MICRON TECHNOLOGY INC
Form 10-Q
March 21, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
(Mark One)

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

For the quarterly period ended February 28, 2019
OR

o 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 1-10658

Micron Technology, Inc.
(Exact name of registrant as specified in its charter)

Delaware	75-1618004
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)
8000 S. Federal Way, Boise, Idaho	83716-9632
(Address of principal executive offices)	(Zip Code)
Registrant's telephone number, including area code	(208) 368-4000

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 T No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes T 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 the 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 x	Accelerated Filer o	Non-Accelerated Filer o	Smaller Reporting Company o	Emerging Growth Company o

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. o
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x
The number of outstanding shares of the registrant's common stock as of March 14, 2019 was 1,106,687,011.

Micron Technology, Inc., including its consolidated subsidiaries, is an industry leader in innovative memory and storage solutions. Through our global brands – Micron®, Crucial®, and Ballistix® – our broad portfolio of high-performance memory and storage technologies, including DRAM, NAND, NOR Flash, and 3D XPoint memory, is transforming how the world uses information to enrich life. Backed by 40 years of technology leadership, our memory and storage solutions enable disruptive trends, including artificial intelligence, machine learning, and autonomous vehicles, in key market segments like data center, networking, automotive, industrial, mobile, graphics, and client.

Micron, Crucial, Ballistix, any associated logos, and all other Micron trademarks are the property of Micron. 3D XPoint is a trademark of Intel in the United States and/or other countries. Other product names or trademarks that are not owned by Micron are for identification purposes only and may be the registered or unregistered trademarks of their respective owners.

Definitions of Commonly Used Terms

As used herein, "we," "our," "us," and similar terms include Micron Technology, Inc. and our consolidated subsidiaries, unless the context indicates otherwise. Abbreviations, terms, or acronyms are commonly used or found in multiple locations throughout this report and include the following:

Term	Definition	Term	Definition
2022 Term Loan B	Senior Secured Term Loan B due 2022	Micron	Micron Technology, Inc. (Parent Company)
2024 Notes	4.64% Senior Unsecured Notes due 2024	MMJ	Micron Memory Japan, G.K.
2025 Notes	5.50% Senior Unsecured Notes due 2025	MMJ Group	MMJ and its subsidiaries
2026 Notes	4.98% Senior Unsecured Notes due 2026	MMT	Micron Memory Taiwan Co., Ltd.
2029 Notes	5.33% Senior Unsecured Notes due 2029	MTTW	Micron Technology Taiwan, Inc.
2032D Notes	3.13% Convertible Senior Notes due 2032	Qimonda	Qimonda AG
2033F Notes	2.13% Convertible Senior Notes due 2033	R&D	Research and Development
2043G Notes	3.00% Convertible Senior Notes due 2043	SG&A	Selling, General, and Administrative
CPU	Central Processing Unit	SSD	Solid-State Drive
IMFT	IM Flash Technologies, LLC	TLC	Triple-Level Cell
Inotera	Inotera Memories, Inc.	VIE	Variable Interest Entity
Intel	Intel Corporation		

The following Micron subsidiaries appear throughout this report:

Micron Consumer Products Group, Inc.	Micron Semiconductor Products, Inc.
Micron Europe Limited	Micron Semiconductor (Shanghai) Co. Ltd.
Micron Semiconductor B.V.,	Micron Semiconductor (Xi'an) Co., Ltd.
Micron Semiconductor (Deutschland) GmbH	

Forward-Looking Statements

This Form 10-Q contains trend information and other forward-looking statements that involve a number of risks and uncertainties. Forward-looking statements include, but are not limited to, statements such as those made regarding our expected NAND and 3D XPoint™ development activities with Intel; the amount we expect to pay to purchase Intel's interest in IMFT; our expectation, from time to time, to engage in additional financing transactions; the sufficiency of our cash and investments, cash flows from operations, and available financing to meet our requirements at least through the next 12 months; and capital spending in 2019. We are under no obligation to update these forward-looking statements. Our actual results could differ materially from our historical results and those discussed in the forward-looking statements. Factors that could cause actual results to differ materially include, but are not limited to, those identified in "Part II, Other Information – Item 1A. Risk Factors."

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

MICRON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions except per share amounts)
(Unaudited)

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Revenue	$5,835	$7,351	$13,748	$14,154
Cost of goods sold	2,971	3,081	6,269	6,137
Gross margin	2,864	4,270	7,479	8,017
Selling, general, and administrative	209	196	418	387
Research and development	601	523	1,212	971
Other operating (income) expense, net	97	(16)	133	(5)
Operating income	1,957	3,567	5,716	6,664
Interest income	58	27	96	50
Interest expense	(27)	(88)	(60)	(212)
Other non-operating income (expense), net	(84)	(53)	(75)	(257)
	1,904	3,453	5,677	6,245
Income tax provision	(280)	(143)	(757)	(257)
Equity in net income of equity method investees	1	1	1	1
Net income	1,625	3,311	4,921	5,989
Net income attributable to noncontrolling interests	(6)	(2)	(9)	(2)
Net income attributable to Micron	$1,619	$3,309	$4,912	$5,987
Earnings per share				
Basic	$1.45	$2.86	$4.37	$5.23
Diluted	1.42	2.67	4.24	4.86
Number of shares used in per share calculations				
Basic	1,114	1,156	1,123	1,145
Diluted	1,141	1,238	1,157	1,232

See accompanying notes to consolidated financial statements.

MICRON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)
(Unaudited)

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Net income	$1,625	$3,311	$4,921	$5,989
Other comprehensive income (loss), net of tax				
Gains (losses) on derivative instruments	6	18	(6)	15
Unrealized gains (losses) on investments	6	(1)	3	(2)
Foreign currency translation adjustments	(1)	—	(1)	—
Pension liability adjustments	—	2	—	1
Other comprehensive income (loss)	11	19	(4)	14
Total comprehensive income	1,636	3,330	4,917	6,003
Comprehensive income attributable to noncontrolling interests	(6)	(2)	(9)	(2)
Comprehensive income attributable to Micron	$1,630	$3,328	$4,908	$6,001

See accompanying notes to consolidated financial statements.

MICRON TECHNOLOGY, INC.

