

MICRON TECHNOLOGY INC
Form 10-Q
March 21, 2019

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 February 28, 2019

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 1-10658

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

Delaware

75-1618004
(IRS Employer
Identification No.)

(State or other jurisdiction of
incorporation or organization)

8000 S. Federal Way, Boise, Idaho
(Address of principal executive offices)

83716-9632
(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 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

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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

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 – Micro®, 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."

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,	March 1,	February 28,	March 1,
	2019	2018	2019	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.

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MICRON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in millions)

(Unaudited)

	Quarter ended		Six months ended	
	February 2019	March 1, 2018	February 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.

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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
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See accompanying notes to consolidated financial statements.

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MICRON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(in millions)

(Unaudited)

	Micron Shareholders					Accumulated	Total	Noncontrolling	
	Common	Additional	Retained	Treasury		Other	Micron	Interests	Total
	Stock	Capital	Earnings	Stock		Comprehensive	Shareholders'	in	Equity
	Number	Amount				Income	Equity	Subsidiaries	
	of					(Loss)			
	Shares								
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
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See accompanying notes to consolidated financial statements.

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MICRON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(in millions)

(Unaudited)

	Micron Shareholders Common Stock		Additional	Retained	Treasury	Accumulated Other Comprehensive Income (Loss)	Total Micron Shareholders' Equity	Noncontrolling Interests in Subsidiaries	Total Equity
	Number of Shares	Amount	Capital	Earnings	Stock				
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.

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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.

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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.

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.

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

(3) 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.

Restricted cash is included in other noncurrent assets and primarily consisted of balances related to the MMJ

(4) 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, August 30,	
	2019	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, August 30,	
	2019	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.

Accounts Payable and Accrued Expenses

As of	February 28, August 30,	
	2019	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

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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, August 30,	
	2019	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.

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	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

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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	Six months ended		
	ended	February 28, 2019		March 1, 2018
	February 28, 2019	February 28, 2019	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		February 28, 2018	
	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		February 28, 2018	
	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

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
Other contract liabilities	108	113
	\$ 255	\$ 348

Our contract liabilities are for advance payments received from customers to secure product in future periods and for other arrangements where we have received amounts in advance of satisfying performance obligations and are reported in the accompanying consolidated balance sheets within other current liabilities and other noncurrent liabilities. Revenue and interest expense associated with contract liabilities for the time value of advance payments was not material in any period presented. As of February 28, 2019, our future performance obligations beyond one year were not material.

Changes in contract liabilities for the first six months of 2019 were as follows:

Contract liabilities balance as of August 31, 2018	\$348
Revenue recognized from beginning balance	(163)
Additions and other activity	70
Contract liabilities balance as of February 28, 2019	\$255

Contract liabilities increase as a result of receiving new advance payments from customers and decrease as revenue is recognized from customers purchasing product under advance payment arrangements. Additions and other activity included new customer advances, payments received from license and other arrangements in advance of performance, and interest accrued for financing components on advance payments. Revenue recognized for the first six months of

2019 from the beginning balance included \$148 million from shipments against customer advances and \$15 million from meeting other performance obligations.

Consideration Payable to Customers

As of February 28, 2019, other current liabilities included \$383 million for estimates of consideration payable to customers, including estimates for pricing adjustments and returns.

Research and Development

We share the cost of certain product and process development activities with development partners. Our R&D expenses were reduced by \$23 million and \$53 million for the second quarter and first six months of 2019, respectively, and by \$58 million and \$114 million for the second quarter and first six months of 2018, respectively, pursuant to reimbursements under these arrangements.

We have agreements to jointly develop NAND and 3D XPoint technologies with Intel. We continue to jointly develop NAND technologies with Intel through the third generation of 3D NAND, which is expected to be completed in the second half of 2019. In the second quarter of 2018, we and Intel agreed to independently develop subsequent generations of 3D NAND in order to better optimize the technology and products for our respective business needs. 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 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.

Other Operating (Income) Expense, Net

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Restructure and asset impairments	\$ 51	\$ 7	\$ 84	\$ 13
Other	46	(23)	49	(18)
	\$ 97	\$ (16)	\$ 133	\$ (5)

Restructure and asset impairments primarily relate to our continued emphasis to centralize certain key functions. As of February 28, 2019 and August 30, 2018, other current liabilities included \$54 million and \$12 million, respectively, for such restructure activities.

Other Non-Operating Income (Expense), Net

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Loss on debt prepayments, repurchases, and conversions	\$(83)	\$(23)	\$(69)	\$(218)
Loss from changes in currency exchange rates	(3)	(27)	(8)	(36)
Other	2	(3)	2	(3)
	\$(84)	\$(53)	\$(75)	\$(257)

Loss on debt prepayments, repurchases, and conversions for 2019 was primarily due to the conversion of our 2043G Notes and for 2018 was due to the repurchase of our 2023 Secured Notes and 2023 Notes and conversions of our convertible notes.

Income Taxes

On December 22, 2017, the United States enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), which imposed a one-time transition tax in 2018 (the "Repatriation Tax") and, beginning in 2019, created a new minimum tax on certain foreign earnings (the "Foreign Minimum Tax"). SEC Staff Accounting Bulletin No. 118 ("SAB 118") allows the use of provisional amounts (reasonable estimates) if the analyses of the impacts of the Tax Act have not been completed when financial statements are issued. During the first quarter of 2019, we finalized the computations of the income tax effects of the Tax Act. As such, in accordance with SAB 118, our accounting for the effects of the Tax Act is complete.

Our income tax provision consisted of the following:

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Income tax (provision) benefit, excluding items below	\$(216)	\$ 5	\$(594)	\$(83)
Utilization of and other changes in net deferred tax assets of MMJ, MMT, and MTTW	(78)	(17)	(130)	(43)
Repatriation Tax, net of adjustments related to uncertain tax positions	14	(1,335)	(33)	(1,335)
Release of the valuation allowance on the net deferred tax assets of our U.S. operations	—	1,337	—	1,337
Remeasurement of deferred tax assets and liabilities reflecting the lower U.S. corporate tax rates	—	(133)	—	(133)
	\$(280)	\$(143)	\$(757)	\$(257)

As of February 28, 2019, we had gross unrecognized income tax benefits of \$438 million, substantially all of which would affect our effective tax rate in the future, if recognized. The amount accrued for interest and penalties related to uncertain tax positions was not material for any period presented.

We operate in a number of tax jurisdictions outside the United States, including Singapore, where we have tax incentive arrangements, which expire in whole or in part at various dates through 2034, that are conditional, in part, upon meeting certain business operations and employment thresholds. The effect of tax incentive arrangements reduced our tax provision by \$244 million (benefiting our diluted earnings per share by \$0.21) and \$671 million (\$0.58 per diluted share) for the second quarter and first six months of 2019, respectively, and by \$436 million (\$0.35 per diluted share) and \$827 million (\$0.67 per diluted share) for the second quarter and first six months of 2018, respectively.

Earnings Per Share

	Quarter ended		Six months ended	
	February 28, 2019	March 1, 2018	February 28, 2019	March 1, 2018
Net income attributable to Micron – Basic	\$1,619	\$ 3,309	\$4,912	\$ 5,987
Assumed conversion of debt	(2)	—	(2)	—
Net income attributable to Micron – Diluted	\$1,617	\$ 3,309	\$4,910	\$ 5,987
Weighted-average common shares outstanding – Basic	1,114	1,156	1,123	1,145
Dilutive effect of equity plans and convertible notes	27	82	34	87
Weighted-average common shares outstanding – Diluted	1,141	1,238	1,157	1,232
Earnings per share				
Basic	\$1.45	\$ 2.86	\$4.37	\$ 5.23
Diluted	1.42	2.67	4.24	4.86

Antidilutive potential common stock shares that could dilute basic earnings per share in the future were 11 million and 9 million for the second quarter and first six months of 2019, respectively, and 3 million for the second quarter and first six months of 2018.

Segment and Other Information

Segment information reported herein is consistent with how it is reviewed and evaluated by our chief operating decision maker. We have the following four business units, which are our reportable segments:

Compute and Networking Business Unit ("CNBU"): Includes memory products sold into data center, client, graphics, and networking markets.

Mobile Business Unit ("MBU"): Includes memory products sold into smartphone and other mobile-device markets.

Storage Business Unit ("SBU"): Includes SSDs and other storage products, including component-level solutions, sold into data center, client, and consumer SSD markets, other discrete storage products sold in component and wafer forms to the removable storage markets, and sales of 3D XPoint memory.

Embedded Business Unit ("EBU"): Includes memory and storage products sold into automotive, industrial, and consumer markets.

Certain operating expenses directly associated with the activities of a specific segment are charged to that segment. Other indirect operating income and expenses are generally allocated to segments based on their respective percentage of cost of goods sold or forecasted wafer production. We do not identify or report internally our assets (other than goodwill) or capital expenditures by segment, nor do we allocate gains and losses from equity method investments, interest, other non-operating income or expense items, or taxes to segments.

	Quarter ended		Six months ended	
	February 28,	March 1,	February 28,	March 1,
	2019	2018	2019	2018
Revenue				
CNBU	\$2,382	\$3,691	\$5,986	\$6,903
MBU	1,611	1,566	3,823	2,931
SBU	1,022	1,254	2,165	2,637
EBU	799	829	1,732	1,659
All Other	21	11	42	24
	\$5,835	\$7,351	\$13,748	\$14,154
Operating income (loss)				
CNBU	\$1,160	\$2,329	\$3,371	\$4,243
MBU	707	689	1,910	1,194
SBU	(20)	) 251	60	651
EBU	262	363	649	705
All Other	1	(2)	) 7	(6)
	2,110	3,630	5,997	6,787
Unallocated				
Stock-based compensation	(57)	) (52)	(118)	(103)
Start-up and preproduction costs	(15)	) —	(23)	—
Employee severance	(17)	) —	(37)	—
Restructure and asset impairments	(51)	) (7)	(81)	(13)
Other	(13)	) (4)	(22)	(7)
	(153)	) (63)	(281)	(123)
Operating income	\$1,957	\$3,567	\$5,716	\$6,664

Revenue by product type was as follows:

	Quarter ended		Six months ended	
	February 2019	March 1, 2018	February 2019	March 1, 2018
DRAM	\$3,760	\$ 5,213	\$9,133	\$9,775
NAND	1,776	1,813	3,955	3,711
Other (primarily 3D XPoint memory and NOR)	299	325	660	668
	\$5,835	\$ 7,351	\$13,748	\$14,154

Customer Concentrations: Revenue from Huawei Technologies Co., Ltd. was 13% of total revenue for the first six months of 2019.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This discussion 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. All period references are to our fiscal periods unless otherwise indicated. Our fiscal year is the 52 or 53-week period ending on the Thursday closest to August 31. Our fiscal 2019 and 2018 each contain 52 weeks. All production data includes the production of IMFT. All tabular dollar amounts are in millions, except per share amounts.

