to obtain parts, materials or services needed to manufacture Applied's products, or if we are unable to do so on a timely manner or on favorable terms. Some key parts are subject to long lead-times or available only from a single supplier or limited group of suppliers, and some sourcing or subassembly is provided by suppliers located in countries other than the countries where Applied conducts its manufacturing. Supply chain disruptions have caused and may continue to cause delays in our equipment production and delivery schedules, which can lead to our business performance becoming significantly dependent on quarter-end production and delivery schedules, and could have an adverse impact on our operating and financial results. Volatility of demand for manufacturing equipment can also increase capital, technical, operational and other risks for Applied and for companies throughout its supply chain, and may cause some suppliers to exit businesses, or scale back or cease operations, which could impact our ability to meet customer demand.

Applied may also experience significant interruptions of its manufacturing operations, delays in its ability to deliver or install products or services, increased costs or customer order cancellations as a result of:

- the failure or inability to accurately forecast demand and obtain sufficient quantities of quality parts on a cost-effective basis;
- volatility in the availability and cost of parts, materials or services, including increased costs due to rising inflation or interest rates or other market conditions;
- difficulties or delays in obtaining required import or export 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;
- information technology or infrastructure failures, including those of a third party supplier or service provider; and

- natural disasters, the impacts of climate change, or other events beyond Applied's control (such as earthquakes, utility interruptions, tsunamis, hurricanes, typhoons, floods, storms or extreme weather conditions, fires, regional economic downturns, regional or global health epidemics, including the ongoing COVID-19 pandemic, geopolitical turmoil, increased trade restrictions between the U.S. and China and other countries, social unrest, political instability, terrorism, or acts of war) in locations where it or its customers or suppliers have manufacturing, research, engineering or other operations.

As more fully discussed in the risk factor "The ongoing COVID-19 pandemic and global measures taken in response thereto have adversely impacted, and may continue to adversely impact, Applied's operations and financial results" above, the ongoing COVID-19 pandemic and measures taken in response by governments and businesses worldwide to contain its spread have adversely impacted and are expected to continue to adversely impact Applied's supply chain, manufacturing, logistics, workforce and operations, as well as the operations of Applied's customers, suppliers and partners globally.

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

In addition, if Applied needs to rapidly increase its business and manufacturing capacity to meet increases in demand or expedited shipment schedules, this may strain Applied's manufacturing and supply chain operations, and negatively impact Applied's working capital. Moreover, if actual demand for Applied's products is different than expected, Applied may purchase more/fewer parts than necessary or incur costs for canceling, postponing or expediting delivery of parts. If Applied purchases or commits 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, Applied may incur excess or obsolete inventory charges.

Applied is exposed to risks associated with business combinations, acquisitions, strategic investments and divestitures.

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

- inability to complete proposed transactions timely or at all due to the failure to obtain regulatory or other approvals, litigation or other disputes, and any ensuing obligation to pay a termination fee;
- diversion of management's attention and disruption of ongoing businesses;
- the failure to realize expected revenues, gross and operating margins, net income and other returns from acquired businesses;
- requirements imposed by government regulators in connection with their review of a transaction, which may include, among other things, divestitures and restrictions on the conduct of Applied's 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 Applied's existing markets and where competitors may have stronger market positions and customer relationships;
- failure to retain and motivate key employees of acquired businesses;
- the potential impact of the announcement or consummation of a proposed transaction on relationships with third parties;
- potential changes in Applied's credit rating, which could adversely impact the Company's access to and cost of capital;

- reductions in cash balances or increases in debt obligations to finance activities associated with a transaction, which increase interest expense, and reductions in cash balances, which reduce the availability of cash flow for general corporate or other purposes, including share repurchases and dividends;
- exposure to new operational risks, rules, regulations, worker expectations, customs and practices to the extent acquired businesses are located in regions where Applied has not historically conducted business;
- challenges associated with managing new, more diverse and more widespread operations, projects and people;
- inability to obtain and protect intellectual property rights in key technologies;
- inadequacy or ineffectiveness of an acquired company’s internal financial controls, disclosure controls and procedures, cybersecurity, privacy policies and compliance programs, or environmental, health and safety, anti-corruption, human resource, or other policies or practices;
- impairment of acquired intangible assets and goodwill as a result of changing business conditions, technological advancements or worse-than-expected performance of the segment;
- the risk of litigation or claims associated with a proposed or completed transaction;
- unknown, underestimated, undisclosed or undetected commitments or liabilities or non-compliance with laws, regulations or policies; and
- the inappropriate scale of acquired entities’ critical resources or facilities for business needs.

