

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 September 28, 2024

OR

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

For the transition period from _____ to _____

Commission File Number: **001-07882**

AMD
ADVANCED MICRO DEVICES, INC.
(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

94-1692300

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

**2485 Augustine Drive
Santa Clara, California 95054**

(Address of principal executive offices)(Zip Code)

(408) 749-4000

(Registrant's telephone number, including area code)

N/A

(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.01 par value per share	AMD	The Nasdaq Global Select Market

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 (the Exchange Act) during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

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

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

Large accelerated filer Accelerated filer Non-accelerated filer
Smaller reporting company Emerging growth company

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

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act). Yes No

Indicate the number of shares outstanding of the registrant's common stock, \$0.01 par value per share, as of October 23, 2024: 1,622,807,346

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PART I. FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

**Advanced Micro Devices, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)**

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
	(In millions, except per share amounts)			
Net revenue	\$ 6,819	\$ 5,800	\$ 18,127	\$ 16,512
Cost of sales	3,167	2,843	8,590	8,236
Amortization of acquisition-related intangibles	233	210	694	727
Total cost of sales	3,400	3,053	9,284	8,963
Gross profit	3,419	2,747	8,843	7,549
Research and development	1,636	1,507	4,744	4,361
Marketing, general and administrative	721	576	1,991	1,708
Amortization of acquisition-related intangibles	352	450	1,116	1,449
Licensing gain	(14)	(10)	(37)	(28)
Operating income	724	224	1,029	59
Interest expense	(23)	(26)	(73)	(79)
Other income (expense), net	36	59	144	148
Income before income taxes and equity income	737	257	1,100	128
Income tax (benefit)	(27)	(39)	(38)	(49)
Equity income in investee	7	3	21	10
Net income	\$ 771	\$ 299	\$ 1,159	\$ 187
Earnings per share				
Basic	\$ 0.48	\$ 0.18	\$ 0.72	\$ 0.12
Diluted	\$ 0.47	\$ 0.18	\$ 0.71	\$ 0.11
Shares used in per share calculation				
Basic	1,620	1,616	1,619	1,613
Diluted	1,636	1,629	1,638	1,625

See accompanying notes.

Advanced Micro Devices, Inc.
Condensed Consolidated Statements of Comprehensive Income
(Unaudited)

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
	(In millions)			
Net income	\$ 771	\$ 299	\$ 1,159	\$ 187
Other comprehensive income (loss), net of tax:				
Net change in unrealized gains (losses) on cash flow hedges	31	(18)	12	(9)
Total comprehensive income	<u>\$ 802</u>	<u>\$ 281</u>	<u>\$ 1,171</u>	<u>\$ 178</u>

See accompanying notes.

Advanced Micro Devices, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)

	September 28, 2024	December 30, 2023
	(In millions, except par value amounts)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 3,897	\$ 3,933
Short-term investments	647	1,840
Accounts receivable, net	7,241	5,376
Inventories	5,374	4,351
Receivables from related parties	29	9
Prepaid expenses and other current assets	1,547	1,259
Total current assets	18,735	16,768
Property and equipment, net	1,669	1,589
Operating lease right-of-use assets	647	633
Goodwill	24,839	24,262
Acquisition-related intangibles, net	19,572	21,363
Investment: equity method	137	99
Deferred tax assets	1,183	366
Other non-current assets	2,854	2,805
Total assets	\$ 69,636	\$ 67,885
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 2,530	\$ 2,055
Payables to related parties	461	363
Accrued liabilities	4,120	3,082
Current portion of long-term debt, net	—	751
Other current liabilities	389	438
Total current liabilities	7,500	6,689
Long-term debt, net of current portion	1,720	1,717
Long-term operating lease liabilities	518	535
Deferred tax liabilities	1,162	1,202
Other long-term liabilities	1,751	1,850
Commitments and contingencies (See Note 13)		
Stockholders' equity:		
Capital stock:		
Common stock, par value \$0.01; shares authorized: 2,250; shares issued: 1,678 and 1,663; shares outstanding: 1,623 and 1,616	17	17
Additional paid-in capital	60,896	59,676
Treasury stock, at cost (shares held: 55 and 47)	(5,812)	(4,514)
Retained earnings	1,882	723
Accumulated other comprehensive income (loss)	2	(10)
Total stockholders' equity	56,985	55,892
Total liabilities and stockholders' equity	\$ 69,636	\$ 67,885

See accompanying notes.

Advanced Micro Devices, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Nine Months Ended	
	September 28, 2024	September 30, 2023
	(In millions)	
Cash flows from operating activities:		
Net income	\$ 1,159	\$ 187
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	2,309	2,654
Stock-based compensation	1,068	1,010
Deferred income taxes	(863)	(800)
Amortization of operating lease right-of-use assets	82	73
Inventory loss at contract manufacturer	65	—
Other	(50)	(31)
Changes in operating assets and liabilities		
Accounts receivable, net	(1,862)	(929)
Inventories	(1,096)	(674)
Prepaid expenses and other assets	(250)	(380)
Receivables from and payables to related parties, net	78	(136)
Accounts payable	476	(238)
Accrued and other liabilities	626	550
Net cash provided by operating activities	<u>1,742</u>	<u>1,286</u>
Cash flows from investing activities:		
Purchases of property and equipment	(428)	(407)
Purchases of short-term investments	(707)	(3,312)
Proceeds from maturity of short-term investments	1,351	1,917
Proceeds from sale of short-term investments	591	248
Acquisitions, net of cash acquired	(548)	(14)
Related party equity method investment	(17)	—
Other	(129)	(5)
Net cash provided by (used in) investing activities	<u>113</u>	<u>(1,573)</u>
Cash flows from financing activities:		
Repayment of debt	(750)	—
Proceeds from sales of common stock through employee equity plans	152	148
Repurchases of common stock	(606)	(752)
Common stock repurchases for tax withholding on employee equity plans	(686)	(382)
Other	(1)	(1)
Net cash used in financing activities	<u>(1,891)</u>	<u>(987)</u>
Net decrease in cash and cash equivalents	(36)	(1,274)
Cash and cash equivalents at beginning of period	3,933	4,835
Cash and cash equivalents at end of period	<u>\$ 3,897</u>	<u>\$ 3,561</u>

Advanced Micro Devices, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Nine Months Ended	
	September 28, 2024	September 30, 2023
	(In millions)	
Supplemental cash flow information:		
Cash paid for taxes, net of refunds	\$ 1,011	\$ 34
Non-cash investing activities:		
Purchases of property and equipment, accrued but not paid	\$ 99	\$ 113
Non-cash activities for leases:		
Operating lease right-of-use assets acquired by assuming related liabilities	\$ 95	\$ 121

See accompanying notes.