CONSOLIDATED BALANCE SHEETS
(in millions except par value amounts)
(Unaudited)

As of	February 28, 2019	August 30, 2018
Assets		
Cash and equivalents	$ 6,353	$ 6,506
Short-term investments	1,180	296
Receivables	4,416	5,478
Inventories	4,390	3,595
Other current assets	211	164
Total current assets	16,550	16,039
Long-term marketable investments	1,614	473
Property, plant, and equipment	26,204	23,672
Intangible assets	350	331
Deferred tax assets	762	1,022
Goodwill	1,228	1,228
Other noncurrent assets	779	611
Total assets	$ 47,487	$ 43,376
Liabilities and equity		
Accounts payable and accrued expenses	$ 4,062	$ 4,374
Current debt	2,634	859
Other current liabilities	665	521
Total current liabilities	7,361	5,754
Long-term debt	3,604	3,777
Other noncurrent liabilities	993	581
Total liabilities	11,958	10,112
Commitments and contingencies		
Redeemable convertible notes	2	3
Redeemable noncontrolling interest	97	97
Micron shareholders' equity		
Common stock, $0.10 par value, 3,000 shares authorized, 1,178 shares issued and 1,106 outstanding (1,170 shares issued and 1,161 outstanding as of August 30, 2018)	118	117
Additional capital	8,143	8,201
Retained earnings	29,364	24,395
Treasury stock, 72 shares held (9 shares as of August 30, 2018)	(3,064)	(429)
Accumulated other comprehensive income	6	10
Total Micron shareholders' equity	34,567	32,294
Noncontrolling interests in subsidiaries	863	870
Total equity	35,430	33,164

Total liabilities and equity	$ 47,487	$ 43,376

See accompanying notes to consolidated financial statements.

MICRON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(in millions)
(Unaudited)

	Micron Shareholders Common Stock Number of Shares	Amount	Additional Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Micron Shareholders' Equity	Noncontrolling Interests in Subsidiaries	Total Equity
Balance at August 30, 2018	1,170	$ 117	$ 8,201	$ 24,395	$ (429)	$ 10	$ 32,294	$ 870	$ 33,164
Cumulative effect of adopting new accounting standards				92			92		92
Net income				3,293			3,293	—	3,293
Other comprehensive income (loss), net						(15)	(15)		(15)
Stock issued under stock plans	3	—	15				15		15
Stock-based compensation expense			61				61		61
Repurchase of stock	(1)	—	108	(11)	(1,933)		(1,836)		(1,836)
Reclassification of redeemable convertible notes, net			1				1		1
Conversion and repurchase of convertible notes			(36)				(36)		(36)
Balance at November 29, 2018	1,172	$ 117	$ 8,350	$ 27,769	$ (2,362)	$ (5)	$ 33,869	$ 870	$ 34,739
Net income				1,619			1,619	5	1,624
Other comprehensive income (loss), net						11	11		11
Stock issued under stock plans	7	1	76				77		77
Stock-based compensation expense			57				57		57
Repurchase of stock	(1)	—	(5)	(24)	(702)		(731)		(731)
Acquisitions of noncontrolling interest							—	(12)	(12)
Reclassification of redeemable convertible notes, net			1				1		1
Conversion and repurchase of convertible			(336)				(336)		(336)

notes									
Balance at February 28, 2019	1,178	$ 118	$ 8,143	$ 29,364	$ (3,064)	$ 6	$ 34,567	$ 863	$ 35,430

See accompanying notes to consolidated financial statements.

MICRON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(in millions)
(Unaudited)

	Micron Shareholders								
	Common Stock Number of Shares	Amount	Additional Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Micron Shareholders' Equity	Noncontrolling Interests in Subsidiaries	Total Equity
Balance at August 31, 2017	1,116	$ 112	$ 8,287	$ 10,260	$ (67)	$ 29	$ 18,621	$ 849	$ 19,470
Net income				2,678			2,678	—	2,678
Other comprehensive income (loss), net						(5)	(5)		(5)
Contributions from noncontrolling interests								18	18
Stock issued in public offering	34	3	1,363				1,366		1,366
Stock issued under stock plans	9	1	105				106		106
Stock-based compensation expense			51				51		51
Repurchase of stock	(1)	—	(90)		—		(90)		(90)
Reclassification of redeemable convertible notes, net			3				3		3
Conversion and repurchase of convertible notes			(271)		67		(204)		(204)
Balance at November 30, 2017	1,158	$ 116	$ 9,448	$ 12,938	$ —	$ 24	$ 22,526	$ 867	$ 23,393
Net income				3,309			3,309	2	3,311
Other comprehensive income (loss), net						19	19		19
Stock issued under stock plans	8	—	82				82		82
Stock-based compensation expense			52				52		52
Repurchase of stock	(1)	—	(44)		—		(44)		(44)
Settlement of capped calls			313		(313)		—		—
Reclassification of redeemable convertible notes, net			5				5		5
Conversion and repurchase of convertible notes			(252)				(252)		(252)
Balance at March 1, 2018	1,165	$ 116	$ 9,604	$ 16,247	$ (313)	$ 43	$ 25,697	$ 869	$ 26,566

See accompanying notes to consolidated financial statements.

MICRON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)
(Unaudited)

Six months ended	February 28, 2019	March 1, 2018
Cash flows from operating activities		
Net income	$ 4,921	$ 5,989
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense and amortization of intangible assets	2,648	2,241
Amortization of debt discount and other costs	29	55
Stock-based compensation	118	103
Loss on debt prepayments, repurchases, and conversions	69	218
Change in operating assets and liabilities		
Receivables	1,202	(630)
Inventories	(800)	(62)
Deferred tax assets	320	(262)
Accounts payable and accrued expenses	(326)	178
Other	64	154
Net cash provided by operating activities	8,245	7,984
Cash flows from investing activities		
Expenditures for property, plant, and equipment	(5,349)	(4,217)
Purchases of available-for-sale securities	(2,566)	(502)
Proceeds from government incentives	455	1
Proceeds from maturities of available-for-sale securities	391	138
Proceeds from sales of available-for-sale securities	160	562
Other	(10)	175
Net cash provided by (used for) investing activities	(6,919)	(3,843)
Cash flows from financing activities		
Payments to acquire treasury stock	(2,568)	(67)
Repayments of debt	(705)	(3,379)
Payments on equipment purchase contracts	(37)	(153)
Proceeds from issuance of debt	1,800	650
Proceeds from issuance of stock	92	1,554
Other	(65)	(25)
Net cash provided by (used for) financing activities	(1,483)	(1,420)
Effect of changes in currency exchange rates on cash, cash equivalents, and restricted cash	(1)	4
Net increase (decrease) in cash, cash equivalents, and restricted cash	(158)	2,725
Cash, cash equivalents, and restricted cash at beginning of period	6,587	5,216
Cash, cash equivalents, and restricted cash at end of period	$ 6,429	$ 7,941

See accompanying notes to consolidated financial statements.

MICRON TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(All tabular amounts in millions except per share amounts)
(Unaudited)

Basis of Presentation

The accompanying consolidated financial statements include the accounts of Micron and our consolidated subsidiaries and have been prepared in accordance with accounting principles generally accepted in the United States of America consistent in all material respects with those applied in our Annual Report on Form 10-K for the year ended August 30, 2018, except for changes related to recently adopted accounting standards. See "Recently Adopted Accounting Standards" note. Prior year information is presented in accordance with the accounting guidance in effect during that period and has not been recast for recently adopted accounting standards. In the opinion of our management, the accompanying unaudited consolidated financial statements contain all necessary adjustments, consisting of a normal recurring nature, to fairly state the financial information set forth herein. Certain reclassifications have been made to prior period amounts to conform to current period presentation.