Applied also makes 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 Applied 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. Applied may not receive the necessary regulatory approvals or the approvals may come with significant conditions or obligations. The risks to Applied’s 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.

Applied continually assesses the strategic fit of its businesses and may from time to time seek to divest portions of its business that are not deemed to fit with its strategic plan. Some divestitures may take the form of Applied contributing assets to a joint venture, and thus are subject to the joint venture risks discussed above. In addition, divestitures involve significant risks and uncertainties, such as ability to sell such businesses on satisfactory price and terms and in a timely manner (including long and costly sales processes and the possibility of lengthy and potentially unsuccessful attempts by a buyer to receive required regulatory approvals), or at all, disruption to other parts of the businesses and distraction of management, allocation of internal resources that would otherwise be devoted to completing strategic acquisitions, loss of key employees or customers, exposure to unanticipated liabilities (including, among other things, those arising from representations and warranties made to a buyer regarding the businesses) or ongoing obligations to support the businesses following such divestitures, and other adverse financial impacts.

Applied is exposed to risks associated with expanding into new and related markets and industries.

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

- the need to devote additional resources to develop new products for, and operate in, new markets;
- the need to develop new sales and technical marketing strategies, cultivate relationships with new customers and meet different customer service requirements;
- differing rates of profitability and growth among multiple businesses;
- Applied’s 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 Applied does not have, or has 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;
- third parties' intellectual property rights; and
- the need to comply with, or work to establish, industry standards and practices.

In addition, Applied from time to time receives funding from United States and other government agencies for certain strategic development programs to increase its research and development resources and address new market opportunities. As a condition to this government funding, Applied is often subject to certain record-keeping, audit, intellectual property rights-sharing, and/or other obligations.

The ability to attract, retain and motivate key employees is vital to Applied's success.

Applied's success, competitiveness and ability to execute on its global strategies and maintain a culture of innovation depend in large part on its ability to attract, retain and motivate qualified employees and leaders with 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 changes, Applied's organizational structure, increasing local and global competition for talent, the availability of qualified employees in the local and global markets, availability of career development opportunities, the ability to obtain necessary authorizations for workers to provide services outside their home countries, and the attractiveness of Applied's compensation and benefit programs, including its share-based programs, and Applied's employment policies, including the flexibility of its remote-work arrangements. We have experienced, and may continue to experience, increasing costs to attract and retain needed talent, driven by macro-economic conditions and a highly competitive labor market. If we are unable to attract, retain and motivate qualified employees and leaders, we may be unable to fully capitalize on current and new market opportunities, which could adversely impact Applied's business and results of operations. The loss or retirement of employees presents particular challenges to the extent they involve the departure of knowledgeable and experienced employees and the resulting need to identify and train existing or new candidates to perform necessary functions, which may result in unexpected costs, reduced productivity, and/or difficulties with respect to internal processes and controls.

Applied is exposed to risks associated with operating in jurisdictions with complex and changing tax laws.

Applied is subject to income taxes in the United States and foreign jurisdictions. Significant judgment is required to determine and estimate worldwide tax liabilities. Applied's 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.

Beginning in fiscal 2023, the Tax Cuts and Jobs Act enacted on December 22, 2017 eliminates the option to deduct research and development expenditures currently and requires taxpayers to capitalize and amortize them over five or fifteen years. Although Congress is considering legislation that would defer the capitalization and amortization requirement, there is no assurance that the provision will be repealed or otherwise modified. If the requirement is not modified, it may increase Applied's provision for income taxes and effective tax rates beginning in fiscal 2023.

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 Applied's provision for income taxes and effective tax rate could, in turn, have a material adverse impact on Applied's results of operations and financial condition.