Overview

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.

We manufacture our products at our worldwide, wholly-owned and joint venture facilities. In recent years, we have increased our manufacturing scale and product diversity through strategic acquisitions, expansion, and various partnering arrangements.

We make significant investments to develop proprietary product and process technology, which are implemented in our manufacturing facilities. We generally increase the density per wafer and reduce manufacturing costs of each generation of product through advancements in product and process technology, such as our leading-edge line-width process technology and 3D NAND architecture. We continue to introduce new generations of products that offer improved performance characteristics, including higher data transfer rates, reduced package size, lower power consumption, improved read/write reliability, and increased memory density. Storage products incorporating NAND, a controller, and firmware constitute a significant and increasing portion of our revenues. We generally develop firmware and, in the first quarter of 2019, introduced proprietary controllers into our SSDs. Development of advanced technologies enables us to diversify our product portfolio toward a richer mix of differentiated, high-value solutions and to target high-growth markets.

We market our products through our internal sales force, independent sales representatives, distributors, and e-tailers, primarily to original equipment manufacturers and retailers located around the world. We face intense competition in the semiconductor memory and storage markets and, in order to remain competitive, we must continuously develop and implement new products and technologies and decrease manufacturing costs. Our success is largely dependent on market acceptance of our diversified portfolio of semiconductor-based memory and storage solutions, efficient utilization of our manufacturing infrastructure, successful ongoing development and integration of advanced product and process technology, return-driven capital spending, and successful R&D investments.

Results of Operations

Consolidated Results

	Second Quarter 2019			First Quarter 2019			Second Quarter 2018			Six Months 2019			2018		
Revenue	\$5,835	100 %		\$7,913	100 %		\$7,351	100 %		\$13,748	100 %		\$14,154	100 %	
Cost of goods sold	2,971	51 %		3,298	42 %		3,081	42 %		6,269	46 %		6,137	43 %	
Gross margin	2,864	49 %		4,615	58 %		4,270	58 %		7,479	54 %		8,017	57 %	
Selling, general, and administrative	209	4 %		209	3 %		196	3 %		418	3 %		387	3 %	
Research and development	601	10 %		611	8 %		523	7 %		1,212	9 %		971	7 %	
Other operating (income) expense, net	97	2 %		36	— %		(16)	— %		133	1 %		(5)	— %	
Operating income	1,957	34 %		3,759	48 %		3,567	49 %		5,716	42 %		6,664	47 %	
Interest income (expense), net	31	1 %		5	— %		(61)	(1) %		36	— %		(162)	(1) %	
Other non-operating income (expense), net	(84)	(1) %		9	— %		(53)	(1) %		(75)	(1) %		(257)	(2) %	
Income tax provision	(280)	(5) %		(477)	(6) %		(143)	(2) %		(757)	(6) %		(257)	(2) %	
Equity in net income (loss) of equity method investees	1	— %		—	— %		1	— %		1	— %		1	— %	
Net income attributable to noncontrolling interests	(6)	— %		(3)	— %		(2)	— %		(9)	— %		(2)	— %	
Net income attributable to Micron	\$1,619	28 %		\$3,293	42 %		\$3,309	45 %		\$4,912	36 %		\$5,987	42 %	

Total Revenue

Total revenue for the second quarter of 2019 decreased 26% as compared to the first quarter of 2019 as a result of less favorable market conditions primarily due to ongoing inventory adjustments at certain customers for DRAM, CPU shortages, a weaker premium smartphone market, and weaker demand in certain other markets. Sales of DRAM products for the second quarter of 2019 decreased 30% from the first quarter of 2019 reflecting a low-20% decline in average selling prices and a low double-digit percentage decrease in sales volumes due to weaker seasonal demand in mobile markets and challenging market conditions. Sales of NAND products for the second quarter of 2019 decreased 18% from the first quarter of 2019 primarily due to pricing declines in the mid-20% range as a result of the challenging market conditions. Shipment volumes of NAND products increased in the second quarter of 2019 as compared to the first quarter of 2019 due to timing of demand.

Total revenue for the second quarter and first six months of 2019 decreased 21% and 3%, respectively, as compared to the corresponding periods of 2018 primarily due to pricing declines resulting from deteriorating market conditions in 2019. Sales of DRAM products for the second quarter and first six months of 2019 decreased 28% and 7%, respectively, as compared to the corresponding periods of 2018 primarily due declines in average selling prices. Sales of NAND products for the second quarter of 2019 decreased 2% as compared to the second quarter of 2018 primarily due declines in average selling prices, which were partially offset by an approximate 70% increase in sales volumes driven by increases in sales of high-value mobile managed NAND products enabled by our transition to products featuring advanced TLC 3D NAND. Sales of NAND products for the first six months of 2019 increased 7% as

compared to the first six months of 2018, despite significant declines in selling prices, primarily due to an approximate 70% increase in sales volumes.

Overall Gross Margin

Our overall gross margin percentage decreased to 49% for the second quarter of 2019 from 58% for the first quarter of 2019 primarily due to declines in market pricing partially offset by manufacturing cost reductions. For the second quarter of 2019 as compared to the first quarter of 2019, margins for DRAM and NAND products decreased due to the declines in average

selling prices which outpaced manufacturing cost reductions resulting from strong execution in delivering products featuring advanced technologies, including 1Xnm and 1Ynm DRAM and 96-layer 3D NAND.

Our overall gross margin percentage decreased to 49% for the second quarter of 2019 from 58% for the second quarter of 2018 and decreased to 54% for the first six months of 2019 from 57% for the first six months of 2018, primarily due to declines in average selling prices. Declines in selling prices were partially offset by cost reductions.

Revenue by Business Unit

	Second Quarter 2019		First Quarter 2019		Second Quarter 2018		Six Months 2019		Six Months 2018	
CNBU	\$2,382	41 %	\$3,604	46 %	\$3,691	50 %	\$5,986	44 %	\$6,903	49 %
MBU	1,611	28 %	2,212	28 %	1,566	21 %	3,823	28 %	2,931	21 %
SBU	1,022	18 %	1,143	14 %	1,254	17 %	2,165	16 %	2,637	19 %
EBU	799	14 %	933	12 %	829	11 %	1,732	13 %	1,659	12 %
All Other	21	— %	21	— %	11	— %	42	— %	24	— %
	\$5,835		\$7,913		\$7,351		\$13,748		\$14,154	

Percentages are of total revenue but may not total 100% due to rounding.

CNBU revenue for the second quarter of 2019 decreased 34% as compared to the first quarter of 2019 due to customer inventory corrections and CPU shortages across market segments driving price and volume reductions. MBU revenue for the second quarter of 2019 decreased 27% as compared to the first quarter of 2019 primarily due to seasonally lower demand and weaker sales of premium smartphone sales. MBU revenue was primarily comprised of mobile LPDRAM and managed NAND products. SBU revenue for the second quarter of 2019 decreased 11% as compared to the first quarter of 2019 primarily due to weaker pricing. EBU revenue for the second quarter of 2019 decreased 14% from the first quarter of 2019 primarily due to seasonal demand softness combined with customer inventory reduction strategies and market pricing declines affecting industrial multimarkets and consumer. EBU revenue was comprised of products incorporating DRAM, NAND, and NOR Flash in decreasing order of revenue.

CNBU revenue for the second quarter and first six months of 2019 decreased 35% and 13%, respectively, as compared to the corresponding periods of 2018 due to challenging market conditions in 2019, which drove price declines and reductions in sales volumes. MBU revenue for the second quarter and first six months of 2019 increased 3% and 30%, respectively, as compared to the corresponding periods of 2018 despite pricing pressure primarily due to strong execution in developing and qualifying mobile managed NAND products. SBU revenue for the second quarter and first six months of 2019 decreased a high teens percentage as compared to corresponding periods of 2018 primarily due to price declines. EBU revenue for the second quarter of 2019 decreased 4% as compared to the second quarter of 2018 primarily due to lower sales to consumer markets from weak demand partially offset by continued growth in automotive and industrial multimarkets. EBU revenue for the first six months of 2019 increased 4% as compared to the first six months of 2018 primarily due to growth in automotive and industrial multimarkets.

Operating Income (Loss) by Business Unit

	Second Quarter 2019		First Quarter 2019		Second Quarter 2018		Six Months 2019		Six Months 2018	
CNBU	\$1,160	49 %	\$2,211	61 %	\$2,329	63 %	\$3,371	56 %	\$4,243	61 %
MBU	707	44 %	1,203	54 %	689	44 %	1,910	50 %	1,194	41 %

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SBU	(20)	(2)%	80	7 %	251	20 %	60	3 %	651	25 %
EBU	262	33 %	387	41 %	363	44 %	649	37 %	705	42 %
All Other 1	5	%	6	29 %	(2)	(18)%	7	17 %	(6)	(25)%
	\$2,110		\$3,887		\$3,630		\$5,997		\$6,787	

Percentages reflect operating income (loss) as a percentage of revenue for each business unit.

CNBU operating income for the second quarter of 2019 decreased from the first quarter of 2019 primarily due to declines in pricing and sales volumes partially offset by cost reductions. MBU operating income for the second quarter of 2019

decreased from the first quarter of 2019 primarily due to declines in pricing which outpaced manufacturing cost reductions. SBU operating margin for the second quarter of 2019 declined from the first quarter of 2019 primarily due to price decreases, which were partially offset by manufacturing cost reductions enabled by our execution in transitioning to advanced TLC 3D NAND products. EBU operating income for the second quarter of 2019 declined from the first quarter of 2019 primarily due to declines in pricing which outpaced manufacturing cost reductions.