Our fiscal year is the 52 or 53-week period ending on the Thursday closest to August 31. Fiscal years 2019 and 2018 each contain 52 weeks. All period references are to our fiscal periods unless otherwise indicated. These interim financial statements should be read in conjunction with the consolidated financial statements and accompanying notes included in our Annual Report on Form 10-K for the year ended August 30, 2018.

Variable Interest Entities

We have interests in entities that are VIEs. If we are the primary beneficiary of a VIE, we are required to consolidate it. To determine if we are the primary beneficiary, we evaluate whether we have the power to direct the activities that most significantly impact the VIE's economic performance and the obligation to absorb losses or the right to receive benefits of the VIE that could potentially be significant to the VIE. Our evaluation includes identification of significant activities and an assessment of our ability to direct those activities based on governance provisions and arrangements to provide or receive product and process technology, product supply, operations services, equity funding, financing, and other applicable agreements and circumstances. Our assessments of whether we are the primary beneficiary of our VIEs require significant assumptions and judgments.

Unconsolidated VIEs

PTI Xi'an: Powertech Technology Inc. Xi'an ("PTI Xi'an") is a wholly-owned subsidiary of Powertech Technology Inc. ("PTI") and was created to provide assembly services to us at our manufacturing site in Xi'an, China. We do not have an equity interest in PTI Xi'an. PTI Xi'an is a VIE because of the terms of its service agreement with us and its dependency on PTI to finance its operations. We do not have the power to direct the activities of PTI Xi'an that most significantly impact its economic performance, primarily because we do not have governance rights. Therefore, we do not consolidate PTI Xi'an. In connection with our assembly services with PTI, as of February 28, 2019 and August 30, 2018, we had net property, plant, and equipment of $56 million and $63 million, respectively, and capital lease obligations of $55 million and $63 million, respectively.

Consolidated VIE

IMFT: IMFT is a VIE because all of its costs are passed to us and its other member, Intel, through product purchase agreements and because IMFT is dependent upon us or Intel for additional cash requirements. The primary activities of IMFT are driven by the constant introduction of product and process technology. Because we perform a significant majority of the technology development, we have the power to direct its key activities. We consolidate IMFT because we have the power to direct the activities of IMFT that most significantly impact its economic performance and because we have the obligation to absorb losses and the right to receive benefits from IMFT that could potentially be significant to it. On January 14, 2019, we exercised our option to acquire Intel's interest in IMFT. As a result, Intel can elect to set the closing date of the transaction to be any time between approximately six months to one year from the date we exercised our call option. (See "Equity – Noncontrolling Interests in Subsidiaries – IMFT" note.)

Recently Adopted Accounting Standards

In October 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-16 – Intra-Entity Transfers Other Than Inventory ("ASU 2016-16"), which requires an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. We adopted this ASU in the first quarter of 2019 under the modified retrospective method and, in connection therewith, made certain adjustments as noted in the table below.

In January 2016, the FASB issued ASU 2016-01 – Recognition and Measurement of Financial Assets and Financial Liabilities, which provides guidance for the recognition, measurement, presentation, and disclosure of financial assets and liabilities. We adopted this ASU in the first quarter of 2019 under the modified retrospective method, with prospective adoption for amendments related to equity securities without readily determinable fair values. The adoption of this ASU did not have a material impact on our financial statements.

In May 2014, the FASB issued ASU 2014-09 – Revenue from Contracts with Customers (as amended, "ASC 606"), which supersedes nearly all existing revenue recognition guidance under generally accepted accounting principles in the United States. The core principal of ASC 606 is that an entity should recognize revenue when it transfers control of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASC 606 also requires additional disclosure about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments, and assets recognized from costs incurred to obtain or fulfill a contract. We adopted ASC 606 in the first quarter of 2019 under the modified retrospective method and, in connection therewith, made certain adjustments as noted in the table below. We applied ASC 606 to contracts with customers that had not yet been completed as of the adoption date.

The following table summarizes the effects of adopting ASU 2016-16 and ASC 606.

	Ending Balance as of August 30, 2018	ASU 2016-16	ASC 606	Opening Balance as of August 31, 2018
Receivables	$ 5,478	$ —	$ 114	$ 5,592
Inventories	3,595	—	(5)	3,590
Other current assets	164	(14)	30	180
Deferred tax assets	1,022	56	(92)	986
Other current liabilities	521	—	(4)	517
Other noncurrent liabilities	581	—	1	582
Retained earnings	24,395	42	50	24,487

As a result of the adoption of ASC 606, the opening balances as of August 31, 2018 for receivables, other current assets, and other current liabilities increased due to the reclassification of allowances for rebates, pricing adjustments, and returns to conform to the new presentation requirements. In addition, the margin from previously deferred sales to distributors was reclassified from other current liabilities to retained earnings. The tax effects of the adoption of ASC 606 were recorded primarily as a reduction of net deferred tax assets, substantially as a result of recognizing income for accounting purposes earlier under ASC 606 than for tax purposes in various jurisdictions.

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The effects of ASC 606 to our consolidated statement of operations and balance sheet were as follows:

	Quarter ended February 28, 2019			Six months ended February 28, 2019		
	As Reported	Adjustments	Amounts Without the Effects of Adoption of ASC 606	As Reported	Adjustments	Amounts Without the Effects of Adoption of ASC 606
Revenue	$5,835	$ (20)	$ 5,815	$13,748	$ (115)	$13,633
Cost of goods sold	2,971	(28)	2,943	6,269	(69)	6,200
Interest expense	(27)	1	(26)	(60)	3	(57)
Income tax provision	(280)	(8)	(288)	(757)	(5)	(762)
Net income attributable to Micron	1,619	1	1,620	4,912	(48)	4,864

As of February 28, 2019	As Reported	Adjustments	Amounts Without the Effects of Adoption of ASC 606
Receivables	$ 4,416	$ (154)	$ 4,262
Other current assets	211	(39)	172
Deferred tax assets	762	87	849
Accounts payable and accrued expenses	4,062	—	4,062
Other current liabilities	665	(7)	658
Other noncurrent liabilities	993	(1)	992
Retained earnings	29,364	(98)	29,266

Recently Issued Accounting Standards Not Yet Adopted

In November 2018, the FASB issued ASU 2018-18 – Collaborative Arrangements, which clarifies that certain transactions between collaborative arrangement participants should be accounted for as revenue when the collaborative arrangement participant is a customer in the context of a unit of account and precludes recognizing as revenue consideration received from a collaborative arrangement participant if the participant is not a customer. This ASU will be effective for us in the first quarter of 2021 with early adoption permitted. This ASU requires retrospective adoption to the date we adopted ASC 606, August 31, 2018, by recognizing a cumulative-effect adjustment to the opening balance of retained earnings of the earliest annual period presented. We are evaluating the timing and effects of our adoption of this ASU on our financial statements.