Advanced Micro Devices, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
(In millions)				
Capital stock:				
Common stock, par value				
Balance, beginning of period	\$ 17	\$ 16	\$ 17	\$ 16
Common stock issued under employee equity plans	—	1	—	1
Balance, end of period	\$ 17	\$ 17	\$ 17	\$ 17
Additional paid-in capital				
Balance, beginning of period	\$ 60,542	\$ 58,825	\$ 59,676	\$ 58,005
Common stock issued under employee equity plans	3	4	152	153
Stock-based compensation	351	353	1,068	1,010
Issuance of common stock to settle convertible debt	—	—	—	1
Issuance of common stock warrants	—	—	—	13
Balance, end of period	\$ 60,896	\$ 59,182	\$ 60,896	\$ 59,182
Treasury stock				
Balance, beginning of period	\$ (5,103)	\$ (3,430)	\$ (4,514)	\$ (3,099)
Repurchases of common stock	(250)	(511)	(606)	(752)
Common stock repurchases for tax withholding on employee equity plans	(459)	(294)	(692)	(384)
Balance, end of period	\$ (5,812)	\$ (4,235)	\$ (5,812)	\$ (4,235)
Retained earnings (Accumulated deficit):				
Balance, beginning of period	\$ 1,111	\$ (243)	\$ 723	\$ (131)
Net income	771	299	1,159	187
Balance, end of period	\$ 1,882	\$ 56	\$ 1,882	\$ 56
Accumulated other comprehensive income (loss):				
Balance, beginning of period	\$ (29)	\$ (32)	\$ (10)	\$ (41)
Other comprehensive income (loss)	31	(18)	12	(9)
Balance, end of period	\$ 2	\$ (50)	\$ 2	\$ (50)
Total stockholders' equity	\$ 56,985	\$ 54,970	\$ 56,985	\$ 54,970

See accompanying notes.

**Notes to Condensed Consolidated Financial Statements
(Unaudited)**

NOTE 1 – The Company

Advanced Micro Devices, Inc. is a global semiconductor company. References herein to AMD or the Company mean Advanced Micro Devices, Inc. and its consolidated subsidiaries. AMD's products include x86 microprocessors (CPUs) and graphics processing units (GPUs), as standalone devices or as incorporated into accelerated processing units (APUs), chipsets, data center and professional GPUs, embedded processors, semi-custom System-on-Chip (SoC) products, microprocessor and SoC development services and technology, data processing units (DPUs), Field Programmable Gate Arrays (FPGAs), System on Modules (SOMs), Smart Network Interface Cards (SmartNICs), Artificial Intelligence (AI) Accelerators and Adaptive SoC products. From time to time, the Company may also sell or license portions of its intellectual property (IP) portfolio.

NOTE 2 – Basis of Presentation and Significant Accounting Policies

Basis of Presentation. The accompanying unaudited condensed consolidated financial statements of AMD have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP) for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. The results of operations for the three and nine months ended September 28, 2024 shown in this report are not necessarily indicative of results to be expected for the full year ending December 28, 2024 or any other future period. In the opinion of the Company's management, the information contained herein reflects all adjustments necessary for a fair presentation of the Company's results of operations, financial position, cash flows and stockholders' equity. All such adjustments are of a normal, recurring nature. The unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements in the Company's Annual Report on Form 10-K for the fiscal year ended December 30, 2023. Certain immaterial prior period amounts have been reclassified to conform to current period presentation.

The Company uses a 52- or 53-week fiscal year ending on the last Saturday in December. The three and nine months ended September 28, 2024 and September 30, 2023 each consisted of 13 weeks and 26 weeks, respectively.

Use of Estimates. The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of commitments and contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results are likely to differ from those estimates, and such differences may be material to the financial statements. Areas where management uses judgment include, but are not limited to, revenue allowances, inventory valuation, valuation of goodwill, long-lived and intangible assets, and income taxes.

Significant Accounting Policies. There have been no material changes to the Company's significant accounting policies in Note 2 - Basis of Presentation and Significant Accounting Policies, of the Notes to Consolidated Financial Statements included in the Company's Annual Report on Form 10-K for the fiscal year ended December 30, 2023.

Recently Issued Accounting Standards Not Yet Adopted. In November 2023, the Financial Accounting Standards Board (FASB) issued Accounting Standard Update (ASU) 2023-07 *Segment Reporting (Topic 280) Improvements to Reportable Segment Disclosures* to enhance disclosures about significant segment expenses. This ASU is effective for the Company's fiscal year 2024 and interim periods in fiscal year 2025. Early adoption is permitted. The Company is currently evaluating segment expense disclosures related to its annual report for fiscal year 2024.

NOTE 3 – Supplemental Financial Statement Information

Accounts Receivable, net

As of September 28, 2024 and December 30, 2023, Accounts receivable, net included unbilled accounts receivable of \$937 million and \$1.1 billion, respectively. Unbilled accounts receivable primarily represent work completed on development services and on custom products for which revenue has been recognized but not yet invoiced. Unbilled accounts receivable that are included in Accounts receivable, net are expected to be billed and collected within 12 months.

Inventories	September 28, 2024		December 30, 2023	
	(In millions)			
Raw materials	\$	412	\$	279
Work in process		3,999		3,260
Finished goods		963		812
Total inventories	\$	5,374	\$	4,351

Property and Equipment, net	September 28, 2024		December 30, 2023	
	(In millions)			
Land, building and leasehold improvements	\$	844	\$	821
Equipment		2,669		2,346
Construction in progress		228		209
Property and equipment, gross		3,741		3,376
Accumulated depreciation		(2,072)		(1,787)
Total property and equipment, net	\$	1,669	\$	1,589

Accrued Liabilities	September 28, 2024		December 30, 2023	
	(In millions)			
Customer-related liabilities	\$	1,405	\$	788
Accrued marketing programs		1,001		827
Accrued compensation and benefits		1,048		884
Other accrued liabilities		666		583
Total accrued liabilities	\$	4,120	\$	3,082

Revenue

Revenue allocated to remaining performance obligations that are unsatisfied (or partially unsatisfied) include amounts received from customers and amounts that will be invoiced and recognized as revenue in future periods for development services, IP licensing and product revenue. As of September 28, 2024, the aggregate transaction price allocated to remaining performance obligations under contracts with an original expected duration of more than one year was \$86 million, of which \$49 million is expected to be recognized in the next 12 months. The revenue allocated to remaining performance obligations does not include amounts which have an original expected duration of one year or less.