Consistent with the international nature of its business, Applied conducts certain manufacturing, supply chain, and other operations in Asia, bringing these activities closer to customers and reducing operating costs. In certain foreign jurisdictions, conditional reduced income tax rates have been granted to Applied. To obtain the benefit of these tax incentives, Applied must meet requirements relating to various activities. Applied's ability to realize benefits from these incentives could be materially affected if, among other things, applicable requirements are not met or Applied incurs net losses in these jurisdictions.

In addition, Applied is subject to examination by the U.S. Internal Revenue Service and other tax authorities, and from time to time amends previously filed tax returns. Applied regularly assesses the likelihood of favorable or unfavorable outcomes resulting from these examinations and amendments to determine the adequacy of its provision for income taxes, which requires estimates and judgments. Although Applied believes its tax estimates are reasonable, there can be no assurance that the tax authorities will agree with such estimates. Applied 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 Applied will be successful or that any final determination will not be materially different from the treatment reflected in Applied's historical income tax provisions and effective tax rates.

Applied's indebtedness and debt covenants could adversely affect its financial condition and business.

Applied has $5.5 billion in aggregate principal amount of senior unsecured notes outstanding. Under the indenture governing the senior unsecured notes, it may be required to offer to repurchase the notes at a price equal to 101% of the principal amount, plus accrued and unpaid interest, upon a change of control of Applied and a contemporaneous downgrade of the notes below investment grade. Applied also has in place a $1.5 billion revolving credit facility. While no amounts were outstanding under this credit facility as of May 1, 2022, Applied may borrow amounts in the future under this credit facility. Applied may also enter into new financing arrangements. Applied's ability to satisfy its debt obligations is dependent upon the results of its business operations and subject to other risks discussed in this section. Significant changes in Applied's credit rating, disruptions in the global financial markets or changes in the interest rate environment could have a material adverse consequence on Applied's access to and cost of capital for future financings, and financial condition. If Applied fails to satisfy its debt obligations, or comply with financial and other debt covenants, it may be in default and any borrowings may become immediately due and payable, and such default may also constitute a default under other of Applied's obligations. There can be no assurance that Applied would have sufficient financial resources or be able to arrange financing to repay any borrowings at such time.

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

Applied periodically implements new or enhanced enterprise resource planning and related information systems in order to better manage its business operations, align its global organizations and enable future growth. Implementation of new business processes and information systems requires the commitment of significant personnel, training and financial resources, and entails risks to Applied's business operations. If Applied does not successfully implement enterprise resource planning and related information systems improvements, or if there are delays or difficulties in implementing these systems, Applied may not realize anticipated productivity improvements or cost efficiencies, and may experience interruptions in service and operational difficulties, such as its ability to track orders, timely manufacture and ship products, project inventory requirements, effectively manage its supply chain and allocate human resources, aggregate financial data and report operating results, and otherwise effectively manage its business, all of which could result in quality issues, reputational harm, lost market and revenue opportunities, and otherwise adversely affect Applied's business, financial condition and results of operations.

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

Applied has a significant amount of goodwill and other acquired intangible assets related to acquisitions. Goodwill and purchased intangible assets with indefinite useful lives are not amortized, but are reviewed for impairment annually during the fourth quarter of each fiscal year, and more frequently when events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. The review compares the fair value for each of Applied's 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 Applied common stock, changes in Applied's strategies or product portfolio, and restructuring activities. Applied's valuation methodology for assessing impairment requires management to make judgments and assumptions based on historical experience and projections of future operating performance. Applied 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.

Risks Related to Intellectual Property and Cybersecurity

Applied is exposed to various risks related to protection and enforcement of intellectual property rights.

Applied's success depends in significant part on the protection of its technology using patents, trade secrets, copyrights and other intellectual property rights. Infringement of Applied's rights by a third party, such as the unauthorized manufacture or sale of equipment or spare parts, could result in uncompensated lost market and revenue opportunities for Applied. Monitoring and detecting any unauthorized use of intellectual property is difficult and costly and Applied cannot be certain that the protective measures it has implemented will completely prevent misuse. Applied's ability to enforce its intellectual property rights is subject to litigation risks, as well as uncertainty as to the protection and enforceability of those rights in some countries. If Applied seeks to enforce its intellectual property rights, it may be subject to claims that those rights are invalid or unenforceable, and others may seek counterclaims against Applied, which could have a negative impact on its business. If Applied is unable to enforce and protect intellectual property rights, or if they are circumvented, rendered obsolete or invalidated by the rapid pace of technological change, it could have an adverse impact on its competitive position and business. In addition, changes in intellectual property laws or their interpretation may impact Applied's ability to protect and assert its 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 Applied's intellectual property assets.