In June 2016, the FASB issued ASU 2016-13 – Measurement of Credit Losses on Financial Instruments, which requires a financial asset (or a group of financial assets) measured on the basis of amortized cost to be presented at the net amount expected to be collected. This ASU requires that the income statement reflect the measurement of credit losses for newly recognized financial assets as well as the increases or decreases of expected credit losses that have taken place during the period. This ASU requires that credit losses of debt securities designated as available-for-sale be recorded through an allowance for credit losses and limits the credit loss to the amount by which fair value is below amortized cost. This ASU will be effective for us in the first quarter of 2021 with adoption permitted as early as the first quarter of 2020. This ASU requires modified retrospective adoption, with prospective adoption for debt securities for which an other-than-temporary impairment had been recognized before the effective date. We are evaluating the timing and effects of our adoption of this ASU on our financial statements.

In February 2016, the FASB issued ASU 2016-02 – Leases, which amends a number of aspects of lease accounting, including requiring lessees to recognize operating leases with a term greater than one year on their balance sheet as a right-of- use asset and corresponding liability, measured at the present value of lease payments. This ASU, as amended, will be effective for us in the first quarter of 2020 with early adoption permitted and allows for either a modified retrospective adoption or a retrospective adoption by recognizing a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The adoption of this ASU will result in an increase to our consolidated balance sheets for these right-of-use assets and corresponding liabilities. We are evaluating the timing and other effects of our adoption of this ASU on our financial statements.

Cash and Investments

Cash and equivalents and the fair values of our available-for-sale investments, which approximated amortized costs, were as follows:

As of	February 28, 2019				August 30, 2018			
	Cash and Equivalents	Short-term Investments	Long-term Marketable Investments(1)	Total Fair Value	Cash and Equivalents	Short-term Investments	Long-term Marketable Investments(1)	Total Fair Value
Cash	$2,652	$ —	$ —	$2,652	$3,223	$ —	$ —	$3,223
Level 1(2)								
Money market funds	3,114	—	—	3,114	2,443	—	—	2,443
Level 2(3)								
Corporate bonds	21	692	923	1,636	3	172	272	447
Government securities	80	255	280	615	5	63	103	171
Asset-backed securities	—	105	401	506	—	34	96	130
Certificates of deposit	382	39	10	431	806	11	2	819
Commercial paper	104	89	—	193	26	16	—	42
	6,353	$ 1,180	$ 1,614	$9,147	6,506	$ 296	$ 473	$7,275
Restricted cash(4)	76				81			
Cash, cash equivalents, and restricted cash	$6,429				$6,587			

(1) The maturities of long-term marketable securities range from one to four years.

(2) The fair value of Level 1 securities is measured based on quoted prices in active markets for identical assets.

(3) The fair value of Level 2 securities is measured using information obtained from pricing services, which obtain quoted market prices for similar instruments, non-binding market consensus prices that are corroborated by observable market data, or various other methodologies, to determine the appropriate value at the measurement date. We perform supplemental analyses to validate information obtained from these pricing services. No adjustments were made to the fair values indicated by such pricing information as of February 28, 2019 or August 30, 2018.

(4) Restricted cash is included in other noncurrent assets and primarily consisted of balances related to the MMJ Creditor Payments. The restrictions on the MMJ Creditor Payments lapse upon approval by the trustees and/or Tokyo District Court.

Gross realized gains and losses from sales of available-for-sale securities were not material for any period presented. As of February 28, 2019, there were no available-for-sale securities that had been in a loss position for longer than 12 months.

Receivables

As of	February 28, 2019	August 30, 2018
Trade receivables	$ 3,997	$ 5,056
Income and other taxes	250	161

Other	169	261
	$ 4,416	$ 5,478

Inventories

As of	February 28, 2019	August 30, 2018
Finished goods	$ 843	$ 815
Work in process	3,023	2,357
Raw materials and supplies	524	423
	$ 4,390	$ 3,595

Property, Plant, and Equipment

As of	February 28, 2019	August 30, 2018
Land	$ 346	$ 345
Buildings	9,547	8,680
Equipment[(1)]	41,377	38,249
Construction in progress[(2)]	1,715	1,162
Software	745	655
	53,730	49,091
Accumulated depreciation	(27,526)	(25,419)
	$ 26,204	$ 23,672

(1) Included costs related to equipment not placed into service of $2.51 billion and $1.73 billion, as of February 28, 2019 and August 30, 2018, respectively.

(2) Included building-related construction, tool installation, and software costs for assets not yet placed into service.

Intangible Assets and Goodwill

As of	February 28, 2019		August 30, 2018	
	Gross Amount	Accumulated Amortization	Gross Amount	Accumulated Amortization
Amortizing assets				
Product and process technology	$577	$ (227)	$567	$ (344)
Non-amortizing assets				
In-process R&D	—	—	108	—
Total intangible assets	$577	$ (227)	$675	$ (344)
Goodwill	$1,228		$1,228	

In the first six months of 2019 and 2018, we capitalized $64 million and $15 million, respectively, for product and process technology with weighted-average useful lives of 8 years and 12 years, respectively, and placed in service $108 million of in-process R&D in the first quarter of 2019, which is being amortized on a straight-line basis over six years. Expected amortization expense is $36 million for the remainder of 2019, $66 million for 2020, $60 million for 2021, $47 million for 2022, and $43 million for 2023.

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Accounts Payable and Accrued Expenses

As of	February 28, 2019	August 30, 2018
Accounts payable	$ 1,523	$ 1,692
Property, plant, and equipment payables	1,416	1,238
Salaries, wages, and benefits	468	841
Income and other taxes	449	402
Other	206	201
	$ 4,062	$ 4,374

Debt

As of	February 28, 2019					August 30, 2018		
			Net Carrying Amount			Net Carrying Amount		
Instrument	Stated Rate	Effective Rate	Current	Long-Term	Total	Current	Long-Term	Total
IMFT Member Debt[(1)]	N/A	N/A	$1,009	$ —	$1,009	$—	$ 1,009	$1,009
Capital lease obligations	N/A	4.12 %	261	455	716	310	536	846
MMJ Creditor Payments	N/A	9.76 %	181	—	181	309	183	492
2022 Term Loan B	4.25%	4.66 %	5	718	723	5	720	725
2024 Notes	4.64%	4.76 %	—	597	597	—	—	—
2025 Notes	5.50%	5.56 %	—	516	516	—	515	515
2026 Notes	4.98%	5.07 %	—	497	497	—	—	—
2029 Notes	5.33%	5.40 %	—	696	696	—	—	—
2032D Notes	3.13%	6.33 %	—	125	125	—	132	132
2033F Notes	2.13%	4.93 %	68	—	68	235	—	235
2043G Notes	3.00%	6.76 %	1,110	—	1,110	—	682	682
			$2,634	$ 3,604	$6,238	$859	$ 3,777	$4,636

(1) IMFT Member Debt was classified as current as of February 28, 2019 as a result of exercising our option to acquire Intel's interest in IMFT.

Senior Unsecured Notes

On February 6, 2019, we issued our 2024 Notes, 2026 Notes, and 2029 Notes in a public offering. Issuance costs for these notes were $11 million. We may redeem some or all of these notes at our option prior to their maturity at a redemption price equal to accrued interest plus the present value of the remaining scheduled payments and we may redeem some or all of these notes at par between one and three months prior to maturity.