CNBU operating income for the second quarter and first six months of 2019 decreased from the corresponding periods of 2018 primarily due to declines in selling prices and higher R&D costs, partially offset by cost reductions. MBU operating income for the second quarter and first six months of 2019 increased from the corresponding periods of 2018 primarily due to increases in sales of high-value managed NAND products and manufacturing cost reductions, which outpaced declines in selling prices. SBU operating margin for the second quarter and first six months of 2019 declined from the corresponding periods of 2018 primarily due to price decreases, which were partially offset by manufacturing cost reductions and increases in sales volumes. SBU operating income for the second quarter and first six months of 2019 was adversely impacted by fixed costs associated with underutilization of our share of IMFT's capacity. EBU operating income for the second quarter and first six months of 2019 decreased from the corresponding periods of 2018 as a result of declines in selling prices and higher R&D costs partially offset by manufacturing cost reductions.

Operating Expenses and Other

Selling, General, and Administrative

SG&A expenses for the second quarter of 2019 were unchanged from the first quarter of 2019. SG&A expenses for the second quarter and first six months of 2019 were 7% and 8% higher, respectively, as compared to the corresponding periods of 2018 primarily due to increases in legal costs.

Research and Development

R&D expenses vary primarily with the number of development wafers processed, the cost of advanced equipment dedicated to new product and process development, and personnel costs. Because of the lead times necessary to manufacture our products, we typically begin to process wafers before completion of performance and reliability testing. Development of a product is deemed complete when it is qualified through reviews and tests for performance and reliability. R&D expenses can vary significantly depending on the timing of product qualification.

R&D expenses for the second quarter of 2019 were relatively unchanged from the first quarter of 2019. R&D expenses for the second quarter and first six months of 2019 were 15% and 25% higher, respectively, as compared to the corresponding periods of 2018, primarily due to increases in volumes of development and pre-qualification wafers, decreases in reimbursements from our R&D cost-sharing arrangements as described below, increases in depreciation expense as a result of increases in capital spending, and, for the first six months of 2019, increases in labor costs.

We share the cost of certain product and process development activities under development agreements with partners, including agreements to jointly develop NAND and 3D XPoint technologies with Intel. Our R&D expenses were reduced by reimbursements under these development partner arrangements of \$23 million in the second quarter of 2019, \$30 million in the first quarter of 2019, and \$58 million in the second quarter of 2018. The decrease in R&D reimbursements in the second and first quarters of 2019 was primarily due to reductions in our joint development activities with Intel for NAND and 3D XPoint technologies, which we expect to complete in the second half of 2019.

Income Taxes

Our income tax provision consisted of the following:

	Second Quarter 2019	First Quarter 2019	Second Quarter 2018	Six Months	
				2019	2018
Income tax (provision) benefit, excluding items below	\$(216)	\$(378)	\$5	\$(594)	\$(83)
Utilization of and other changes in net deferred tax assets of MMJ, MMT, and MTTW	(78)	(52)	(17)	(130)	(43)
Repatriation Tax, net of adjustments related to uncertain tax positions	14	(47)	(1,335)	(33)	(1,335)
Release of the valuation allowance on the net deferred tax assets of our U.S. operations	—	—	1,337	—	1,337
Remeasurement of deferred tax assets and liabilities reflecting the lower U.S. corporate tax rates	—	—	(133)	—	(133)
	\$(280)	\$(477)	\$(143)	\$(757)	\$(257)
Effective tax rate	14.7 %	12.6 %	4.1 %	13.3 %	4.1 %

The decrease in our income tax provision in the second quarter of 2019 as compared to the first quarter of 2019 was due primarily to a reduction in income before tax, partially offset by charges related to assessments of tax exposures. Our provision for income tax and the effective tax rate increased in the second quarter and first six months of 2019 as compared to the second quarter and first six months of 2018 primarily as a result of the Foreign Minimum Tax. We operate in a number of tax jurisdictions outside the United States, including Singapore, where we have tax incentive arrangements, which expire in whole or in part at various dates through 2034, that are conditional, in part, upon meeting certain business operations and employment thresholds. The effect of tax incentive arrangements reduced our tax provision by \$244 million (benefiting our diluted earnings per share by \$0.21) for the second quarter of 2019, \$427 million (\$0.36 per diluted share) for the first quarter of 2019, and \$436 million (\$0.35 per diluted share) for the second quarter of 2018.

Other

Interest income for the second quarter of 2019 increased 53% and 115% as compared to the first quarter of 2019 and second quarter of 2018, respectively, primarily due to increases in cash balances invested in short-term and long-term investments and increases in interest rates. Interest income for the first six months of 2019 increased 92% as compared to the first six months of 2018 primarily due to increases in interest rates.

Interest expense for the second quarter of 2019 decreased 18% and 69% as compared to the first quarter of 2019 and second quarter of 2018, respectively, and 72% for the first six months of 2019 as compared to the first six months of 2018, primarily due to decreases in debt obligations and increases in capitalized interest from higher levels of capital spending.

Further discussion of other operating and non-operating income and expenses can be found in "Item 1. Financial Statements – Notes to Consolidated Financial Statements – Equity Plans, Other Operating Income (Expense), Net, and Other Non-Operating Income (Expense), Net" notes.

Liquidity and Capital Resources

Our primary sources of liquidity are cash generated from operations and financing obtained from capital markets and financial institutions. Cash generated from operations is highly dependent on selling prices for our products, which can vary significantly from period to period. We are continuously evaluating alternatives for efficiently funding our capital expenditures and ongoing operations. We expect, from time to time, to engage in a variety of financing transactions for such purposes, including the issuance of securities. We have an undrawn revolving credit facility that expires in July 2023 and provides for borrowings of up to \$2.50 billion. We expect that our cash and investments, cash flows from operations, and available financing will be sufficient to meet our requirements at least through the next 12 months.

To develop new product and process technology, support future growth, achieve operating efficiencies, and maintain product quality, we must continue to invest in manufacturing technologies, facilities and equipment, and R&D. We estimate that capital expenditures in 2019 for property, plant, and equipment, net of partner contributions, to be approximately \$9 billion, focused on technology transitions and product enablement. The actual amounts for 2019 will vary depending on market conditions. As of February 28, 2019, we had commitments of approximately \$1.8 billion for the acquisition of property, plant, and equipment, substantially all of which is expected to be paid within one year.

Our Board of Directors has authorized the discretionary repurchase of up to \$10 billion of our outstanding common stock, beginning in our fiscal 2019, which we may purchase 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 and 63 million shares of our common stock, respectively, for \$702 million and \$2.51 billion, respectively, under an accelerated share repurchase agreement, a Rule 10b5-1 plan, and through open market repurchases.

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 approximately \$1.5 billion in cash for Intel's interest in IMFT and IMFT Member Debt. As of February 28, 2019, current debt included \$1 billion of IMFT Member Debt.

Cash and marketable investments totaled \$9.15 billion and \$7.28 billion as of February 28, 2019 and August 30, 2018, respectively. Our investments consist primarily of money market funds and liquid, investment-grade, fixed-income securities, diversified among industries and individual issuers. To mitigate credit risk, we invest through high-credit-quality financial institutions and by policy generally limit the concentration of credit exposure by restricting the amount of investments with any single obligor.

Limitations on the Use of Cash and Investments

MMJ Group: Cash and marketable investments as of February 28, 2019 included \$494 million held by the MMJ Group. As a result of the corporate reorganization proceedings of MMJ initiated in March 2012, and for so long as such proceedings are continuing, the MMJ Group is prohibited from paying dividends to us. In addition, pursuant to an order of the Tokyo District Court, the MMJ Group cannot make loans or advances, other than certain ordinary course advances, to us without the consent of the Tokyo District Court and may, under certain circumstances, be subject to the approval of the legal trustee. As a result, the assets of the MMJ Group are not available for use by us in our other operations. Furthermore, certain uses of the assets of the MMJ Group, including investments in certain

capital expenditures, may require consent of MMJ's trustees and/or the Tokyo District Court.

IMFT: Cash and marketable investments included \$288 million held by IMFT as of February 28, 2019. Our ability to access funds held by IMFT to finance our other operations is subject to agreement by Intel and contractual limitations. Amounts held by IMFT are not anticipated to be available to finance our other operations.

Indefinitely Reinvested: As of February 28, 2019, \$496 million of cash and marketable investments, including substantially all of the amounts held by the MMJ Group, was held by foreign subsidiaries whose earnings were considered to be indefinitely reinvested. Determination of the amount of unrecognized deferred tax liabilities related to investments in these foreign subsidiaries is not practicable.

Cash Flows

	First Six Months	
	2019	2018
Net cash provided by operating activities	\$8,245	\$7,984
Net cash provided by (used for) investing activities	(6,919)	(3,843)
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

Operating Activities: For the first six months of 2019, cash provided by operating activities was due primarily to net income and the effect of working capital adjustments, which included a \$1.20 billion decrease in receivables as a result of lower levels of revenue, an \$800 million increase in inventory due to higher levels of work in process and raw materials inventories, a \$326 million decrease in accounts payable and accrued expenses, and a \$320 million decrease in deferred income taxes due primarily to the utilization of deferred tax assets. For the first six months of 2018, cash provided by operating activities included \$630 million of cash used for increases in receivables as a result of higher levels of revenue, partially offset by \$178 million of cash provided by an increase in accounts payable and accrued expenses.

Investing Activities: For the first six months of 2019, net cash used for investing activities consisted primarily of \$4.89 billion of expenditures for property, plant, and equipment (net of partner contributions) and \$2.02 billion of net outflows from sales, maturities, and purchases of available-for-sale securities. For the first six months of 2018, net cash used for investing activities consisted primarily of \$3.88 billion of expenditures for property, plant, and equipment (net of partner contributions), partially offset by \$198 million of net inflows from sales, maturities, and purchases of available-for-sale securities.

Financing Activities: For the first six months of 2019, net cash used for financing activities consisted primarily of \$2.51 billion for the acquisition of 63 million shares of treasury stock under our \$10 billion share repurchase authorization and cash payments to reduce our debt, including \$506 million for scheduled repayment of other notes and capital leases and \$199 million to settle conversions of notes, partially offset by net proceeds of \$1.79 billion from the aggregate issuance of the 2024 Notes, 2026 Notes, and 2029 Notes. For the first six months of 2018, net cash used for financing activities consisted primarily of cash payments to reduce our debt, including \$2.93 billion to repurchase debt and settle conversions of notes and \$449 million for scheduled repayment of other notes and capital leases. Cash used for financing activities in the first six months of 2018 was partially offset by net proceeds of \$1.36 billion from the issuance of 34 million shares of our common stock for \$41.00 per share in a public offering.