Third parties may also assert claims against Applied and its products. Claims that Applied's 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 Applied's business. In addition, Applied 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 Applied's business and reputation, result in significant expenses, harm its competitive position, and prevent Applied from selling certain products, all of which could have a significant adverse impact on Applied's business and results of operations.

Applied is exposed to risks related to cybersecurity threats and incidents.

In the conduct of its business, Applied collects, uses, transmits and stores data on information technology systems, including systems owned and maintained by Applied or its third-party providers. These data include confidential information and intellectual property belonging to Applied or its customers or other business partners, as well as personal information of individuals. All information technology systems are subject to disruption, breach or failure. Applied and its third-party providers have experienced, and expect to continue to experience, cybersecurity incidents, some of which have been, and may continue to be, successful. These cybersecurity incidents may range from employee error or misuse, to individual attempts to gain unauthorized access to these information systems, to sophisticated cybersecurity attacks, known as advanced persistent threats, any of which may target the Company directly or indirectly through its third party providers and global supply chain. Globally, cybersecurity attacks are increasing in number and the attackers are increasingly organized and well-financed, or at times supported by state actors. In addition, geopolitical tensions or conflicts, such as Russia's invasion of Ukraine, may create a heightened risk of cybersecurity attacks. Although no such cybersecurity incident has been material to the Company to date, Applied continues to devote significant resources to network security, data encryption, and other measures to protect its systems and data from unauthorized access or misuse, and it may be required to expend greater resources in the future, especially in the face of continuously evolving and increasingly sophisticated cybersecurity threats and privacy and data protection laws. Applied may be unable to anticipate, prevent or remediate future attacks, and in some instances Applied may be unaware of a cybersecurity incident or its magnitude and effects, particularly as attackers are becoming increasingly able to circumvent controls and remove forensic evidence. Depending on their nature and scope, cybersecurity incidents may result in business disruption, such as delay in the development and delivery of Applied's products or disruption of Applied's manufacturing processes, internal communications, interactions with customers and suppliers and processing and reporting financial results; the 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 Applied and its third party providers and customers); reputational damage; litigation or regulatory enforcement action related to contractual or regulatory privacy, cybersecurity, data protection, or other confidentiality obligations; diminution in the value of Applied's 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. Compliance with, and changes to, laws and regulations concerning privacy, cybersecurity, data protection and data localization could result in significant expense, and any failure to comply could result in proceedings against Applied by regulatory authorities or other third parties. Further, customers and third-party providers increasingly demand rigorous contractual provisions regarding privacy, cybersecurity, data protection, confidentiality, and intellectual property, which may also increase our overall compliance burden.

Risks Related to Legal and Compliance

Applied is exposed to various risks related to legal proceedings.

Applied from time to time is, and in the future may be involved in legal proceedings or claims regarding patent infringement, trade secret misappropriation, and other intellectual property rights, trade, including import, export and customs, antitrust, environmental regulations, privacy, data protection, securities, contracts, product performance, product liability, unfair competition, employment, workplace safety, and other matters. Applied also on occasion receives notification from customers who believe that Applied owes them indemnification, product warranty or has other obligations related to claims made against such customers by third parties.

Legal proceedings and claims, whether with or without merit, and associated internal investigations, may be time-consuming and expensive to prosecute, defend or conduct; divert management's attention and other Applied resources; inhibit Applied's ability to sell its products; result in adverse judgments for damages, injunctive relief, penalties and fines; and negatively affect Applied's business. There can be no assurance regarding the outcome of current or future legal proceedings, claims or investigations.

Applied is subject to risks associated with environmental, health and safety regulations and sustainability requirements.