Revenue recognized over time associated with custom products and development services accounted for 5% and 10% of the Company's revenue for the three and nine months ended September 28, 2024, respectively and 25% and 27% of the Company's revenue for the three and nine months ended September 30, 2023, respectively.

NOTE 4 – Segment Reporting

Management, including the Chief Operating Decision Maker (CODM), who is the Company's Chief Executive Officer, reviews and assesses operating performance using segment net revenue and operating income (loss). These performance measures include the allocation of expenses to the reportable segments based on management's judgment.

The Company's four reportable segments are:

- the Data Center segment, which primarily includes server microprocessors (CPUs), graphics processing units (GPUs), accelerated processing units (APUs), data processing units (DPUs), Field Programmable Gate Arrays (FPGAs), Smart Network Interface Cards (SmartNICs), Artificial Intelligence (AI) accelerators and Adaptive System-on-Chip (SoC) products for data centers;
- the Client segment, which primarily includes CPUs, APUs, and chipsets for desktop, notebook and handheld personal computers;
- the Gaming segment, which primarily includes discrete GPUs, and semi-custom SoC products and development services; and
- the Embedded segment, which primarily includes embedded CPUs, GPUs, APUs, FPGAs, System on Modules (SOMs), and Adaptive SoC products.

From time to time, the Company may also sell or license portions of its IP portfolio.

In addition to these reportable segments, the Company has an All Other category, which is not a reportable segment. This category primarily includes certain expenses and credits that are not allocated to any of the reportable segments because the CODM does not consider these expenses and credits in evaluating the performance of the reportable segments. This category primarily includes amortization of acquisition-related intangibles, employee stock-based compensation expense, inventory loss at contract manufacturer, acquisition-related and other costs, and licensing gain. Acquisition-related and other costs primarily include transaction costs, purchase price adjustments for inventory, certain compensation charges, contract termination and workforce rebalancing charges.

The following table provides a summary of net revenue and operating income (loss) by segment:

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
	(In millions)			
Net revenue:				
Data Center	\$ 3,549	\$ 1,598	\$ 8,720	\$ 4,214
Client	1,881	1,453	4,741	3,190
Gaming	462	1,506	2,032	4,844
Embedded	927	1,243	2,634	4,264
Total net revenue	\$ 6,819	\$ 5,800	\$ 18,127	\$ 16,512
Operating income (loss):				
Data Center	\$ 1,041	\$ 306	\$ 2,325	\$ 601
Client	276	140	451	(101)
Gaming	12	208	240	747
Embedded	372	612	1,059	2,167
All Other ⁽¹⁾	(977)	(1,042)	(3,046)	(3,355)
Total operating income	\$ 724	\$ 224	\$ 1,029	\$ 59

- (1) For the three and nine months ended September 28, 2024, all other operating losses primarily included \$585 million and \$1.8 billion of amortization of acquisition-related intangibles, and \$351 million and \$1.1 billion of stock-based compensation expense, respectively. For the three and nine months ended September 30, 2023, all other operating losses primarily included \$660 million and \$2.2 billion of amortization of acquisition-related intangibles, and \$353 million and \$1.0 billion of stock-based compensation expense, respectively.

NOTE 5 – Business Combinations**Acquisition of Silo AI**

On August 9, 2024, the Company completed the acquisition of Silo AI Oy (Silo AI), an AI lab based in Finland in an all-cash transaction of \$665 million. Net of closing adjustments, transaction costs and deferred cash compensation, the purchase consideration of \$553 million was allocated to \$19 million of identifiable intangible assets, \$43 million of net liabilities assumed, and \$577 million to goodwill. Goodwill was attributed to Silo AI's workforce who will help the Company accelerate the deployment and development of AI models and software solutions on AMD hardware. Silo AI financial results, which were not material, were included in the Company's statement of operations from the date of acquisition primarily within the Data Center segment.

Pending Acquisition of ZT Systems

On August 17, 2024, the Company entered into an agreement (the Agreement) to acquire ZT Group Int'l, Inc. (ZT Systems), a provider of AI and general purpose compute infrastructure for hyperscale computing companies, in a cash and stock transaction valued at approximately \$4.9 billion (the Acquisition). The aggregate closing consideration payable by the Company consists of 8,335,852 shares of the Company's common stock and \$3.4 billion in cash. Contingent consideration of up to 740,964 shares of the Company's common stock and up to \$300 million of cash is payable by the Company to the extent certain conditions are met. The Agreement provides that if the Acquisition is not completed by August 17, 2025, subject to two automatic extensions until February 17, 2026, the Company will pay a termination fee of \$300 million. The Acquisition is expected to close in the first half of 2025, subject to certain regulatory approvals and other customary closing conditions. The Company intends to seek a strategic partner to acquire ZT Systems' manufacturing business.

NOTE 6 – Goodwill and Acquisition-related Intangibles, net**Goodwill**

The carrying amount of goodwill was assigned to reporting units within the following reportable segments:

	December 30, 2023	Acquisitions (In millions)	September 28, 2024
Data Center	\$ 2,942	\$ 461	\$ 3,403
Client	18	108	126
Gaming	238	—	238
Embedded	21,064	8	21,072
Total	<u>\$ 24,262</u>	<u>\$ 577</u>	<u>\$ 24,839</u>

Acquisition-related Intangibles, net

Acquisition-related intangibles, net were as follows:

	September 28, 2024			December 30, 2023		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
	(In millions)			(In millions)		
Developed technology	\$ 13,409	\$ (2,279)	\$ 11,130	\$ 13,390	\$ (1,583)	\$ 11,807
Customer relationships	12,324	(4,811)	7,513	12,324	(3,755)	8,569
Customer backlog	809	(809)	—	809	(809)	—
Corporate trade name	65	(65)	—	65	(65)	—
Product trademarks	914	(205)	709	914	(147)	767
Acquisition-related intangible assets subject to amortization	27,521	(8,169)	19,352	27,502	(6,359)	21,143
In-process research and development (IPR&D) not subject to amortization	220	—	220	220	—	220
Total acquisition-related intangible assets, net	\$ 27,741	\$ (8,169)	\$ 19,572	\$ 27,722	\$ (6,359)	\$ 21,363

Acquisition-related intangible amortization expense was \$585 million and \$1.8 billion for the three and nine months ended September 28, 2024, and \$660 million and \$2.2 billion for the three and nine months ended September 30, 2023, respectively.