Potential Settlement Obligations of Convertible Notes

Since the closing price of our common stock exceeded 130% of the conversion price per share of 2032D Notes and 2033F Notes for at least 20 trading days in the 30 trading day period ended on December 31, 2018, holders may convert such notes at any time through the calendar quarter ended March 31, 2019. Additionally, the closing price of our common stock also exceeded the thresholds for our 2032D Notes and 2033F Notes for the calendar quarter ended March 31, 2019; therefore, such notes are convertible by the holders at any time through June 30, 2019. The following table summarizes the potential settlements that we could be required to make for the calendar quarter ending March 31, 2019 if all holders converted their notes. The amounts in the table below are based on our closing share price of \$40.88 as of February 28, 2019.

Settlement Option	If Settled With Minimum Cash	If Settled
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	Principal Amount	Amount in Excess of Principal	Underlying Shares	Required Cash	Remainder in Shares	Entirely With Cash
2032D Notes	Cash and/or shares	Cash and/or shares	13	\$ —	13	\$ 548
2033F Notes	Cash	Cash and/or shares	6	69	5	259
			19	\$ 69	18	\$ 807

In addition to the potential settlements presented in the above table, we settled conversions of our 2043G Notes for \$1.43 billion in cash on March 13, 2019 and recognized a loss of \$316 million in the third quarter of 2019.

Contractual Obligations

As of February 28, 2019	Total	Payments Due by Period			
		Remainder of 2019	2020 - 2021	2022 - 2023	2024 and Thereafter
Notes payable ⁽¹⁾⁽²⁾	\$6,865	\$ 1,517	\$1,734	\$970	\$ 2,644
Capital lease obligations ⁽²⁾	840	149	344	119	228
Operating leases ⁽³⁾	643	18	103	109	413
Total	\$8,348	\$ 1,684	\$2,181	\$1,198	\$ 3,285

(1) Amounts include MMJ Creditor Payments, convertible notes, and other notes.

(2) Amounts include principal and interest.

(3) Amounts include contractually obligated minimum lease payments for operating leases having an initial noncancelable term in excess of one year.

Critical Accounting Estimates

For a discussion of our critical accounting estimates, see "Part I – Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended August 30, 2018. Except for the critical accounting estimates associated with revenue recognition as discussed below, there have been no material changes to our critical accounting estimates since our Annual Report on Form 10-K for the year ended August 30, 2018.

Revenue recognition: Revenue is 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 amount is recognized as an adjustment to revenue.

Recently Adopted Accounting Standards

See "Item 1. Financial Statements – Notes to Consolidated Financial Statements – Recently Adopted Accounting Standards."

Recently Issued Accounting Standards Not Yet Adopted

See "Item 1. Financial Statements – Notes to Consolidated Financial Statements – Recently Issued Accounting Standards Not Yet Adopted."

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

We are exposed to interest rate risk related to our indebtedness and our investment portfolio. As of February 28, 2019 and August 30, 2018, we had fixed-rate debt of \$4.8 billion and \$3.1 billion, respectively, and as a result, the fair value of our debt fluctuates with changes in market interest rates. We estimate that, as of February 28, 2019 and August 30, 2018, a decrease in market interest rates of 1% would increase the fair value of our fixed-rate debt by approximately \$151 million and \$79 million, respectively.

Foreign Currency Exchange Rate Risk

We are affected by changes in currency exchange rates. For further discussion about market risk and sensitivity analysis related to changes in currency exchange rates, see "Part II - Item 7A. Quantitative and Qualitative Disclosures About Market Risk" of our Annual Report on Form 10-K for the year ended August 30, 2018.

ITEM 4. CONTROLS AND PROCEDURES

An evaluation was carried out under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report. Based upon that evaluation, the principal executive officer and principal financial officer concluded that those disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act are recorded, processed, summarized, and reported within the time periods specified in the Commission's rules and forms and that such information is accumulated and communicated to our management, including the principal executive officer and principal financial officer, to allow timely decision regarding disclosure.

During the second quarter of 2019, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

For a discussion of legal proceedings, see "Part I – Item 3. Legal Proceedings" of our Annual Report on Form 10-K for the year ended August 30, 2018 and "Part I. Financial Information – Item 1. Financial Statements – Notes to Consolidated Financial Statements – Contingencies" and "Item 1A. Risk Factors" herein.

ITEM 1A. RISK FACTORS

In addition to the factors discussed elsewhere in this Form 10-Q, the following are important factors, the order of which is not necessarily indicative of the level of risk that each poses to us, which could cause actual results or events to differ materially from those contained in any forward-looking statements made by us. Our operations could also be affected by other factors that are presently unknown to us or not considered significant. Any of the factors below could have a material adverse effect on our business, results of operations, financial condition, or stock price.

Volatility in average selling prices for our semiconductor memory and storage products may adversely affect our business.

We have experienced significant volatility in our average selling prices, including dramatic declines as noted in the table below, and may continue to experience such volatility in the future. In some prior periods, average selling prices for our products have been below our manufacturing costs and we may experience such circumstances in the future. Average selling prices for our products that decline faster than our costs could have a material adverse effect on our

business, results of operations, or financial condition.

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DRAM^{Trade}
NAND

(percentage
change in
average selling
prices)

2018 from 2017	37 %	(11)%
2017 from 2016	19 %	(9)%
2016 from 2015	(35)%	(20)%
2015 from 2014	(11)%	(17)%
2014 from 2013	6 %	(23)%

We may be unable to maintain or improve gross margins.

Our gross margins are dependent in part upon continuing decreases in per gigabit manufacturing costs achieved through improvements in our manufacturing processes and product designs, including, but not limited to, process line-width, additional 3D memory layers, additional bits per cell (i.e., cell levels), architecture, number of mask layers, number of fabrication steps, and yield. In future periods, we may be unable to reduce our per gigabit manufacturing costs at sufficient levels to maintain or improve gross margins. Factors that may limit our ability to reduce costs include, but are not limited to, strategic product diversification decisions affecting product mix, the increasing complexity of manufacturing processes, difficulties in transitioning to smaller line-width process technologies, 3D memory layers, NAND cell levels, transitioning to replacement gate technology for NAND, process complexity including number of mask layers and fabrication steps, manufacturing yield, technological barriers, changes in process technologies, and new products that may require relatively larger die sizes. Per gigabit manufacturing costs may be affected by any decisions to reduce our production output, which may cause per gigabit costs to increase. In addition, per gigabit manufacturing costs may also be affected by a broader product portfolio, which may have smaller production quantities and shorter product lifecycles. Our inability to maintain or improve gross margins could have a material adverse effect on our business, results of operations, or financial condition.

The semiconductor memory and storage markets are highly competitive.

We face intense competition in the semiconductor memory and storage markets from a number of companies, including Intel; Samsung Electronics Co., Ltd.; SK Hynix Inc.; Toshiba Memory Corporation; and Western Digital Corporation. Some of our competitors are large corporations or conglomerates that may have greater resources to invest in technology, capitalize on growth opportunities, and withstand downturns in the semiconductor markets in which we compete. Consolidation of industry competitors could put us at a competitive disadvantage. In addition, some governments have provided, and may continue to provide, significant assistance, financial or otherwise, to some of our competitors or to new entrants and may intervene in support of national industries and/or competitors. In particular, we face the threat of increasing competition as a result of significant investment in the semiconductor industry by the Chinese government and various state-owned or affiliated entities that is intended to advance China's stated national policy objectives. In addition, the Chinese government may restrict us from participating in the China market or may prevent us from competing effectively with Chinese companies. Some of our competitors may use aggressive pricing to obtain market share or take business of our key customers.

Our competitors generally seek to increase silicon capacity, improve yields, and reduce die size in their product designs which may result in significant increases in worldwide supply and downward pressure on prices. Increases in worldwide supply of semiconductor memory and storage also result from fabrication capacity expansions, either by

way of new facilities, increased capacity utilization, or reallocation of other semiconductor production to semiconductor memory and storage production. Our competitors may increase capital expenditures resulting in future increases in worldwide supply. We and some of our competitors have plans to ramp, or are constructing or ramping, production at new fabrication facilities. Increases in worldwide supply of semiconductor memory and storage, if not accompanied by commensurate increases in demand, would lead to further declines in average selling prices for our products and would materially adversely affect our business, results of operations, or financial condition. If competitors are more successful at developing or implementing new product or process technology, their products could have cost or performance advantages.

The competitive nature of our industry could have a material adverse effect on our business, results of operations, or financial condition.

We may be unable to generate sufficient cash flows or obtain access to external financing necessary to fund our operations, make scheduled debt payments, and make adequate capital investments.

Our cash flows from operations depend primarily on the volume of semiconductor memory and storage products sold, average selling prices, and manufacturing costs. To develop new product and process technology, support future growth,

achieve operating efficiencies, and maintain product quality, we must make significant capital investments in manufacturing technology, capital equipment, facilities, R&D, and product and process technology.

We estimate that capital expenditures in 2019 for property, plant, and equipment, net of partner contributions, to be approximately \$9 billion, focused on technology transitions and product enablement. Investments in capital expenditures may not generate expected returns or cash flows. Delays in completion and ramping of new production facilities could significantly impact our ability to realize expected returns on our capital expenditures, which could have a material adverse effect on our business, results of operations, or financial condition.

As a result of the corporate reorganization proceedings of MMJ initiated in 2012, and for so long as such proceedings are continuing, MMJ is prohibited from paying dividends, including any cash dividends, to us and such proceedings require that excess earnings be used in MMJ's business or to fund the MMJ creditor payments. In addition, pursuant to an order of the Tokyo District Court, MMJ cannot make loans or advances, other than certain ordinary course advances, to us without the consent of the Tokyo District Court and may, under certain circumstances, be subject to approval of the legal trustee. As a result, the assets of MMJ are not available for use by us in our other operations. Furthermore, certain uses of the assets of MMJ, including certain capital expenditures of MMJ, may require consent of MMJ's trustees and/or the Tokyo District Court.