Each of the 2024 Notes, 2026 Notes, and 2029 Notes contain covenants that, among other things, limit, in certain circumstances, our ability and/or the ability of our restricted subsidiaries (which are generally domestic subsidiaries in which we own at least 80% of the voting stock) to (1) create or incur certain liens, (2) enter into certain sale and lease-back transactions; and (3) consolidate with or merge with or into, or convey, transfer or lease all or substantially all of our assets, to another entity. These covenants are subject to a number of limitations and exceptions. Additionally, if a change in control triggering event occurs, as defined in the indenture governing such notes, we will be required to offer to purchase such notes at 101% of the outstanding aggregate principal amount plus accrued interest up to the purchase date.

Convertible Senior Notes

On February 8, 2019, we notified holders of our 2043G Notes that we would redeem all of the outstanding 2043G Notes on March 13, 2019. Holders could elect to convert these notes prior to March 12, 2019 at a conversion rate of 34.2936 shares of our common stock per $1,000 of principal amount. In connection with our notice, we made an irrevocable election to settle any conversions in cash. As a result, we reclassified $336 million from equity to a derivative debt liability. As of February 28, 2019, current debt included an aggregate of $1.11 billion for the settlement obligation (including principal and amounts in excess of principal) of all of our 2043G Notes. Holders converted substantially all of the 2043G Notes and on March 13, 2019, we paid $1.43 billion to settle the conversions and recognized a loss of $316 million in the third quarter of 2019.

Holders of our convertible notes may convert their notes during any calendar quarter if the closing price of our common stock for at least 20 trading days in the 30 consecutive trading days ending on the last trading day of the preceding calendar quarter is more than 130% of the conversion price. As of February 28, 2019, the trading price of our common stock was higher than the initial conversion prices of our 2032D Notes and our 2033F Notes and, as a result, the aggregate conversion value of $807 million exceeded the aggregate principal amount of $203 million by $604 million.

Available Revolving Credit Facility

On November 27, 2018, we increased the amount available to draw under our existing revolving credit facility expiring in July 2023 from $2.0 billion to $2.5 billion. As of February 28, 2019, there were no outstanding amounts drawn under this facility.

Debt Activity

When we receive a notice of conversion for any of our convertible notes and elect to settle in cash any portion of the conversion obligation in excess of the principal amount, the cash settlement obligations become derivative debt liabilities subject to mark-to-market accounting treatment based on the volume-weighted-average price of our common stock over a period of 20 consecutive trading days. Accordingly, at the date of our election to settle a conversion in cash, we reclassify the fair value of the equity component of the converted notes from additional capital to derivative debt liability within current debt in our consolidated balance sheet.

The following table presents the effects of conversions, settlements, and issuance of debt in the first six months of 2019:

Six months ended February 28, 2019	Increase (Decrease) in Principal	Increase (Decrease) in Carrying Value	Increase (Decrease) in Cash	Decrease in Equity	Gain (Loss)
Settled conversions					
2032D Notes	$ (10)	$ (9)	$ (35)	$ (28)	$ 2
2033F Notes	(38)	(169)	(164)	(8)	13
Conversions not settled					
2043G Notes	—	420	—	(336)	(84)
Issuances					
2024 Notes	600	597	597	—	—
2026 Notes	500	497	497	—	—
2029 Notes	700	695	695	—	—
	$ 1,752	$ 2,031	$ 1,590	$ (372)	$ (69)

Contingencies

We have accrued a liability and charged operations for the estimated costs of adjudication or settlement of various asserted and unasserted claims existing as of the balance sheet date, including those described below. We are currently a party to other legal actions arising from the normal course of business, none of which is expected to have a material adverse effect on our business, results of operations, or financial condition.

Patent Matters

As is typical in the semiconductor and other high-tech industries, from time to time, others have asserted, and may in the future assert, that our products or manufacturing processes infringe upon their intellectual property rights.

On November 21, 2014, Elm 3DS Innovations, LLC ("Elm") filed a patent infringement action against Micron; Micron Semiconductor Products, Inc.; and Micron Consumer Products Group, Inc. in the U.S. District Court for the District of Delaware. On March 27, 2015, Elm filed an amended complaint against the same entities. The amended complaint alleges that unspecified semiconductor products of ours that incorporate multiple stacked die infringe 13 U.S. patents and seeks damages, attorneys' fees, and costs.

On December 15, 2014, Innovative Memory Solutions, Inc. ("IMS") filed a patent infringement action against Micron in the U.S. District Court for the District of Delaware. The complaint alleges that a variety of our NAND products infringe eight U.S. patents and seeks damages, attorneys' fees, and costs. On July 23, 2018, IMS served a patent infringement complaint on Micron Semiconductor (Deutschland) GmbH and Micron Europe Limited alleging that products including our SSDs infringe a European patent. The complaint seeks unspecified damages and an order forbidding Micron Semiconductor (Deutschland) GmbH and Micron Europe Limited from offering to sell, using, and importing the accused products. On August 31, 2018, Micron was served with a complaint filed by IMS in Shenzhen Intermediate People's Court in Guangdong Province, China. The complaint alleges that certain of our NAND flash products infringe a Chinese patent. The complaint seeks an order requiring Micron to stop manufacturing, using, selling, and offering for sale the accused products in China, and to pay damages of 1 million Chinese yuan plus expenses.

On March 19, 2018, Micron Semiconductor (Xi'an) Co., Ltd. ("MXA") was served with a patent infringement complaint filed by Fujian Jinhua Integrated Circuit Co., Ltd. ("Jinhua") in the Fuzhou Intermediate People's Court in Fujian Province, China (the "Fuzhou Court"). On April 3, 2018, Micron Semiconductor (Shanghai) Co. Ltd. ("MSS") was served with the same complaint. The complaint alleges that MXA and MSS infringe a Chinese patent by manufacturing and selling certain Crucial DDR4 DRAM modules. The complaint seeks an order requiring MXA and MSS to destroy inventory of the accused products and equipment for manufacturing the accused products in China, to stop manufacturing, using, selling, and offering for sale the accused products in China, and to pay damages of 98 million Chinese yuan plus court fees incurred.

On March 21, 2018, MXA was served with a patent infringement complaint filed by United Microelectronics Corporation ("UMC") in the Fuzhou Court. On April 3, 2018, MSS was served with the same complaint. The complaint alleges that MXA and MSS infringe a Chinese patent by manufacturing and selling certain Crucial DDR4 DRAM modules. The complaint seeks an order requiring MXA and MSS to destroy inventory of the accused products and equipment for manufacturing the accused products in China, to stop manufacturing, using, selling, and offering for sale the accused products in China, and to pay damages of 90 million Chinese yuan plus court fees incurred.