Based on the carrying value of acquisition-related intangibles recorded as of September 28, 2024, and assuming no subsequent impairment of the underlying assets, the estimated annual amortization expense for acquisition-related intangibles is expected to be as follows:

Fiscal Year	(In millions)
Remainder of 2024	\$ 565
2025	2,154
2026	2,040
2027	1,922
2028	1,846
2029 and thereafter	10,825
Total	\$ 19,352

NOTE 7 – Related Parties — Equity Joint Ventures

ATMP Joint Ventures

The Company holds a 15% equity interest in two joint ventures (collectively, the ATMP JV) with affiliates of Tongfu Microelectronics Co., Ltd, a Chinese joint stock company. The Company has no obligation to fund the ATMP JV. The Company accounts for its equity interests in the ATMP JV under the equity method of accounting due to its significant influence over the ATMP JV.

The ATMP JV provides assembly, testing, marking and packaging (ATMP) services to the Company. The Company assists the ATMP JV in its management of certain raw material inventory. The purchases from and resales to the ATMP JV of inventory under the Company's inventory management program are reported within purchases and resales with the ATMP JV and do not impact the Company's condensed consolidated statements of operations.

The Company's purchases from the ATMP JV during the three and nine months ended September 28, 2024 were \$407 million and \$1.2 billion, respectively. The Company's purchases from the ATMP JV during the three and nine months ended September 30, 2023 were \$448 million and \$1.2 billion, respectively. As of September 28, 2024 and December 30, 2023, the amounts payable to the ATMP JV were \$461 million and \$363 million, respectively, and are reflected as Payables to related parties on the Company's condensed consolidated balance sheets. The Company's resales to the ATMP JV during the three and nine months ended September 28, 2024 were \$33 million and \$103 million, respectively. The Company's resales to the ATMP JV during the three and nine months ended September 30, 2023 were \$2 million and \$5 million, respectively. As of September 28, 2024 and December 30, 2023, the Company's receivables from the ATMP JV were \$29 million and \$9 million, respectively, and are reflected as Receivables from related parties on the Company's balance sheet.

During the three and nine months ended September 28, 2024, the Company recorded a gain of \$7 million and \$21 million, in Equity income in investee on its statements of operations, respectively. During the three and nine months ended September 30, 2023, the Company recorded a gain of \$3 million and \$10 million, in Equity income in investee on its statements of operations, respectively.

On August 8, 2024, the Company contributed \$17 million to the ATMP JV, representing additional equity that is in proportion to the Company's existing 15% equity interest. As of September 28, 2024 and December 30, 2023, the carrying value of the Company's investment in the ATMP JV was \$137 million and \$99 million, respectively.

THATIC Joint Ventures

The Company holds equity interests in two joint ventures (collectively, the THATIC JV) with Higon Information Technology Co., Ltd. (THATIC), a third-party Chinese entity. As of both September 28, 2024 and December 30, 2023, the carrying value of the investment was zero. The Company licenses certain of its intellectual property (Licensed IP) to the THATIC JV and receives royalties based on sales of the THATIC JV's products, which is recorded within operating income as licensing gain. During the three and nine months ended September 28, 2024, the Company recognized \$14 million and \$37 million of licensing gain from royalties associated with Licensed IP, respectively. During the three and nine months ended September 30, 2023, the Company recognized \$10 million and \$28 million of licensing gain from royalties associated with Licensed IP, respectively. As of September 28, 2024 and December 30, 2023, the Company had no receivables from the THATIC JV. In June 2019, the Bureau of Industry and Security of the United States Department of Commerce added certain Chinese entities to the Entity List, including THATIC and the THATIC JV. The Company is complying with U.S. law pertaining to the Entity List designation.

NOTE 8 – Debt, Revolving Credit Facility and Commercial Paper Program

Debt

The Company's total debt as of September 28, 2024 and December 30, 2023 consisted of the following:

	September 28, 2024	December 30, 2023
	(In millions)	
2.95% Senior Notes Due 2024 (2.95% Notes)	\$ —	\$ 750
2.375% Senior Notes Due 2030 (2.375% Notes)	750	750
3.924% Senior Notes Due 2032 (3.924% Notes)	500	500
4.393% Senior Notes Due 2052 (4.393% Notes)	500	500
Total debt (principal amount)	1,750	2,500
Unamortized debt discount and issuance costs	(30)	(32)
Total debt (net)	1,720	2,468
Less: current portion of long-term debt and related unamortized debt premium and issuance costs	—	(751)
Total long-term debt	\$ 1,720	\$ 1,717

2.95% Senior Notes Due 2024

The 2.95% Notes with a principal amount of \$750 million were repaid in June 2024.

2.375% Senior Notes Due 2030, 3.924% Senior Notes Due 2032 and 4.393% Senior Notes Due 2052

The 2.375% Notes, 3.924% Notes and 4.393% Notes are general unsecured senior obligations of the Company with semi-annual fixed interest payments due on June 1 and December 1.

As of September 28, 2024, the Company was in compliance with the covenants associated with its debt.

Revolving Credit Facility

The Company has \$3.0 billion available under an unsecured revolving credit facility that expires on April 29, 2027. During the three and nine months ended September 28, 2024, the Company did not borrow under the revolving credit facility and as of September 28, 2024 and December 30, 2023, the Company had no outstanding borrowings under the revolving credit facility. As of September 28, 2024, the Company was in compliance with the covenants under the revolving credit facility.

Commercial Paper Program

The Company has a commercial paper program under which it can issue unsecured commercial paper notes up to \$3.0 billion. During the three and nine months ended September 28, 2024, the Company did not issue any commercial paper under the program and as of September 28, 2024 and December 30, 2023, the Company had no commercial paper outstanding.