In the past we have utilized external sources of financing when needed. As a result of our debt levels, expected debt amortization, and general economic conditions, it may be difficult for us to obtain financing on terms acceptable to us. There can be no assurance that we will be able to generate sufficient cash flows, use cash held by MMJ to fund its capital expenditures, access capital markets or find other sources of financing to fund our operations, make debt payments, and make adequate capital investments to remain competitive in terms of technology development and cost efficiency. Our inability to do any of the foregoing could have a material adverse effect on our business, results of operations, or financial condition.

Our future success depends on our ability to develop and produce competitive new memory and storage technologies.

Our key semiconductor memory and storage products and technologies face technological barriers to continue to meet long-term customer needs. These barriers include potential limitations on stacking additional 3D memory layers, increasing bits per cell (i.e., cell levels), meeting higher density requirements, and improving power consumption and reliability. We may face technological barriers to continue to shrink our products at our current or historical rate, which has generally reduced per-unit cost. In addition, we may face challenges in transitioning to replacement gate technology for NAND. We have invested and expect to continue to invest in R&D for new and existing products, which involves significant risk and uncertainties. We may be unable to recover our investment in R&D or otherwise realize the economic benefits of reducing die size or increasing memory and storage densities. Our competitors are working to develop new memory and storage technologies that may offer performance and/or cost advantages to existing technologies and render existing technologies obsolete. Accordingly, our future success may depend on our ability to develop and produce viable and competitive new memory and storage technologies. There can be no assurance of the following:

- that we will be successful in developing competitive new semiconductor memory and storage technologies;
- that we will be able to cost-effectively manufacture new products;
- that we will be able to successfully market these technologies; and
- that margins generated from sales of these products will allow us to recover costs of development efforts.

We develop and produce advanced memory technologies, including 3D XPoint memory, a new class of non-volatile technology. There is no assurance that our efforts to develop and market new product technologies will be successful.

Unsuccessful efforts to develop new semiconductor memory and storage technologies could have a material adverse effect on our business, results of operations, or financial condition.

A significant concentration of our revenue is to a select number of customers.

In each of the last three years, approximately one-half of our total revenue was from our top ten customers. A disruption in our relationship with any of these customers could adversely affect our business. We could experience fluctuations in our customer base or the mix of revenue by customer as markets and strategies evolve. In addition, any consolidation of our customers could reduce the number of customers to whom our products could be sold. Our inability to meet our customers' requirements or to qualify our products with them could adversely impact our revenue. The loss of one or more of our major customers or any significant reduction in orders from, or a shift in product mix by, these customers could have a material adverse effect on our business, results of operations, or financial condition.

We have been served with complaints in Chinese courts alleging patent infringement.

We have been served with complaints in Chinese courts alleging that we infringe certain Chinese patents by manufacturing and selling certain products in China. The complaints seek orders requiring us 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 plus court fees.

We are unable to predict the outcome of these assertions of infringement made against us 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 operations in China, products, and/or manufacturing processes. Any of the foregoing could have a material adverse effect on our business, results of operations, or financial condition. (See "Part I. Financial Information – Item 1. Financial Statements – Notes to Consolidated Financial Statements – Contingencies.")

We are subject to allegations of anticompetitive conduct.

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.

We are unable to predict the outcome of these matters and therefore cannot estimate the range of possible loss. The final resolution of these matters could result in significant liability and could have a material adverse effect on our business, results of operations, or financial condition.

We are subject to allegations of securities violations and related wrongful acts.

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.

We are unable to predict the outcome of these matters and therefore cannot estimate the range of possible loss. The final resolution of these matters could result in significant liability and could have a material adverse effect on our business, results of operations, or financial condition.

New product and market development may be unsuccessful.

We are developing new products, including system-level memory and storage products and solutions, which complement our traditional products or leverage their underlying design or process technology. We have made significant investments in product and process technology and anticipate expending significant resources for new semiconductor product and system-level solution development over the next several years. Additionally, we are increasingly differentiating our products and solutions to meet the specific demands of our customers, which increases our reliance on our customer's ability to accurately forecast the end-customer's needs and preferences. As a result, our product demand forecasts may be impacted significantly by the strategic actions of our customers. In order to continue our success, we must develop, manufacture, and qualify the products our customers need at the time they need those products. The process to develop new products requires us to demonstrate advanced functionality and performance, often well in advance of a planned ramp of production, in order to secure design wins with our customers. In addition, some of our components have long lead-times, requiring us to place orders several months in advance of anticipated demand. Such long lead-times increase the risk of excess inventory or loss of sales in the event our forecasts vary substantially from actual demand. There can be no assurance of the following:

- that our product development efforts will be successful;
- that we will be able to cost-effectively manufacture new products;
- that we will be able to successfully market these products;
- that we will be able to establish or maintain key relationships with customers with specific chip set or design requirements;
- that we will be able to introduce new products into the market and qualify them with our customers on a timely basis;
- or
- that margins generated from sales of these products will allow us to recover costs of development efforts.

Our unsuccessful efforts to develop new products and solutions could have a material adverse effect on our business, results of operations, or financial condition.

Our joint ventures and strategic relationships involve numerous risks.

We have entered into strategic relationships to develop new manufacturing process technologies and products and to manufacture certain products, including our joint development partnership and our IMFT joint venture with Intel. 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 approximately \$1.5 billion in cash for Intel's interest in IMFT and IMFT Member Debt. As of February 28, 2019, current debt included \$1 billion of IMFT Member Debt. Our joint ventures and strategic relationships are subject to various risks that could adversely affect the value of our investments and our results of operations, including the following:

- diverging interests between us and our partners and disagreements on the following:
 - ongoing or future development, manufacturing, or operational activities;
 - the amount, timing, or nature of further investments; and
 - commercial terms in our joint ventures or strategic relationships;
- competition from our partners;

- access by our partners to our proprietary product and process technology which they may use;
- difficulties in transferring technology to joint ventures;
- difficulties and delays in ramping production at joint ventures;
- limited control over the operations of our joint ventures;
- inability of our partners to meet their commitments to us or our joint ventures;
- differences in participation on funding capital investments in our joint ventures due to differing business models or long-term business goals;
- inadequate cash flows to fund increased capital requirements of our joint ventures;
- difficulties or delays in collecting amounts due to us from our joint ventures and partners;
- disputes with partners regarding the terms of arrangements, including the termination or discontinuance of our joint ventures, or that terms of such arrangements are unfavorable; and
- changes in tax, legal, or regulatory requirements that necessitate changes in the agreements with our partners.

Our joint ventures and strategic relationships, if unsuccessful, could have a material adverse effect on our business, results of operations, or financial condition.

Increases in sales of system solutions may increase our dependency upon specific customers and our costs to develop and qualify our system solutions.

Our development of system-level memory and storage products is dependent, in part, upon successfully identifying and meeting our customers' specifications for those products. Developing and manufacturing system-level products with specifications unique to a customer increases our reliance upon that customer for purchasing our products in sufficient volume, quantity, and in a timely manner. If we fail to identify or develop products on a timely basis, or at all, that comply with our customers' specifications or achieve design wins with our customers, we may experience a significant adverse impact on our revenues and margins. Even if our products meet customer specifications, our sales of system-level solutions are dependent upon our customers choosing our products over those of our competitors and purchasing our products at sufficient volumes and prices. Our competitors' products may be less costly, provide better performance, or include additional features when compared to our products. Our long-term ability to sell system-level memory and storage products is reliant upon our customers' ability to create, market, and sell their products containing our system-level solutions at sufficient volumes and prices in a timely manner. If we fail to successfully develop and market system-level products, our business, results of operations, or financial condition may be materially adversely affected.

Even if we are successful in selling system-level solutions to our customers in sufficient volume, we may be unable to generate sufficient profit if our per-unit manufacturing costs exceed our per-unit selling prices. Manufacturing system-level solutions to customer specifications requires a longer development cycle, as compared to discrete products, to design, test, and qualify, which may increase our costs. Additionally, some of our system solutions are increasingly dependent on sophisticated firmware that may require significant customization to meet customer specifications, which increases our costs and time to market. Additionally, we may need to update our firmware or develop new firmware as a result of new product introductions or changes in customer specifications and/or industry standards, which increases our costs. System complexities and extended warranties for system-level products could also increase our warranty costs. Our failure to cost-effectively manufacture system-level solutions and/or firmware in a timely manner, may result in reduced demand for our system-level products, and could have a material adverse effect on our business, results of operations, or financial condition.

Products that fail to meet specifications, are defective, or that are otherwise incompatible with end uses could impose significant costs on us.

Products that do not meet specifications or that contain, or are perceived by our customers to contain, defects or that are otherwise incompatible with end uses could impose significant costs on us or otherwise materially adversely affect our business, results of operations, or financial condition. From time to time, we experience problems with nonconforming, defective, or incompatible products after we have shipped such products. In recent periods, we have further diversified and expanded our product offerings, which could potentially increase the chance that one or more of our products could fail to meet specifications in a particular application. Our products and solutions may be deemed fully or partially responsible for functions in our customers' products and may result in sharing or shifting of product or financial liability from our customers to us for costs incurred by the end user as a result of our customers' products failing to perform as specified. We could be adversely affected in several ways, including the following:

- we may be required or agree to compensate customers for costs incurred or damages caused by defective or incompatible products and to replace products;

• we could incur a decrease in revenue or adjustment to pricing commensurate with the reimbursement of such costs or
• alleged damages; and
• we may encounter adverse publicity, which could cause a decrease in sales of our products or harm our relationships with existing or potential customers.

Any of the foregoing items could have a material adverse effect on our business, results of operations, or financial condition.

We may be unable to protect our intellectual property or retain key employees who are knowledgeable of and develop our intellectual property.

We maintain a system of controls over our intellectual property, including U.S. and foreign patents, trademarks, copyrights, trade secrets, licensing arrangements, confidentiality procedures, non-disclosure agreements with employees, consultants, and

vendors, and a general system of internal controls. Despite our system of controls over our intellectual property, it may be possible for our current or future competitors to obtain, copy, use, or disclose, illegally or otherwise, our product and process technology or other proprietary information. The laws of some foreign countries may not protect our intellectual property to the same degree as do U.S. laws and our confidentiality, non-disclosure, and non-compete agreements may be unenforceable or difficult and costly to enforce.