On April 3, 2018, MSS was served with another patent infringement complaint filed by Jinhua and two additional complaints filed by UMC in the Fuzhou Court. The three additional complaints allege that MSS infringes three Chinese patents by manufacturing and selling certain Crucial MX300 SSDs and certain GDDR5 memory chips. The two complaints filed by UMC each seek an order requiring MSS to destroy inventory of the accused products and equipment for manufacturing the accused products in China, to stop manufacturing, using, selling, and offering for sale the accused products in China, and to pay damages of 90 million Chinese yuan plus court fees incurred. The complaint filed by Jinhua seeks an order requiring MSS to destroy inventory of the accused products and equipment for manufacturing the accused products in China, to stop manufacturing, using, selling, and offering for sale the accused products in China, and to pay damages of 98 million Chinese yuan plus court fees incurred. On October 9, 2018, UMC withdrew its complaint that alleged MSS infringed a Chinese patent by manufacturing and selling certain GDDR5 memory chips.

On July 5, 2018, MXA and MSS were notified that the Fuzhou Court granted a preliminary injunction against those entities that enjoins them from manufacturing, selling, or importing certain Crucial and Ballistic-branded DRAM modules and solid-state drives in China. The affected products make up slightly more than 1% of our annualized revenues. We are complying with the ruling and have requested the Fuzhou Court to reconsider or stay its decision.

Among other things, the above lawsuits pertain to substantially all of our DRAM, NAND, and other memory and storage products we manufacture, which account for a significant portion of our revenue.

Qimonda

On January 20, 2011, Dr. Michael Jaffé, administrator for Qimonda's insolvency proceedings, filed suit against Micron and Micron Semiconductor B.V., our Netherlands subsidiary ("Micron B.V."), in the District Court of Munich, Civil Chamber. The complaint seeks to void, under Section 133 of the German Insolvency Act, a share purchase agreement between Micron B.V. and Qimonda signed in fall 2008, pursuant to which Micron B.V. purchased substantially all of Qimonda's shares of Inotera (the "Inotera Shares"), representing approximately 18% of Inotera's outstanding shares as of February 28, 2019, and seeks an order requiring us to re-transfer those shares to the Qimonda estate. The complaint also seeks, among other things, to recover damages for the alleged value of the joint venture relationship with Inotera and to terminate, under Sections 103 or 133 of the German Insolvency Code, a patent cross-license between us and Qimonda entered into at the same time as the share purchase agreement.

Following a series of hearings with pleadings, arguments, and witnesses on behalf of the Qimonda estate, on March 13, 2014, the court issued judgments: (1) ordering Micron B.V. to pay approximately $1 million in respect of certain Inotera Shares sold in connection with the original share purchase; (2) ordering Micron B.V. to disclose certain information with respect to any Inotera Shares sold by it to third parties; (3) ordering Micron B.V. to disclose the benefits derived by it from ownership of the Inotera Shares, including in particular, any profits distributed on the Inotera Shares and all other benefits; (4) denying Qimonda's claims against Micron for any damages relating to the joint venture relationship with Inotera; and (5) determining that Qimonda's obligations under the patent cross-license agreement are canceled. In addition, the court issued interlocutory judgments ordering, among other things: (1) that Micron B.V. transfer to the Qimonda estate the Inotera Shares still owned by Micron B.V. and pay to the Qimonda estate compensation in an amount to be specified for any Inotera Shares sold to third parties; and (2) that Micron B.V. pay the Qimonda estate as compensation an amount to be specified for benefits derived by Micron B.V. from ownership of the Inotera Shares. The interlocutory judgments have no immediate, enforceable effect on us, and, accordingly, we expect to be able to continue to operate with full control of the Inotera Shares subject to further developments in the case. We have filed a notice of appeal, and the parties have submitted briefs to the appeals court.

Antitrust Matters

On April 27, 2018, a complaint was filed against Micron and other DRAM suppliers in the U.S. District Court for the Northern District of California. Subsequently two substantially identical cases were filed in the same court. The lawsuits purport to be on behalf of a nationwide class of indirect purchasers of DRAM products. The complaints assert claims based on alleged price-fixing of DRAM products under federal and state law during the period from June 1, 2016 to February 1, 2018, and seek treble monetary damages, costs, interest, attorneys' fees, and other injunctive and equitable relief.

On June 26, 2018, a complaint was filed against Micron and other DRAM suppliers in the U.S. District Court for the Northern District of California. Subsequently four substantially identical cases were filed in the same court. The lawsuits purport to be on behalf of a nationwide class of direct purchasers of DRAM products. The complaints assert claims based on alleged price-fixing of DRAM products under federal and state law during the period from June 1, 2016 to February 1, 2018, and seek treble monetary damages, costs, interest, attorneys' fees, and other injunctive and equitable relief.

Additionally, six cases have been filed in the following Canadian courts: Superior Court of Quebec, the Federal Court of Canada, and the Supreme Court of British Columbia. The substantive allegations in these cases are similar to those asserted in the cases filed in the United States.

On May 15, 2018, the Chinese State Administration for Market Regulation ("SAMR") notified Micron that it was investigating potential collusion and other anticompetitive conduct by DRAM suppliers in China. On May 31, 2018, SAMR made unannounced visits to our sales offices in Beijing, Shanghai, and Shenzhen to seek certain information as part of its investigation. We are cooperating with SAMR in its investigation.

Securities Matters

On January 23, 2019, a complaint was filed against Micron and two of our officers, Sanjay Mehrotra and David Zinsner, in the U.S. District Court for the Southern District of New York. The lawsuit purports to be brought on behalf of a class of purchasers of our stock during the period from June 22, 2018 through November 19, 2018. Subsequently two substantially similar cases were filed in the same court adding one of our former officers, Ernie Maddock, as a defendant and alleging a class action period from September 26, 2017 through November 19, 2018. The three complaints allege that defendants committed securities fraud through misrepresentations and omissions about purported anticompetitive behavior in the DRAM industry and seek compensatory and punitive damages, fees, interest, costs, and other appropriate relief.

On March 5, 2019, a shareholder derivative complaint was filed in the U.S. District Court for the District of Delaware, allegedly on behalf of and for the benefit of Micron, against certain current and former officers and directors of Micron for alleged breaches of their fiduciary duties and other violations of law. The allegations are based on, among other things, purported false and misleading statements regarding anticompetitive behavior in the DRAM industry. The complaint seeks damages, fees, interest, costs, and other appropriate relief.

Other

On December 5, 2017, Micron filed a complaint against UMC and Jinhua in the U.S. District Court for the Northern District of California. The complaint alleges that UMC and Jinhua violated the Defend Trade Secrets Act, the civil provisions of the Racketeer Influenced and Corrupt Organizations Act, and California's Uniform Trade Secrets Act by misappropriating Micron's trade secrets and other misconduct. Micron's complaint seeks damages, restitution, disgorgement of profits, injunctive relief, and other appropriate relief.

In the normal course of business, we are a party to a variety of agreements pursuant to which we may be obligated to indemnify the other party. It is not possible to predict the maximum potential amount of future payments under these types of agreements due to the conditional nature of our obligations and the unique facts and circumstances involved in each particular agreement. Historically, our payments under these types of agreements have not had a material adverse effect on our business, results of operations, or financial condition.