NOTE 9 – Financial Instruments

Fair Value Measurements

The Company's financial instruments are measured and recorded at fair value on a recurring basis, except for non-marketable equity investments in privately-held companies. These equity investments are generally accounted for under the measurement alternative, defined as cost, less impairments, adjusted for subsequent observable price changes and are periodically assessed for impairment when events or circumstances indicate that a decline in value may have occurred.

Financial Instruments Recorded at Fair Value on a Recurring Basis

(In millions)	September 28, 2024				December 30, 2023			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Total	
Cash equivalents								
Money market funds	\$ 1,879	\$ —	\$ —	\$ 1,879	\$ 969	\$ —	\$ 969	
Corporate debt securities	—	642	—	642	—	753	753	
U.S. government and agency securities	330	—	—	330	1,252	—	1,252	
Non-U.S. government and agency securities	—	—	—	—	—	135	135	
Time deposits and certificates of deposits	—	132	—	132	—	205	205	
Short-term investments								
Corporate debt securities	—	271	—	271	—	506	506	
Time deposits and certificates of deposits	—	10	—	10	—	9	9	
Asset-backed and mortgage-backed securities	—	30	—	30	—	34	34	
U.S. government and agency securities	275	40	—	315	1,209	28	1,237	
Non-U.S. government and agency securities	—	21	—	21	—	54	54	
Other non-current assets								
Deferred compensation plan and other investments	162	—	25	187	133	—	133	
Total assets measured at fair value	\$ 2,646	\$ 1,146	\$ 25	\$ 3,817	\$ 3,563	\$ 1,724	\$ 5,287	

Deferred compensation plan and other investments are primarily mutual fund investments held in a Rabbi trust established to maintain the Company's executive deferred compensation plan.

The following is a summary of cash equivalents and short-term investments:

	September 28, 2024				December 30, 2023			
	Cost/ Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Cost/ Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(in millions)				(in millions)			
Asset-backed and mortgage-backed securities	\$ 32	\$ —	\$ (2)	\$ 30	\$ 35	\$ —	\$ (2)	\$ 33
Corporate debt securities	912	1	—	913	1,259	—	—	1,259
Money market funds	1,879	—	—	1,879	969	—	—	969
Time deposits and certificates of deposits	142	—	—	142	214	—	—	214
U.S. government and agency securities	643	2	—	645	2,487	3	—	2,490
Non-U.S. government and agency securities	21	—	—	21	189	—	—	189
	\$ 3,629	\$ 3	\$ (2)	\$ 3,630	\$ 5,153	\$ 3	\$ (2)	\$ 5,154

As of September 28, 2024 and December 30, 2023, the Company did not have material available-for-sale debt securities which had been in a continuous unrealized loss position of more than twelve months.

The contractual maturities of cash equivalents and investments classified as available-for-sale are as follows:

	September 28, 2024		December 30, 2023	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
	(In millions)		(In millions)	
Due within 1 year	\$ 1,472	\$ 1,473	\$ 3,792	\$ 3,792
Due in 1 year through 5 years	250	252	361	364
Due in 5 years and later	28	26	32	30
	<u>\$ 1,750</u>	<u>\$ 1,751</u>	<u>\$ 4,185</u>	<u>\$ 4,186</u>

Financial Instruments Not Recorded at Fair Value

The Company carries its financial instruments at fair value except for its debt. The carrying amounts and estimated fair values of the Company's debt are as follows:

	September 28, 2024		December 30, 2023	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
	(In millions)		(In millions)	
Current portion of long-term debt, net	\$ —	\$ —	\$ 751	\$ 741
Long-term debt, net of current portion	\$ 1,720	\$ 1,644	\$ 1,717	\$ 1,630

The estimated fair value of the Company's long-term debt is based on Level 2 inputs of quoted prices for the Company's debt and comparable instruments in inactive markets.

The fair value of the Company's accounts receivable, accounts payable and other short-term obligations approximate their carrying value based on existing terms.

Financial Instruments Measured at Fair Value on a Non-Recurring Basis

The Company's investments in non-marketable securities in privately-held companies are recorded using a measurement alternative that adjusts the securities to fair value when the Company recognizes an observable price adjustment or an impairment. As of September 28, 2024 and December 30, 2023, the Company had non-marketable securities in privately-held companies of \$257 million and \$155 million, respectively, that are recorded under Other non-current assets in the balance sheet. Impairment losses or observable price adjustments were not material during the three and nine months ended September 28, 2024 and September 30, 2023.

Hedging Transactions and Derivative Financial Instruments

Foreign Currency Forward Contracts Designated as Accounting Hedges

The Company enters into foreign currency forward contracts to hedge its exposure to foreign currency exchange rate risk related to future forecasted transactions denominated in currencies other than the U.S. Dollar. These contracts generally mature within 24 months and are designated as accounting hedges. As of September 28, 2024 and December 30, 2023, the notional value of the Company's outstanding foreign currency forward contracts designated as cash flow hedges was \$2.2 billion and \$2.4 billion, respectively. The fair value of these contracts, recorded as an asset, was \$19 million and \$6 million as of September 28, 2024 and December 30, 2023, respectively.

Foreign Currency Forward Contracts Not Designated as Accounting Hedges

The Company also enters into foreign currency forward contracts to reduce the short-term effects of foreign currency fluctuations on certain receivables or payables denominated in currencies other than the U.S. Dollar. These forward contracts generally mature within 3 months and are not designated as accounting hedges. As of September 28, 2024 and December 30, 2023, the notional value of these outstanding contracts was \$573 million and \$568 million, respectively. The fair value of these contracts was not material as of September 28, 2024 and December 30, 2023.

NOTE 10 – Earnings Per Share

The following table sets forth the components of basic and diluted earnings per share:

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
(In millions, except per share amounts)				
Numerator				
Net income for basic earnings per share	\$ 771	\$ 299	\$ 1,159	\$ 187
Denominator				
Basic weighted average shares	1,620	1,616	1,619	1,613
Potentially dilutive shares from employee equity plans	16	13	19	12
Diluted weighted average shares	<u>1,636</u>	<u>1,629</u>	<u>1,638</u>	<u>1,625</u>
Earnings per share:				
Basic	\$ 0.48	\$ 0.18	\$ 0.72	\$ 0.12
Diluted	\$ 0.47	\$ 0.18	\$ 0.71	\$ 0.11

Securities which would have been anti-dilutive are not material and are excluded from the computation of diluted earnings per share for all periods presented.