Applied is subject to environmental, health and safety regulations in connection with its global business operations, including but not limited to: regulations related to the development, manufacture, shipping and use of its products; handling, discharge, recycling and disposal of hazardous materials used in its products or in producing its products; the operation of its facilities; and the use of its real property. The failure or inability to comply with existing or future environmental, health and safety regulations, including those relating to climate change, 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 its products; limitations on the operation of its facilities or ability to use its real property; and a decrease in the value of its real property.

In addition to regulatory compliance, growing customer sustainability requirements, as well as Applied's sustainability targets, could cause Applied from time to time to alter its manufacturing, operations or equipment designs, and incur substantial expense to meet these regulatory and sustainability requirements. Any failure to comply with these regulations, or meet these customer requirements or sustainability targets, could adversely impact the demand for Applied's products and subject Applied to significant costs and liabilities and reputational risks that could adversely affect Applied's business, financial condition and results of operations.

Applied is exposed to various risks related to the global regulatory environment.

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

Item 2. *Unregistered Sales of Equity Securities and Use of Proceeds*

Issuer Purchases of Equity Securities

In March 2022, Applied's Board of Directors approved a common stock repurchase program authorizing $6.0 billion in repurchases, which supplemented the previously existing $7.5 billion authorization approved in March 2021. As of May 1, 2022, approximately $7.4 billion remained available for future stock repurchases under the repurchase program.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Aggregate Price Paid	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Dollar Value of Shares That May Yet be Purchased Under the Program
	(In millions, except per share amounts)				
Month #1					
(January 31, 2022 to February 27, 2022)	3.0	$ 135.67	$ 403	3.0	$ 2,819
Month #2					
(February 28, 2022 to March 27, 2022)	3.9	$ 129.03	512	3.9	$ 8,307
Month #3					
(March 28, 2022 to May 1, 2022)	7.5	$ 118.31	885	7.5	$ 7,422
Total	14.4	$ 124.84	$ 1,800	14.4	

Item 3. *Defaults Upon Senior Securities*

None

Item 4. *Mine Safety Disclosures*

Not applicable.

Item 5. *Other Information*

None.

Item 6. *Exhibits*

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

		Incorporated by Reference			
Exhibit No.	Description	Form	File No.	Exhibit No.	Filing Date
10.1	Offer Letter, dated February 26, 2022, between Applied Materials, Inc. and Brice Hill†				
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.
May 26, 2022	By:	/s/ BRICE HILL
		Brice Hill *Senior Vice President,* *Chief Financial Officer* *(Principal Financial Officer)*
May 26, 2022	By:	/s/ CHARLES W. READ
		Charles W. Read *Corporate Vice President,* *Corporate Controller* *and Chief Accounting Officer* *(Principal Accounting Officer)*

3050 Bowers Avenue | P.O. Box 58039
Santa Clara, California 95054, U.S.A.
Telephone: 408 727 5555
www.appliedmaterials.com

APPLIED MATERIALS® **Exhibit 10.1**

February 26, 2022

Brice Hill
[Personal Address]

Dear Brice:

I am pleased to extend an offer of employment to you for the position of Senior Vice President, Chief Financial Officer, reporting to Gary Dickerson. We believe you will find great opportunity and professional challenge at Applied Materials, where you will contribute to the success of a world-class organization.

Your annual base salary will be $675,000, paid in accordance with the Company's normal payroll cycle.

After 30 days of continuous employment with Applied Materials, you will receive a Sign-on and Retention Bonus payment of $2,000,000. The bonus (less applicable payroll tax withholding and deductions) will be paid during the first payroll period after you have completed your first 30 days of employment with the Company. This bonus is intended to compensate you for a portion of the compensation you will forfeit at your prior employer and to provide an incentive to complete at least 24 months of service (the "Retention Period") with the Company. In the event that you resign or Applied Materials terminates your employment for Cause before the completion of your Retention Period, you will be obligated to repay to the Company the Sign-on and Retention Bonus less any amount withheld by the Company for taxes at the time of such bonus payment, as follows: (i) full re-payment in case of resignation or termination of employment before the twelve (12) month anniversary of your hire date and (ii) pro rata re-payment in case of resignation or termination of employment after the twelve (12) month anniversary of your hire date but before completing the Retention Period, with the obligation reduced by 1/24 for each completed month of employment following your hire date. "Cause" is defined in the Applied Materials Inc. Employee Stock Incentive Plan ("ESIP"). Such repayment will be due and owing to Applied Materials on your last day of work.