Additionally, our ability to maintain and develop intellectual property is dependent upon our ability to attract, develop, and retain highly skilled employees. Global competition for such skilled employees in our industry is intense. Due to the volatile nature of our industry and our operating results, a decline in our operating results and/or stock price may adversely affect our ability to retain key employees whose compensation is dependent, in part, upon the market price of our common stock, achieving certain performance metrics, levels of company profitability, or other financial or company-wide performance. If our competitors or future entrants into our industry are successful in hiring our employees, they may directly benefit from the knowledge these employees gained while they were under our employment.

Our inability to protect our intellectual property or retain key employees who are knowledgeable of and develop our intellectual property could have a material adverse effect on our business, results of operations, or financial condition.

Claims that our products or manufacturing processes infringe or otherwise violate the intellectual property rights of others, or failure to obtain or renew license agreements covering such intellectual property, could materially adversely affect our business, results of operations, or financial condition.

As is typical in the semiconductor and other high technology industries, from time to time others have asserted, and may in the future assert, that our products or manufacturing processes infringe upon, misappropriate, misuse, or otherwise violate their intellectual property rights. We are unable to predict the outcome of these assertions made against us. Any of these types of claims, regardless of the merits, could subject us to significant costs to defend or resolve such claims and may consume a substantial portion of management's time and attention. As a result of these claims, we may be required to:

- pay significant monetary damages, fines, royalties, or penalties;
- enter into license or settlement agreements covering such intellectual property rights;
- make material changes to or redesign our products and/or manufacturing processes; and/or
- cease manufacturing, having made, selling, offering for sale, importing, marketing, or using products and/or manufacturing processes in certain jurisdictions.

We may not be able to take any of the actions described above on commercially reasonable terms and any of the foregoing results could have a material adverse effect on our business, results of operations, or financial condition. (See "Part I. Financial Information – Item 1. Financial Statements – Notes to Consolidated Financial Statements – Contingencies.")

We have a number of intellectual property license agreements. Some of these license agreements require us to make one-time or periodic payments. We may need to obtain additional licenses or renew existing license agreements in the future. We are unable to predict whether these license agreements can be obtained or renewed on terms acceptable to us. The failure to obtain or renew licenses as necessary could have a material adverse effect on our business, results of operations, or financial condition.

Litigation could have a material adverse effect on our business, results of operations, or financial condition.

From time to time we are subject to various legal proceedings and claims that arise out of the ordinary conduct of our business or otherwise, both domestically and internationally. Any claim, with or without merit, could result in significant legal fees that could negatively impact our financial results, disrupt our operations, and require significant attention from our management. We could be subject to litigation or arbitration disputes arising from our relationships with vendors or customers, supply agreements, or contractual obligations with our subcontractors or business partners. We may also be associated with and subject to litigation arising from the actions of our subcontractors or business partners. We may also be subject to litigation as a result of indemnities we issue, primarily with our customers, the terms of our product warranties, and from product liability claims. As we continue to focus on developing system solutions with manufacturers of consumer products, including autonomous driving, augmented reality, and others, we may be exposed to greater potential for personal liability claims against us as a result of consumers' use of those products. There can be no assurance that we are adequately insured to protect against all claims and potential liabilities, and we may elect to self-insure with respect to certain matters. Exposures to various litigation could lead to significant costs and expenses as we defend claims, are required to pay damage awards, or enter into settlement agreements, any of which could have a material adverse effect on our business, results of operations, or financial condition.

If our manufacturing process is disrupted, our business, results of operations, or financial condition could be materially adversely affected.

We and our subcontractors manufacture products using highly complex processes that require technologically advanced equipment and continuous modification to improve yields and performance. Difficulties in the manufacturing process or the effects from a shift in product mix can reduce yields or disrupt production and may increase our per gigabit manufacturing costs. We and our subcontractors maintain operations and continuously implement new product and process technology at manufacturing facilities, which are widely dispersed in multiple locations in several countries including the United States, Singapore, Taiwan, Japan, Malaysia, and China. Additionally, our control over operations at IMFT is limited by our agreements with Intel. From time to time, there have been disruptions in the manufacturing process as a result of power outages, improperly functioning equipment, disruptions in supply of raw materials or components, equipment failures, earthquakes, or other environmental events. If production is disrupted for any reason, manufacturing yields may be adversely affected or we may be unable to meet our customers' requirements and they may purchase products from other suppliers. This could result in a significant increase in manufacturing costs, loss of revenues, or damage to customer relationships, any of which could have a material adverse effect on our business, results of operations, or financial condition.

Increases in tariffs or other trade restrictions or taxes on our or our customers' products or equipment and supplies could have an adverse impact on our operations.

In 2018, 88% of our revenue was from customers located outside the United States. We also purchase a significant portion of equipment and supplies from suppliers outside the United States. Additionally, a significant portion of our facilities are located outside the United States, including Taiwan, Singapore, Japan, and China. The United States and other countries have levied tariffs and taxes on certain goods. General trade tensions between the U.S. and China have been escalating since 2018, with three rounds of U.S. tariffs on Chinese goods taking effect in July, August, and September 2018, each followed by a round of retaliatory Chinese tariffs on U.S. goods. Some of our products are included in these announced tariffs. Higher duties on existing tariffs and further rounds of tariffs have been announced or threatened by U.S. and Chinese leaders. For example, a U.S. tariff on Chinese goods, including certain of our products, was scheduled to increase from 10% to 25%; however, that increase has been delayed pending trade negotiations between the U.S. and China. If the U.S. were to impose additional tariffs on components that we or our suppliers source from China, our cost for such components would increase. We may also incur increases in manufacturing costs and supply chain risks due to our efforts to mitigate the impact of tariffs on our customers and our operations. Additionally, tariffs on our customers' products could impact their sales of such end products, resulting in lower demand for our products. Further changes in trade policy, tariffs, additional taxes, restrictions on exports or other trade barriers, or restrictions on supplies, equipment, and raw materials including rare earth minerals, may limit our ability to produce products, increase our selling and/or 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 conditions.

We face risks associated with our international sales and operations that could materially adversely affect our business, results of operations, or financial condition.

A substantial majority of our consolidated revenue is from customers located outside the United States. In addition, a substantial portion of our manufacturing operations are located outside the United States. In particular, a significant portion of our manufacturing operations are concentrated in Singapore, Taiwan, Japan, and China. Many of our customers, suppliers, and vendors operate internationally and are also subject to the risks listed below. In addition, the U.S. government has in the past banned American firms from selling products and software to certain of our customers and may in the future impose similar bans or other restrictions on sales to one or more of our significant

customers. Specifically, the U.S. government has recently intensified its focus on the business practices of major Chinese technology companies, including Huawei Technologies Co., Ltd., which accounted for 13% of our total revenue for the first six months of 2019. Possible future U.S. government actions could lead to enhanced export control for exports from the United States to China or other countries, bans on sales to one or more key customers, or other similar restrictions.

Our international sales and operations are subject to a variety of risks, including:

- export and import duties, changes to import and export regulations, customs regulations and processes, and restrictions on the transfer of funds;
- imposition of bans on sales of goods or services to one or more of our significant foreign customers;
- compliance with U.S. and international laws involving international operations, including the Foreign Corrupt Practices Act of 1977, as amended, export and import laws, and similar rules and regulations;
- theft of intellectual property;

political and economic instability;
problems with the transportation or delivery of products;
issues arising from cultural or language differences and labor unrest;
longer payment cycles and greater difficulty in collecting accounts receivable;
compliance with trade, technical standards, and other laws in a variety of jurisdictions;
contractual and regulatory limitations on the ability to maintain flexibility with staffing levels;
disruptions to manufacturing operations as a result of actions imposed by foreign governments;
changes in economic policies of foreign governments; and
difficulties in staffing and managing international operations.

If we or our customers, suppliers, or vendors are impacted by these risks, it could have a material adverse effect on our business, results of operations, or financial condition.

Debt obligations could adversely affect our financial condition.

We have incurred in the past, and expect to incur in the future, debt to finance our capital investments, business acquisitions, and restructuring of our capital structure. As of February 28, 2019, we had debt with a carrying value of \$6.24 billion and may borrow up to an additional \$2.50 billion under an undrawn revolving credit facility. In addition, as of February 28, 2019, the conversion value in excess of principal of our convertible notes was \$604 million, based on the trading price of our common stock of \$40.88 per share on such date.

Our debt obligations could adversely impact us. For example, these obligations could:

- require us to use a large portion of our cash flow to pay principal and interest on debt, which will reduce the amount of cash flow available to fund working capital, capital expenditures, acquisitions, R&D expenditures, and other business activities;
- require us to use cash and/or issue shares of our common stock to settle any conversion obligations of our convertible notes;
- result in certain of our debt instruments being accelerated to be immediately due and payable or being deemed to be in default if certain terms of default are triggered, such as applicable cross payment default and/or cross-acceleration provisions;
- adversely impact our credit rating, which could increase future borrowing costs;
 - limit our future ability to raise funds for capital expenditures, strategic acquisitions or business opportunities, R&D, and other general corporate requirements;
- restrict our ability to incur specified indebtedness, create or incur certain liens, and enter into sale-leaseback financing transactions;
- increase our vulnerability to adverse economic and semiconductor memory and storage industry conditions;
- increase our exposure to interest rate risk from variable rate indebtedness;
- continue to dilute our earnings per share as a result of the conversion provisions in our convertible notes; and
- require us to continue to pay cash amounts substantially in excess of the principal amounts upon settlement of our convertible notes to minimize dilution of our earnings per share.

Our ability to meet our payment obligations under our debt instruments depends on our ability to generate significant cash flows in the future. This, to some extent, is subject to market, economic, financial, competitive, legislative, and regulatory factors as well as other factors that are beyond our control. There can be no assurance that our business will generate cash flow from operations, or that additional capital will be available to us, in amounts sufficient to enable us to meet our debt payment obligations and to fund other liquidity needs. Additionally, events and circumstances may occur which would cause us to not be able to satisfy applicable draw-down conditions and utilize our revolving credit

facility. If we are unable to generate sufficient cash flows to service our debt payment obligations, we may need to refinance or restructure our debt, sell assets, reduce or delay capital investments, or seek to raise additional capital. If we are unable to implement one or more of these alternatives, we may be unable to meet our debt payment obligations, which could have a material adverse effect on our business, results of operations, or financial condition.