NOTE 11 – Common Stock and Stock-based Compensation
Common Stock

Shares of common stock outstanding were as follows:

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
(In millions)				
Balance, beginning of period	1,618	1,614	1,616	1,612
Common stock issued under employee equity plans	10	9	15	14
Common stock repurchases for tax withholding on equity awards	(3)	(3)	(4)	(4)
Issuance of common stock upon warrant exercise	—	—	—	1
Repurchases of common stock	(2)	(5)	(4)	(8)
Balance, end of period	<u>1,623</u>	<u>1,615</u>	<u>1,623</u>	<u>1,615</u>

Stock Repurchase Program

The Company has an approved stock repurchase program authorizing repurchases of up to \$12 billion of the Company's common stock (Repurchase Program). During the three and nine months ended September 28, 2024, the Company returned \$250 million and \$606 million, respectively, to shareholders through the repurchase of its common stock under the Repurchase Program. As of September 28, 2024, \$4.9 billion remains available for future stock repurchases under the Repurchase Program. The Repurchase Program does not obligate the Company to acquire any common stock, has no termination date and may be suspended or discontinued at any time.

Stock-based Compensation

Stock-based compensation expense recorded in the condensed consolidated statements of operations was as follows:

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
	(In millions)			
Cost of sales	\$ 5	\$ 6	\$ 16	\$ 24
Research and development	267	260	809	721
Marketing, general and administrative	79	87	243	265
Total	\$ 351	\$ 353	\$ 1,068	\$ 1,010

NOTE 12 – Income Taxes

The Company determines its income taxes for interim reporting periods by applying the Company's estimated annual effective tax rate to the year-to-date results, adjusted for tax items discrete to each period.

For the three and nine months ended September 28, 2024, the Company recorded an income tax benefit of \$27 million and \$38 million representing an effective tax rate of (3.6)% and (3.3)%, respectively. The difference between the U.S. federal statutory tax rate of 21% and the Company's estimated annual effective tax rate was primarily due to the income tax benefit from foreign-derived intangible income (FDII) and research and development (R&D) tax credits, partially offset by the tax rate detriment from foreign earnings. The tax benefit for the three and nine months ended September 28, 2024 reflected discrete tax benefits of \$28 million and \$68 million, respectively, primarily related to stock-based compensation, partially offset by the interest and penalties accrued for uncertain tax positions.

For the three months and nine months ended September 30, 2023, the Company recorded an income tax benefit of \$39 million and \$49 million representing an effective tax rate of (15.2)% and (35.8)%, respectively. The difference between the U.S. federal statutory tax rate of 21% and the Company's estimated annual effective tax rate was primarily due to the income tax benefit from FDII and R&D tax credits. The tax benefit for the three months ended September 30, 2023 reflected a discrete tax benefit of \$17 million primarily related to tax effects of stock-based compensation. The tax benefit for the nine months ended September 30, 2023, reflected a discrete tax benefit of \$29 million primarily related to tax effects of stock-based compensation, partially offset by interest and penalties accrued for uncertain tax positions.

As of September 28, 2024 and December 30, 2023, the Company had long-term income tax liabilities related to unrecognized tax benefits of \$1.5 billion and \$1.4 billion recorded under Other long-term liabilities in the balance sheet.

NOTE 13 – Commitments and Contingencies

Commitments

The Company's purchase commitments primarily include obligations to purchase wafers and substrates from third parties. These purchase obligations were made under noncancellable purchase orders or contractual obligations requiring minimum purchases for which cancellation would lead to significant penalties. Purchase commitments also include future payments related to certain software, technology and IP licenses.

Total future unconditional purchase commitments as of September 28, 2024 were as follows:

Fiscal Year		(In millions)
Remainder of 2024	\$	2,510
2025		1,325
2026		268
2027		45
2028		44
2029 and thereafter		95
Total unconditional purchase commitments	\$	4,287

On an ongoing basis, the Company works with suppliers on timing of payments and deliveries of purchase commitments, taking into account business conditions.

Contingencies

During the quarterly period ended September 28, 2024, there were no material legal proceedings. The Company is a defendant or plaintiff in various actions that arose in the normal course of business. With respect to these matters, based on management's current knowledge, the Company believes that the amount or range of reasonably possible loss, if any, will not, either individually or in the aggregate, have a material adverse effect on the Company's financial position, results of operations, or cash flows.

NOTE 14 – Subsequent Event

On October 9, 2024, the Company entered into a one-year term loan agreement with one of the ATMP JVs for \$100 million to provide funds for the ATMP JV's general corporate purposes. The loan bears interest, payable quarterly, at the three months term Secured Overnight Financing Rate (SOFR) plus 50 basis points. The loan is secured by the ATMP JV's receivable balance due from the Company. Subject to the Company's discretion, the loan may be extended for further terms of up to twelve months.

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

The statements in this report include forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on current expectations and beliefs and involve numerous risks and uncertainties that could cause actual results to differ materially from expectations. These forward-looking statements speak only as of the date hereof or as of the dates indicated in the statements and should not be relied upon as predictions of future events, as we cannot assure you that the events or circumstances reflected in these statements will be achieved or will occur. You can identify forward-looking statements by the use of forward-looking terminology including "believes," "expects," "may," "will," "should," "seeks," "intends," "plans," "pro forma," "estimates," "anticipates," or the negative of these words and phrases, other variations of these words and phrases or comparable terminology. The forward-looking statements relate to, among other things: possible impact of future accounting rules on AMD's condensed consolidated financial statements; demand for AMD's products; AMD's strategy and expected benefits; the growth, change and competitive landscape of the markets in which AMD participates; the expectation that international sales will continue to be a significant portion of total sales in the foreseeable future; the expectation that AMD's cash, cash equivalents and short-term investment balances, together with the availability under that certain revolving credit facility made available to AMD and certain of its subsidiaries, our commercial paper program, and our cash flows from operations will be sufficient to fund AMD's operations including capital expenditures, purchase commitments and acquisitions over the next 12 months and beyond; AMD's ability to access capital markets; AMD's ability to obtain sufficient external financing on favorable terms, or at all; AMD's expectation that based on management's current knowledge, the potential liability related to AMD's current litigation will not have a material adverse effect on its financial positions, results of operation or cash flows; anticipated ongoing and increased costs related to enhancing and implementing information security controls; AMD's expectation that all unbilled accounts receivables are expected to be billed and collected within 12 months; that revenue allocated to remaining performance obligations that are unsatisfied which will be recognized in the next 12 months and that a small number of customers will continue to account for a substantial part of AMD's revenue in the future; the expected implications from the development of the legal and regulatory environment relating to emerging technologies, such as AI; AMD's ability to achieve its corporate responsibility initiatives; expected future AI trends and developments; the expected benefits of AMD's acquisition of Silo AI Oy (Silo AI); AMD's anticipated acquisition of ZT Group Int'l, Inc. (ZT Systems) and the anticipated timing of the transaction; AMD's intention to seek a strategic partner to acquire ZT Systems' manufacturing business; and AMD's expectation to fund stock repurchases through cash generated from operations. For a discussion of the factors that could cause actual results to differ materially from the forward-looking statements, see "Part II, Item 1A—Risk Factors" and the "Financial Condition" section set forth in "Part I, Item 2-Management's Discussion and Analysis of Financial Condition and Results of Operations," or MD&A, and such other risks and uncertainties as set forth below in this report or detailed in our other Securities and Exchange Commission (SEC) reports and filings. We assume no obligation to update forward-looking statements.