You will also participate in the Senior Executive Bonus Plan ("SEBP") with a target payout of 135% of your base salary. Your participation for fiscal year 2022 will be prorated for the portion of the year you are employed by the Company. Actual payout under the SEBP will be at the sole discretion of the Human Resources and Compensation Committee ("HRCC") and will be based on an evaluation of achievement of pre-determined financial and operational objectives and assessment of your individual performance. Generally, employees who leave the Company's employment before the end of the fiscal year are not eligible for a bonus payout for that fiscal year.

Additionally, you will receive a New Hire Restricted Stock Unit ("RSU") award with a grant-date value of $8,500,000. The grant date for this award will be the date you commence employment with Applied Materials. The number of RSUs underlying the award will be calculated by dividing the dollar amount specified above by the closing price of Applied Materials common stock on the grant date. The award will vest ratably over a three-year period, subject to your continued employment on each corresponding vesting date. The award will be granted under the terms and conditions of the ESIP and applicable stock award agreement. A stock award granted to you does not constitute a contract of employment and does not obligate the Company to retain you in its employ for any period.

Subject to your continuing employment in the position of Senior Vice President, Chief Financial Officer through the applicable grant date, and subject to the approval of the HRCC or its authorized delegate, you will be eligible for a fiscal year 2023 annual long-term incentive award with a grant-date value of no less than $4,250,000. This award will be subject to the terms and conditions of the ESIP and applicable award

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agreements and will generally reflect the provisions of the fiscal year 2023 long-term incentive program approved by the HRCC for Senior Vice Presidents of the Company.

In connection with your anticipated relocation to the San Francisco Bay Area in 2023, you will receive comprehensive relocation benefits under Applied's standard relocation program. Program benefits are summarized in a separate document attached to this offer letter.

As part of the employment process, it is necessary for us to ask you to complete a number of forms. This offer of employment is contingent upon your ability to provide and maintain the following:

1) Proof of your identity and authorization to work in the United States;

2) A signed copy of the Employment Agreement and the offer letter to Applied Materials prior to the expiration date set forth in the offer letter; and

3) A signed copy of the U.S. Export Compliance Agreement. If you are not a United States citizen, United States permanent resident, or Canadian citizen, you may not be able to begin work at Applied Materials until such time as Applied Materials, in its sole discretion, has obtained a validated license authorizing your receipt of regulated company information; and

4) Disclosure of your participation on any boards of directors or in any outside business activities so that Applied Materials may evaluate whether such participation poses an actual or potential conflict of interest with any aspect of Applied Materials' business.

5) This offer is made with the understanding that you will continue to comply with all prior employment agreements, and that you will not bring with you, use or disclose confidential or proprietary information belonging to any of your previous employers while employed by Applied Materials. You also agree to disclose to Applied Materials all ongoing contractual obligations to previous employers so that Applied may evaluate whether they will affect your ability to execute an Employment Agreement with Applied Materials.

If you agree to accept the terms of this offer letter and the attached Employment Agreement (which contains provisions pertaining to your employment, including protection of intellectual property, at-will employment status and arbitration), please sign both documents and return them by email to [**]@amat.com.

This offer will expire at 8 pm (Pacific Time zone) on March 4, 2022.

You will receive additional information regarding New-Hire Orientation and training upon receipt of your signed offer letter.

Sincerely,
Susan Winchester
SVP, Chief Human Resources Officer

I accept the employment offer as stated above.

Signature: /s/ Brice Hill

Date: March 3, 2022

Start Date: March 7, 2022

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: May 26, 2022

/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: May 26, 2022

/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 May 1, 2022, 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 May 1, 2022 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 May 1, 2022 fairly presents, in all material respects, the financial condition and results of operations of Applied Materials, Inc. for the periods presented therein.

Date: May 26, 2022

/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 May 1, 2022, 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 May 1, 2022 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 May 1, 2022 fairly presents, in all material respects, the financial condition and results of operations of Applied Materials, Inc. for the periods presented therein.

Date: May 26, 2022

/s/ BRICE HILL

Brice Hill
Senior Vice President, Chief Financial Officer