We must attract, retain, and motivate highly skilled employees.

To remain competitive, we must attract, retain, and motivate executives and other highly skilled employees. Hiring and retaining qualified executives, engineers, technical staff, and sales representatives are critical to our business, and competition for experienced employees in our industry can be intense. Our inability to attract and retain key employees may inhibit our ability to expand our business operations. Additionally, changes to immigration policies in the numerous countries in which we

operate, including the United States, may limit our ability to hire and/or retain talent in specific locations. If our total compensation programs and workplace culture cease to be viewed as competitive, our ability to attract, retain, and motivate employees could be weakened, which could have a material adverse effect on our business, results of operations, or financial condition.

The acquisition of our ownership interest in Inotera from Qimonda has been challenged by the administrator of the insolvency proceedings for 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.

We are unable to predict the outcome of the matter and, therefore, cannot estimate the range of possible loss. The final resolution of this lawsuit could result in the loss of the Inotera Shares or monetary damages, unspecified damages based on the benefits derived by Micron B.V. from the ownership of the Inotera Shares, and/or the termination of the patent cross-license, which could have a material adverse effect on our business, results of operations, or financial condition.

Breaches of our security systems could expose us to losses.

We maintain a system of controls over the physical security of our facilities. We also manage and store various proprietary information and sensitive or confidential data relating to our operations. In addition, we process, store, and transmit large amounts of data relating to our customers and employees, including sensitive personal information. Unauthorized persons or employees may gain access to our facilities or network systems to steal trade secrets or other proprietary information, compromise confidential information, create system disruptions, or cause shutdowns. These parties may also be able to develop and deploy viruses, worms, and other malicious software programs that disrupt our operations and create security vulnerabilities. Breaches of our physical security and attacks on our network systems

could result in significant losses and damage our reputation with customers and suppliers and may expose us to litigation if the confidential information of our customers, suppliers, or employees is compromised, which could have a material adverse effect on our business, results of operations, or financial condition.

Changes in foreign currency exchange rates could materially adversely affect our business, results of operations, or financial condition.

Across our global operations, significant transactions and balances are denominated in currencies other than the U.S. dollar (our reporting currency), primarily the euro, Singapore dollar, New Taiwan dollar, and yen. Although we hedge our primary exposures to changes in currency exchange rates from our monetary assets and liabilities, the effectiveness of these hedges is dependent upon our ability to accurately forecast our monetary assets and liabilities. In addition, a significant portion of our manufacturing costs are denominated in foreign currencies. Exchange rates for some of these currencies against the U.S. dollar, particularly the yen, have been volatile in recent periods. If these currencies strengthen against the U.S. dollar, our

manufacturing costs could significantly increase. Exchange rates for the U.S. dollar that adversely change against our foreign currency exposures could have a material adverse effect on our business, results of operations, or financial condition.

We may make future acquisitions and/or alliances, which involve numerous risks.

Acquisitions and the formation or operation of alliances, such as joint ventures and other partnering arrangements, involve numerous risks, including the following:

- integrating the operations, technologies, and products of acquired or newly formed entities into our operations;
- increasing capital expenditures to upgrade and maintain facilities;
- increased debt levels;
- the assumption of unknown or underestimated liabilities;
- the use of cash to finance a transaction, which may reduce the availability of cash to fund working capital, capital expenditures, R&D expenditures, and other business activities;
- diverting management's attention from daily operations;
- managing larger or more complex operations and facilities and employees in separate and diverse geographic areas;
- hiring and retaining key employees;
- requirements imposed by governmental authorities in connection with the regulatory review of a transaction, which may include, among other things, divestitures or restrictions on the conduct of our business or the acquired business;
- inability to realize synergies or other expected benefits;
- failure to maintain customer, vendor, and other relationships;
- inadequacy or ineffectiveness of an acquired company's internal financial controls, disclosure controls and procedures, compliance programs, and/or environmental, health and safety, anti-corruption, human resource, or other policies or practices; and
- impairment of acquired intangible assets, goodwill, or other assets as a result of changing business conditions, technological advancements, or worse-than-expected performance of the acquired business.

In previous years, supply of memory and storage products has significantly exceeded customer demand resulting in significant declines in average selling prices. The global memory and storage industry has experienced consolidation and may continue to consolidate. We engage, from time to time, in discussions regarding potential acquisitions and similar opportunities. To the extent we are successful in completing any such transactions, we could be subject to some or all of the risks described above, including the risks pertaining to funding, assumption of liabilities, integration challenges, and increases in debt that may accompany such transactions. Acquisitions of, or alliances with, technology companies are inherently risky and may not be successful and could have a material adverse effect on our business, results of operations, or financial condition.

Our business, results of operations, or financial condition could be adversely affected by the limited availability and quality of materials, supplies, and capital equipment, or the dependency on third-party service providers.

Our supply chain and operations are dependent on the availability of materials that meet exacting standards and the use of third parties to provide us with components and services. We generally have multiple sources of supply for our raw materials and services. However, only a limited number of suppliers are capable of delivering certain raw materials and services that meet our standards and, in some cases, materials, components, or services are provided by a single supplier. Various factors could reduce the availability of raw materials or components such as chemicals, silicon wafers, gases, photoresist, controllers, substrates, lead frames, printed circuit boards, targets, and reticle glass blanks. Shortages or increases in lead times may occur from time to time in the future. Our manufacturing processes are also dependent on our relationships with third-party manufacturers of controllers used in a number of our products

and with outsourced semiconductor assembly and test providers, contract manufacturers, logistic carriers, and other service providers. Certain raw materials are primarily available in certain countries, including rare earth minerals available primarily from China, and trade disputes or other political or economic conditions may limit our availability to obtain such raw materials. We and/or our suppliers and service providers could be affected by tariffs, embargoes or other trade restrictions, as well as laws and regulations enacted in response to concerns regarding climate change, conflict minerals, and responsible sourcing practices, which could limit the supply of our raw materials and/or increase the cost. In addition, disruptions in transportation lines could delay our receipt of raw materials. Lead times for the supply of raw materials have been extended in the past. The disruption of our supply of raw materials, components, services, or the extension of our lead times could have a material adverse effect on our business, results of operations, or financial condition.

Our operations are dependent on our ability to procure advanced semiconductor manufacturing equipment that enables the transition to lower cost manufacturing processes. For certain key types of equipment, including photolithography tools, we are sometimes dependent on a single supplier. From time to time, we have experienced difficulties in obtaining some equipment on

a timely basis due to suppliers' limited capacity. Our inability to obtain equipment on a timely basis could adversely affect our ability to transition to next generation manufacturing processes and reduce our costs. Delays in obtaining equipment could also impede our ability to ramp production at new facilities and could increase our overall costs of a ramp. Our inability to obtain advanced semiconductor manufacturing equipment in a timely manner could have a material adverse effect on our business, results of operations, or financial condition.

A downturn in the worldwide economy may harm our business.

Downturns in the worldwide economy have harmed our business in the past and future downturns could also adversely affect our business. Adverse economic conditions affect demand for devices that incorporate our products, such as personal computers, mobile devices, SSDs, and servers. Reduced demand for these products could result in significant decreases in our average selling prices and product sales. A deterioration of current conditions in worldwide credit markets could limit our ability to obtain external financing to fund our operations and capital expenditures. In addition, we may experience losses on our holdings of cash and investments due to failures of financial institutions and other parties. Difficult economic conditions may also result in a higher rate of losses on our accounts receivables due to credit defaults. As a result, a downturn in the worldwide economy could have a material adverse effect on our business, results of operations, or financial condition.

Our results of operations could be affected by natural disasters and other events in the locations in which we or our customers or suppliers operate.

We have manufacturing and other operations in locations subject to natural occurrences such as severe weather and geological events, including earthquakes or tsunamis, that could disrupt operations or result in construction delays. In addition, our suppliers and customers also have operations in such locations. A natural disaster, fire, explosion, or other event that results in a prolonged disruption to our operations, or the operations of our customers or suppliers, could have a material adverse effect on our business, results of operations, or financial condition.

Our incentives from various governments are conditional upon achieving or maintaining certain performance obligations and are subject to reduction, termination, or clawback.

We have received, and may in the future continue to receive, benefits and incentives from national, state, and local governments in various regions of the world designed to encourage us to establish, maintain, or increase investment, workforce, or production in those regions. These incentives may take various forms, including grants, loan subsidies, and tax arrangements, and typically require us to perform or maintain certain levels of investment, capital spending, employment, technology deployment, or research and development activities to qualify for such incentives. We cannot guarantee that we will successfully achieve performance obligations required to qualify for these incentives or that the granting agencies will provide such funding. These incentive arrangements typically provide the granting agencies with rights to audit our performance with the terms and obligations. Such audits could result in modifications to, or termination of, the applicable incentive program. The incentives we receive could be subject to reduction, termination, or clawback, and any decrease or clawback of government incentives could have a material adverse effect on our business, results of operations, or financial condition.

A change in tax laws in key jurisdictions could materially increase our tax expense.

We are subject to income taxes in the U.S. and many foreign jurisdictions. Changes to income tax laws and regulations in any of the jurisdictions in which we operate, or in the interpretation of such laws, could significantly increase our effective tax rate and ultimately reduce our cash flow from operating activities and otherwise have a material adverse effect on our financial condition. For example, as a result of the Tax Cuts and Jobs Act (the "Tax

Act") enacted on December 22, 2017 by the United States, our effective tax rate increased to 13.3% in the first six months of 2019. The U.S. Treasury Department continues to issue interpretive guidance on the Tax Act, including the Repatriation Tax, foreign tax credits, Foreign Minimum Tax, foreign derived intangible income, and interest expense deduction limitations. It is anticipated that the guidance will be finalized over the next several months. Additionally, various levels of government are increasingly focused on tax reform and other legislative actions to increase tax revenue. Further changes in the tax laws of foreign jurisdictions could arise as a result of the base erosion and profit shifting project undertaken by the Organization for Economic Co-operation and Development, which represents a coalition of member countries and recommended changes to numerous long-standing tax principles. If adopted by countries, such changes, as well as changes in U.S. federal and state tax laws or in taxing jurisdictions' administrative interpretations, decisions, policies, and positions, could have a material adverse effect on our business, results of operations, or financial condition.

We may incur additional tax expense or become subject to additional tax exposure.