We are unable to predict the outcome of the patent matters, the Qimonda matter, antitrust matters, securities matters, and other matters noted above and therefore cannot estimate the range of possible loss. A determination that our products or manufacturing processes infringe the intellectual property rights of others or entering into a license agreement covering such intellectual property could result in significant liability and/or require us to make material changes to our products and/or manufacturing processes. Any of the foregoing, as well as the resolution of any other legal matter noted above, could have a material adverse effect on our business, results of operations, or financial condition.

Equity

Micron Shareholders' Equity

Common Stock Repurchases: Our Board of Directors has authorized the discretionary repurchase of up to $10 billion of our outstanding common stock beginning in our fiscal 2019. We may purchase shares on a discretionary basis through open-market purchases, block trades, privately-negotiated transactions, derivative transactions, and/or pursuant to Rule 10b5-1 trading plans, subject to market conditions and our ongoing determination of the best use of available cash. The repurchase authorization does not obligate us to acquire any common stock.

In the second quarter and first six months of 2019, we repurchased 21 million shares of our common stock for $702 million and 63 million shares of our common stock for $2.51 billion, respectively, under an accelerated share repurchase agreement, Rule 10b5-1 plans, and through open market repurchases. The shares were recorded as treasury stock.

Noncontrolling Interests in Subsidiaries

As of	February 28, 2019		August 30, 2018	
	Balance	Percentage	Balance	Percentage
IMFT	$858	49 %	$853	49 %
Other	5	Various	17	Various
	$863		$870	

IMFT: Since 2006, we have owned 51% of IMFT, a joint venture between us and Intel. IMFT is governed by a Board of Managers, for which the number of managers appointed by each member varies based on the members' respective ownership interests. IMFT manufactures semiconductor products exclusively for its members under a long-term supply agreement at prices approximating cost. In the first quarter of 2018, IMFT discontinued production of NAND and subsequent to that time has manufactured 3D XPoint memory. Through our IMFT joint venture, we continue to jointly develop 3D XPoint technologies with Intel through the second generation of 3D XPoint technology, which is expected to be completed in the second half of 2019. To better optimize the 3D XPoint technology for our product roadmap and maximize the benefits for our customers and shareholders, in the fourth quarter of 2018, we announced that we will no longer jointly develop with Intel subsequent generations of 3D XPoint technology. IMFT will continue to manufacture memory based on 3D XPoint technology at the fabrication facility in Lehi, Utah for its members. IMFT sales to Intel were $172 million and $347 million for the second quarter and first six months of 2019, respectively, and were $115 million and $227 million for the second quarter and first six months of 2018, respectively.

On January 14, 2019, we exercised our option to acquire Intel's interest in IMFT. As a result, Intel can elect to set the closing date of the transaction to be any time between approximately six months to one year from the date we exercised our call option. At the time of closing, we expect to pay Intel consideration approximating Intel's interest in the net book value of IMFT plus member debt. Following the closing date, we will continue to supply to Intel product from IMFT for a period of up to one year under a fixed-price arrangement for the duration of the supply agreement. The pricing will be determined at the time of the closing of our acquisition of Intel's interest based on the cost of products produced by IMFT over a period of time prior to closing, plus a margin. For the first six months of such one-year period, Intel can receive supply ranging from 50% to 100%, at Intel's choice, of the volume supplied to Intel by IMFT in the six-month period immediately prior to the closing date. For the second six months of such one-year period, Intel can receive supply ranging from 0% to 100%, at Intel's choice, of the volume supplied to Intel by IMFT in the first six-month period.

IMFT's capital requirements are generally determined based on an annual plan approved by the members, and capital contributions to IMFT are requested as needed. Capital requests are made to the members in proportion to their then-current ownership interest. Members may elect to not contribute their proportional share, and in such event, the contributing member may elect to contribute any amount of the capital request, either in the form of an equity contribution or member debt financing. Under the supply agreement, the members have rights and obligations to the capacity of IMFT in proportion to their investment, including member debt financing. Any capital contribution or member debt financing results in a proportionate adjustment to the sharing of output on an eight-month lag. Members pay their proportionate share of fixed costs associated with IMFT's capacity.

Creditors of IMFT have recourse only to IMFT's assets and do not have recourse to any other of our assets. The following table presents the assets and liabilities of IMFT included in our consolidated balance sheets:

As of	February 28, 2019	August 30, 2018
Assets		
Cash and equivalents	$ 288	$ 91
Receivables	126	126
Inventories	111	114
Other current assets	5	8
Total current assets	530	339
Property, plant, and equipment	2,464	2,641
Other noncurrent assets	36	45
Total assets	$ 3,030	$ 3,025
Liabilities		
Accounts payable and accrued expenses	$ 154	$ 138
Current debt	1,020	20
Other current liabilities	37	9
Total current liabilities	1,211	167
Long-term debt	54	1,064
Other noncurrent liabilities	37	74
Total liabilities	$ 1,302	$ 1,305

Amounts exclude intercompany balances that were eliminated in our consolidated balance sheets.

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Fair Value Measurements

All of our marketable debt and equity investments were classified as available-for-sale and carried at fair value as of the dates noted below. The estimated fair values of our convertible and other notes in the table below were determined based on Level 2 inputs, and together with the carrying value of our outstanding debt instruments (excluding the carrying value of equity and mezzanine equity components of our convertible notes) were as follows:

As of	February 28, 2019		August 30, 2018	
	Fair Value	Carrying Value	Fair Value	Carrying Value
Notes and MMJ Creditor Payments	$4,291	$ 4,219	$2,798	$ 2,741
Convertible notes	2,232	1,303	3,124	1,049

Other operating (income) expense, net included unrealized losses from assets held for sale of $46 million in the second quarter of 2019. The fair values for semiconductor equipment were based on quotations obtained from equipment dealers, which consider the remaining useful life and configuration of the equipment (Level 3).

Derivative Instruments

	Gross Notional Amount	Fair Value of Current Assets[1]	Fair Value of Current Liabilities[2]
As of February 28, 2019			
Derivative instruments with hedge accounting designation			
Cash flow currency hedges	$ 235	$—	$ (3)
Derivative instruments without hedge accounting designation			
Non-designated currency hedges	2,205	6	(3)
Convertible notes settlement obligation[3]		—	(420)
		6	(423)
		$6	$ (426)
As of August 30, 2018			
Derivative instruments with hedge accounting designation			
Cash flow currency hedges	$ 538	$—	$ (13)
Derivative instruments without hedge accounting designation			
Non-designated currency hedges	1,919	14	(10)
Convertible notes settlement obligation[3]		—	(167)
		14	(177)
		$14	$ (190)

(1) Included in receivables – other.

(2) Included in accounts payable and accrued expenses – other for forward contracts and in current debt for convertible notes settlement obligations.

(3)

Notional amounts of convertible notes settlement obligations as of February 28, 2019 and August 30, 2018 were 35 million and 3 million shares of our common stock, respectively.