References in this Quarterly Report on Form 10-Q to "AMD," "we," "us," "management," "our" or the "Company" mean Advanced Micro Devices, Inc. and our consolidated subsidiaries.

AMD, the AMD Arrow logo, EPYC, Radeon, Ryzen, Xilinx and combinations thereof are trademarks of Advanced Micro Devices, Inc. Other names are for informational purposes only and are used to identify companies and products and may be trademarks of their respective owners. "Zen" is a codename for an AMD architecture and is not a product name.

The following discussion should be read in conjunction with the unaudited condensed consolidated financial statements and related notes included in this report and our audited consolidated financial statements and related notes as of December 30, 2023 and December 31, 2022, and for each of the three years for the period ended December 30, 2023 as filed in our Annual Report on Form 10-K for the fiscal year ended December 30, 2023.

Overview and Recent Developments

We are a global semiconductor company primarily offering:

- server microprocessors (CPUs), graphics processing units (GPUs), accelerated processing units (APUs), data processing units (DPUs), Field Programmable Gate Arrays (FPGAs), Smart Network Interface Cards (SmartNICs), Artificial Intelligence (AI) accelerators and Adaptive System-on-Chip (SoC) products for data centers;
- CPUs, APUs and chipsets for desktop, notebook, and handheld personal computers;
- discrete GPUs, and semi-custom SoC products and development services; and
- embedded CPUs, GPUs, APUs, FPGAs, System on Modules (SOMs), and Adaptive SoC products.

From time to time, we may also sell or license portions of our intellectual property (IP) portfolio.

In this section, we will describe the general financial condition and the results of operations of Advanced Micro Devices, Inc. and its wholly-owned subsidiaries (collectively, “us,” “our” or “AMD”), including a discussion of our results of operations for the three and nine months ended September 28, 2024 compared to the prior year period and an analysis of changes in our financial condition.

Net revenue for the three months ended September 28, 2024 was \$6.8 billion, an 18% increase compared to the prior year period. The increase in net revenue was driven by an increase in Data Center segment revenue primarily driven by the strong ramp of AMD Instinct™ GPU shipments and growth in AMD EPYC™ CPU sales, and an increase in Client segment revenue primarily driven by strong demand for “Zen 5” AMD Ryzen™ processors, partially offset by a decrease in Gaming segment revenue primarily due to lower semi-custom revenue, and a decrease in Embedded segment revenue as customers continued to normalize their inventory levels.

Gross margin for the three months ended September 28, 2024 was 50% compared to gross margin of 47% for the prior year period. The increase in gross margin was primarily driven by higher Data Center segment revenue.

Operating income for the three months ended September 28, 2024 was \$724 million compared to operating income of \$224 million for the prior year period. Net income for the three months ended September 28, 2024 was \$771 million compared to net income of \$299 million for the prior year period. The increase in operating and net income was primarily driven by higher revenue and gross margin, and lower amortization of acquisition-related intangible assets, partially offset by increased operating expenses.

As of September 28, 2024, our cash, cash equivalents and short-term investments were \$4.5 billion compared to \$5.8 billion as of December 30, 2023. During the three and nine months ended September 28, 2024, we generated \$628 million and \$1.7 billion of cash, respectively, from operating activities, and we returned \$250 million and \$606 million, respectively, to shareholders through the repurchase of common stock under our Repurchase Program.

As part of the next step in our AI strategy, on August 9, 2024, we completed the acquisition of Silo AI, an AI lab based in Finland in an all-cash transaction of \$665 million, which resulted in a net purchase consideration of \$553 million. The acquisition of Silo AI expands our ability to accelerate development and deployment of AI models on AMD hardware. Silo AI financial results, which were immaterial, were included in our statement of operations from the date of acquisition primarily within the Data Center segment.

On August 17, 2024, we entered into an agreement to acquire ZT Systems, a provider of AI and general-purpose compute infrastructure for hyperscale computing companies, in a cash and stock transaction valued at approximately \$4.9 billion (the Acquisition). Upon closing of the Acquisition, we will pay approximately \$3.4 billion in cash and 8,335,852 shares of the Company’s common stock and to the extent certain conditions are met, we will pay an additional \$300 million of cash and up to 740,963 shares of the Company’s common stock. The Acquisition is expected to close in the first half of fiscal year 2025, subject to certain regulatory approvals and other customary closing conditions. We intend to seek a strategic partner to acquire ZT Systems’ manufacturing business.

We intend the discussion of our financial condition and results of operations that follows to provide information that will assist in understanding our financial statements, the changes in certain key items in those financial statements from period to period, the primary factors that resulted in those changes, and how certain accounting principles, policies and estimates affect our financial statements.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our condensed consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP). The preparation of our financial statements requires us to make estimates and judgments that affect the reported amounts in our consolidated financial statements. We evaluate our estimates on an ongoing basis, including those related to our revenue, inventories, goodwill, long-lived and intangible assets, and income taxes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Although actual results have historically been reasonably consistent with management's expectations, the actual results may differ from these estimates or our estimates may be affected by different assumptions or conditions.

Management believes there have been no significant changes for the three and nine months ended September 28, 2024 to the items that we disclosed as our critical accounting estimates in the Management's Discussion and Analysis of Financial Condition and Results of Operations section of our Annual Report on Form 10-K for the fiscal year ended December 30, 2023.