We operate in a number of locations outside the United States, including Singapore, where we have tax incentive arrangements that are conditional, in part, upon meeting certain business operations and employment thresholds. Our domestic and international taxes are dependent upon the geographic mix of our earnings among these jurisdictions. Our provision for income taxes and cash tax liabilities in the future could be adversely affected by numerous factors, including challenges by tax authorities to our tax positions and intercompany transfer pricing arrangements, failure to meet performance obligations with respect to tax incentive agreements, expanding our operations in various countries, and changes in tax laws and regulations. Additionally, we file income tax returns with the U.S. federal government, various U.S. states, and various other jurisdictions throughout the world and certain tax returns may remain open to examination for several years. The results of audits and examinations of previously filed tax returns and continuing assessments of our tax exposures may have an adverse effect on our provision for income taxes and cash tax liability. The foregoing items could have a material adverse effect on our business, results of operations, or financial condition.

We may incur additional restructuring charges in future periods.

From time to time, we have, and may in the future, enter into restructure initiatives in order to, among other items, streamline our operations, respond to changes in business conditions, our markets or product offerings, or to centralize certain key functions. We may not realize expected savings or other benefits from our restructure activities and may incur additional restructure charges or other losses in future periods associated with other initiatives. In connection with any restructure initiatives, we could incur restructure charges, loss of production output, loss of key personnel, disruptions in our operations, and difficulties in the timely delivery of products, which could have a material adverse effect on our business, results of operations, or financial condition.

Compliance with customer requirements and regulations regarding the use of conflict minerals could limit the supply and increase the cost of certain metals used in manufacturing our products.

Increased focus on environmental protection and social responsibility initiatives led to the passage of Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act") and its implementing SEC regulations. The Dodd-Frank Act imposes supply chain diligence and disclosure requirements for certain manufacturers of products containing specific minerals that may originate in or near the Democratic Republic of the Congo (the "DRC") and finance or benefit local armed groups. These "conflict minerals" are commonly found in materials used in the manufacture of semiconductors. The implementation of these regulations may limit the sourcing and availability of some of these materials. This in turn may affect our ability to obtain materials necessary for the manufacture of our products in sufficient quantities and may affect related material pricing. Some of our customers may elect to disqualify us as a supplier or reduce purchases from us if we are unable to verify that our products are DRC conflict free. In addition, many of our customers have or are planning to adopt responsible sourcing programs with requirements that are broader in terms of minerals and geographies than DRC conflict minerals programs. Our inability to comply with requirements regarding the use of conflict and other minerals could have a material adverse effect on our business, results of operations, or financial condition.

We and others are subject to a variety of laws and regulations that may result in additional costs and liabilities.

The manufacturing of our products requires the use of facilities, equipment, and materials that are subject to a broad array of laws and regulations in numerous jurisdictions in which we operate. Additionally, we are subject to a variety of other laws and regulations relative to the construction, maintenance, and operations of our facilities. Any of these laws or regulations could cause us to incur additional direct costs, as well as increased indirect costs related to our relationships with our customers and suppliers, and otherwise harm our operations and financial condition. Any failure

to comply with these laws or regulations could adversely impact our reputation and our financial results. Additionally, we engage various third parties to represent us or otherwise act on our behalf and we partner with other companies in our joint ventures, all of whom are also subject to a broad array of laws and regulations. Our engagement with these third parties and our ownership in these joint ventures may also expose us to risks associated with their respective compliance with these laws and regulations. As a result of these items, we could experience the following:

- suspension of production;
- remediation costs;
- alteration of our manufacturing processes;
- regulatory penalties, fines, and legal liabilities; and
- reputational challenges.

Our failure, or the failure of our third-party agents or joint ventures, to comply with these laws and regulations could have a material adverse effect on our business, results of operations, or financial condition.

We are subject to counterparty default risks.

We have numerous arrangements with financial institutions that subject us to counterparty default risks, including cash deposits, investments, capped call contracts on our common stock, and derivative instruments. As a result, we are subject to the risk that the counterparty to one or more of these arrangements will default on its performance obligations. A counterparty may not comply with their contractual commitments which could then lead to their defaulting on their obligations with little or no notice to us, which could limit our ability to take action to mitigate our exposure. Additionally, our ability to mitigate our exposures may be constrained by the terms of our contractual arrangements or because market conditions prevent us from taking effective action. If one of our counterparties becomes insolvent or files for bankruptcy, our ability to recover any losses suffered as a result of that counterparty's default may be limited by the liquidity of the counterparty or the applicable laws governing the bankruptcy proceedings. In the event of such default, we could incur significant losses, which could have a material adverse effect on our business, results of operations, or financial condition.

The operations of MMJ are subject to continued oversight by the Tokyo District Court during the pendency of the corporate reorganization proceedings.

Because MMJ's plan of reorganization provides for ongoing payments to creditors following the closing of our acquisition of MMJ, the reorganization proceedings in Japan (the "Japan Proceedings") are continuing and MMJ remains subject to the oversight of the Tokyo District Court and of the trustees (including a trustee designated by us, who we refer to as the business trustee, and a trustee designated by the Tokyo District Court, who we refer to as the legal trustee), pending completion of the reorganization proceedings. The business trustee is responsible for overseeing the operation of the business of MMJ, other than oversight in relation to acts that need to be carried out in connection with the Japan Proceedings, which are the responsibility of the legal trustee. MMJ's reorganization proceedings in Japan, and oversight of the Tokyo District Court, will continue until the final creditor payment is made under MMJ's plan of reorganization, which is scheduled to occur in December 2019, but may occur on a later date to the extent any claims of creditors remain unfixed on the final scheduled installment payment date. MMJ may petition the Tokyo District Court for an early termination of the reorganization proceedings once two-thirds of all payments under the plan of reorganization are made. Although such early terminations are customarily granted, there can be no assurance that the Tokyo District Court will grant any such petition in this particular case.

During the pendency of the reorganization proceedings in Japan, MMJ is obligated to provide periodic financial reports to the Tokyo District Court and may be required to obtain the consent of the Tokyo District Court prior to taking a number of significant actions relating to its businesses, including transferring or disposing of, or acquiring, certain material assets, incurring or guaranteeing material indebtedness, settling material disputes, or entering into certain material agreements. The consent of the legal trustee may also be required for matters that would likely have a material impact on the operations or assets of MMJ or for transfers of material assets, to the extent the matters or transfers would reasonably be expected to materially and adversely affect execution of MMJ's plan of reorganization. Accordingly, during the pendency of the reorganization proceedings in Japan, our ability to operate MMJ as part of our global business or to cause MMJ to take certain actions that we deem advisable for its business could be adversely affected if the Tokyo District Court or the legal trustee is unwilling to consent to various actions that we may wish to take with respect to MMJ.

The operations of MMJ being subject to the continued oversight by the Tokyo District Court during the pendency of the corporate reorganization proceedings could have a material adverse effect on our business, results of operations, or

financial condition.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

In May 2018, we announced that our Board of Directors had authorized the discretionary repurchase of up to \$10 billion of our outstanding common stock beginning in 2019. We may purchase shares on a discretionary basis through open-market purchases, block trades, privately-negotiated transactions, and/or derivative transactions, 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.

Period	(a) Total number of shares purchased	(b) Average price paid per share	(c) Total number of shares (or units) purchased as part of publicly announced plans or programs	(d) Maximum number (or approximate dollar value) of shares (or units) that may yet be purchased under publicly announced plans or programs
November 30, 2018 – January 3, 2019	4,824,142	\$ 30.88	4,824,142	
January 4, 2019 – January 31, 2019	11,635,513	34.75	11,635,513	
February 1, 2019 – February 28, 2019	3,780,995	39.40	3,780,995	
	20,240,650			\$7,494,825,433

Shares of common stock withheld as payment of withholding taxes and exercise prices in connection with the vesting or exercise of equity awards are also treated as common stock repurchases. Those withheld shares of common stock are not considered common stock repurchases under an authorized common stock repurchase plan and accordingly are excluded from the amounts in the table above.

6. Exhibits

Exhibit Number	Description of Exhibit	Filed Herewith	Form	Period Ending	Exhibit/Appendix	Filing Date
3.1	<u>Restated Certificate of Incorporation of the Registrant</u>		8-K		99.2	1/26/15
3.2	<u>Bylaws of the Registrant, Amended and Restated</u>		8-K		99.1	1/22/19
4.15	<u>Indenture, dated February 6, 2019, by and between Micron Technology, Inc. and U.S. Bank National Association, as Trustee</u>		8-K		4.1	2/6/19
4.16	<u>Supplemental Indenture, dated February 6, 2019, by and between Micron Technology, Inc. and U.S. Bank National Association, as Trustee</u>		8-K		4.2	2/6/19
4.17	<u>Form of Note for Micron Technology, Inc.'s 4.640% Notes due 2024 (included in Exhibit 4.16)</u>		8-K		4.3	2/6/19
4.18	<u>Form of Note for Micron Technology, Inc.'s 4.975% Notes due 2026 (included in Exhibit 4.16)</u>		8-K		4.4	2/6/19
4.19	<u>Form of Note for Micron Technology, Inc.'s 5.327% Notes due 2029 (included in Exhibit 4.16)</u>		8-K		4.5	2/6/19
10.71	<u>Underwriting Agreement, dated February 4, 2019, by and among Micron Technology, Inc. and Morgan Stanley & Co. LLC, BNP Paribas Securities Corp. and Credit Suisse Securities (USA) LLC, as representatives of the several underwriters on Schedule I attached thereto</u>		8-K		1.1	2/6/19
31.1	<u>Rule 13a-14(a) Certification of Chief Executive Officer</u>	ü				
31.2	<u>Rule 13a-14(a) Certification of Chief Financial Officer</u>	ü				
32.1	<u>Certification of Chief Executive Officer Pursuant to 18 U.S.C. 1350</u>	ü				
32.2	<u>Certification of Chief Financial Officer Pursuant to 18 U.S.C. 1350</u>	ü				
101.INS	XBRL Instance Document	ü				
101.SCH	XBRL Taxonomy Extension Schema Document	ü				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	ü				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	ü				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	ü				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	ü				

SIGNATURE

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.

Micron Technology, Inc.
(Registrant)

Date: March 21, 2019 /s/ David A. Zinsner
David A. Zinsner
Senior Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)