Derivative Instruments with Hedge Accounting Designation

We utilize currency forward contracts that generally mature within 12 months to hedge our exposure to changes in currency exchange rates. Currency forward contracts are measured at fair value based on market-based observable inputs including currency exchange spot and forward rates, interest rates, and credit-risk spreads (Level 2). We do not use derivative instruments for speculative purposes.

Cash Flow Hedges: We utilize cash flow hedges for our exposure from changes in currency exchange rates for certain capital expenditures. For derivative instruments designated as cash flow hedges, the effective portion of the realized and unrealized gains or losses on derivatives is included as a component of accumulated other comprehensive income. Amounts in accumulated other comprehensive income are reclassified into earnings in the same line items and in the same periods in which the underlying transactions affect earnings. For the periods presented prior to the second quarter of 2018, the ineffective and excluded portion of the realized and unrealized gain or loss was included in other non-operating income (expense). As a result of adopting ASU 2017-12, beginning in the second quarter of 2018, the excluded portion of such amounts is included in the same line item in which the underlying transactions affect earnings and the ineffective portion of the realized and unrealized gains or losses on derivatives is included as a component of accumulated other comprehensive income.

We recognized gains of $7 million and losses of $6 million for the second quarter and first six months of 2019, respectively, and gains of $21 million and $17 million for the second quarter and first six months of 2018, respectively, in accumulated other comprehensive income from the effective portion of cash flow hedges. Neither the amount excluded from hedge effectiveness nor the reclassifications from accumulated other comprehensive income to earnings were material in the second quarters or first six months of 2019 or 2018. The amounts from cash flow hedges included in accumulated other comprehensive income that are expected to be reclassified into earnings in the next 12 months were also not material.

Fair Value Hedges: During the second quarter of 2018, we utilized fair value hedges to hedge our exposure to changes in fair values from the changes in currency exchange rates for certain monetary assets and liabilities. Other non-operating income (expense) for the second quarter of 2018 included gains of $56 million from the change in fair value attributed to changes in the undiscounted spot rate which offset the losses on the remeasurement of the hedged assets and liabilities, and losses of $19 million from the amortization of amounts excluded from hedge effectiveness of fair value hedges. Amounts recorded to other comprehensive income (loss) for the second quarter of 2018 were not material.

Derivative Instruments without Hedge Accounting Designation

Currency Derivatives: We generally utilize a rolling hedge strategy with currency forward contracts that mature within three months to hedge our exposures of monetary assets and liabilities from changes in currency exchange rates. At the end of each reporting period, monetary assets and liabilities denominated in currencies other than the U.S. dollar are remeasured into U.S. dollars and the associated outstanding forward contracts are marked to market. Currency forward contracts are valued at fair values based on the middle of bid and ask prices of dealers or exchange quotations (Level 2). Realized and unrealized gains and losses on derivative instruments without hedge accounting designation as well as the changes in the underlying monetary assets and liabilities from changes in currency exchange rates are included in other non-operating income (expense). For derivative instruments without hedge accounting designation, we recognized gains of $11 million in the second quarter of 2019, losses of $11 million in the first quarter of 2019, and gains of $50 million and $52 million in the second quarter and first six months of 2018, respectively.

Convertible Notes Settlement Obligations: For settlement obligations associated with our convertible notes subject to mark-to-market accounting treatment, the fair values of the underlying derivative settlement obligations were initially determined using the Black-Scholes option valuation model (Level 2), which requires inputs of stock price, expected stock-price volatility, estimated option life, risk-free interest rate, and dividend rate. The subsequent measurement amounts were based on the volume-weighted-average trading price of our common stock (Level 2). (See "Debt" note.) We recognized losses of $82 million and $66 million in the second quarter and first six months of 2019, respectively, and losses of $20 million and $24 million for the second quarter and first six months of 2018, respectively, in other non-operating income (expense), net for the changes in fair value of the derivative settlement obligations.

Equity Plans

As of February 28, 2019, 113 million shares of our common stock were available for future awards under our equity plans.

Stock Options

Stock options granted and assumptions used in the Black-Scholes option valuation model were as follows:

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Stock options granted	—	1	—	2
Weighted-average grant-date fair value per share	—	$ 18.61	$ 19.50	$ 18.13
Average expected life in years	—	5.5	5.4	5.5
Weighted-average expected volatility	—	44 %	44 %	44 %
Weighted-average risk-free interest rate	—	2.2 %	2.9 %	2.2 %
Expected dividend yield	—	0.0 %	0.0 %	0.0 %

Restricted Stock and Restricted Stock Units ("Restricted Stock Awards")

Restricted Stock Awards activity is summarized as follows:

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Restricted stock award shares granted	—	2	6	4
Weighted-average grant-date fair value per share	$ 37.01	$ 43.21	$ 39.83	$ 41.51

Employee Stock Purchase Plan

Our first ESPP offering period ended in January 2019 and we issued 1 million shares to employees at a purchase price per share of $32.50 under the ESPP. Assumptions used in the Black-Scholes option valuation model for the offering period beginning February 2019 were as follows:

Weighted-average grant-date fair value per share	$ 10.92
Average expected life in years	0.5
Weighted-average expected volatility	47 %
Weighted-average risk-free interest rate	2.5 %
Expected dividend yield	0.0 %

Stock-based Compensation Expense

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Stock-based compensation expense by caption				
Cost of goods sold	$ 23	$ 22	$ 49	$ 42
Selling, general, and administrative	18	16	37	34
Research and development	16	14	32	27
	$ 57	$ 52	$ 118	$ 103

Stock-based compensation expense by type of award				
Restricted stock awards	$ 42	$ 38	$ 83	$ 72
Stock options	7	14	19	31
Employee Stock Purchase Plan	8	—	16	—
	$ 57	$ 52	$ 118	$ 103

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Income tax benefits related to share-based payment arrangements were $30 million and $53 million for the second quarter and first six months of 2019, respectively, and $58 million and $116 million for the second quarter and first six months of 2018, respectively. Income tax benefits related to share-based compensation for the first quarter of 2018 were offset by an increase in the U.S. valuation allowance. As of February 28, 2019, $450 million of total unrecognized compensation costs for unvested awards, before the effect of any future forfeitures, was expected to be recognized through the second quarter of 2023, resulting in a weighted-average period of 1.4 years.

Revenue and Contract Liabilities

Our revenues are primarily recognized at a point in time, when control of the promised goods is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods. Contracts with our customers are generally short-term in duration at fixed, negotiated prices with payment generally due shortly after delivery. We estimate a liability for returns using the expected value method based on historical rates of return. In addition, we generally offer price protection to our distributors, which is a form of variable consideration that decreases the transaction price. We estimate the amount of consideration we expect to be entitled to from sales to distributors, using the expected value method, based on historical price adjustments and current pricing trends. Differences between the estimated and actual amounts are recognized as adjustments to revenue. (See "Segment and Other Information" note for disclosure of disaggregated revenue.)

Contract Liabilities

As of	February 28, 2019	Opening Balance as of August 31, 2018
Contract liabilities from customer advances	$ 147	$ 235