Results of Operations

Our operating results tend to vary seasonally. Historically, our net revenue has been generally higher in the second half of the year than in the first half of the year, although market conditions and product transitions could impact this trend.

The following table provides a summary of net revenue and operating income (loss) by segment:

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
	(In millions)			
Net revenue:				
Data Center	\$ 3,549	\$ 1,598	\$ 8,720	\$ 4,214
Client	1,881	1,453	4,741	3,190
Gaming	462	1,506	2,032	4,844
Embedded	927	1,243	2,634	4,264
Total net revenue	<u>\$ 6,819</u>	<u>\$ 5,800</u>	<u>\$ 18,127</u>	<u>\$ 16,512</u>
Operating income (loss):				
Data Center	\$ 1,041	\$ 306	\$ 2,325	\$ 601
Client	276	140	451	(101)
Gaming	12	208	240	747
Embedded	372	612	1,059	2,167
All Other	(977)	(1,042)	(3,046)	(3,355)
Total operating income	<u>\$ 724</u>	<u>\$ 224</u>	<u>\$ 1,029</u>	<u>\$ 59</u>

Data Center

Data Center net revenue of \$3.5 billion for the three months ended September 28, 2024 increased by 122%, compared to net revenue of \$1.6 billion for the prior year period. Data Center net revenue of \$8.7 billion for the nine months ended September 28, 2024 increased by 107%, compared to net revenue of \$4.2 billion for the prior year period. The increase in both periods was primarily driven by the strong ramp of AMD Instinct GPU shipments and growth in AMD EPYC CPU sales.

Data Center operating income was \$1.0 billion for the three months ended September 28, 2024, compared to operating income of \$306 million for the prior year period. Data Center operating income was \$2.3 billion for the nine months ended September 28, 2024, compared to operating income of \$601 million for the prior year period. The increase in operating income in both periods was primarily driven by higher revenue, partially offset by higher operating expenses.

Client

Client net revenue of \$1.9 billion for the three months ended September 28, 2024 increased by 29%, compared to net revenue of \$1.5 billion for the prior year period. The increase was primarily driven by a 25% increase in unit shipments and a 3% increase in average selling price of AMD Ryzen desktop and mobile processors driven by strong demand for "Zen 5" AMD Ryzen processors.

Client net revenue of \$4.7 billion for the nine months ended September 28, 2024 increased by 49%, compared to net revenue of \$3.2 billion for the prior year period, primarily driven by a 36% increase in unit shipments and a 9% increase in average selling price of AMD Ryzen mobile and desktop processors. The increase was driven by an improvement from weak PC market conditions and inventory corrections across the PC supply chain experienced in the first half of fiscal year 2023.

Client operating income was \$276 million for the three months ended September 28, 2024, compared to operating income of \$140 million for the prior year period. Client operating income was \$451 million for the nine months ended September 28, 2024, compared to operating loss of \$101 million for the prior year period. The increase in operating income in both periods was primarily driven by higher revenue, partially offset by higher operating expenses.

Gaming

Gaming net revenue of \$462 million for the three months ended September 28, 2024 decreased by 69%, compared to net revenue of \$1.5 billion for the prior year period. Gaming net revenue of \$2.0 billion for the nine months ended September 28, 2024 decreased by 58%, compared to net revenue of \$4.8 billion for the prior year period. The decrease in both periods was primarily due to lower semi-custom revenue.

Gaming operating income was \$12 million for the three months ended September 28, 2024, compared to operating income of \$208 million for the prior year period. Gaming operating income was \$240 million for the nine months ended September 28, 2024, compared to operating income of \$747 million for the prior year period. The decrease in operating income in both periods was primarily due to lower revenue.

Embedded

Embedded net revenue of \$927 million for the three months ended September 28, 2024 decreased by 25%, compared to net revenue of \$1.2 billion for the prior year period. Embedded net revenue of \$2.6 billion for the nine months ended September 28, 2024 decreased by 38%, compared to net revenue of \$4.3 billion for the prior year period. Net revenue decreased in both periods as customers continued to normalize their inventory levels.

Embedded operating income was \$372 million for the three months ended September 28, 2024, compared to operating income of \$612 million for the prior year period. Embedded operating income was \$1.1 billion for the nine months ended September 28, 2024, compared to operating income of \$2.2 billion for the prior year period. The decrease in operating income in both periods was primarily due to lower revenue.

All Other

All Other operating loss of \$977 million for the three months ended September 28, 2024 primarily consisted of \$585 million of amortization of acquisition-related intangibles and \$351 million of stock-based compensation expense. All Other operating loss of \$1.0 billion for the prior year period primarily consisted of \$660 million of amortization of acquisition-related intangibles and \$353 million of stock-based compensation expense.

All Other operating loss of \$3.0 billion for the nine months ended September 28, 2024 primarily consisted of \$1.8 billion of amortization of acquisition-related intangibles and \$1.1 billion of stock-based compensation expense. All Other operating loss of \$3.4 billion for the prior year period primarily consisted of \$2.2 billion of amortization of acquisition-related intangibles and \$1.0 billion of stock-based compensation expense.

International Sales

International sales as a percentage of net revenue were 72% and 68% for the three months ended September 28, 2024 and September 30, 2023, respectively. International sales as a percentage of net revenue were 65% and 67% for the nine months ended September 28, 2024 and September 30, 2023, respectively. We expect that international sales will continue to be a significant portion of total sales in the foreseeable future. Substantially all of our sales transactions were denominated in U.S. dollars.

Comparison of Gross Margin, Expenses, Licensing Gain, Interest Expense, Other Income (Expense) and Income Taxes

The following is a summary of certain condensed consolidated statement of operations data for the periods indicated:

	Three Months Ended		Nine Months Ended	
	September 28, 2024	September 30, 2023	September 28, 2024	September 30, 2023
	In millions, except percentages			
Net revenue	\$ 6,819	\$ 5,800	\$ 18,127	\$ 16,512
Cost of sales	3,167	2,843	8,590	8,236
Amortization of acquisition-related intangibles	233	210	694	727
Gross profit	3,419	2,747	8,843	7,549
Gross margin	50 %	47 %	49 %	46 %
Research and development	1,636	1,507	4,744	4,361
Marketing, general and administrative	721	576	1,991	1,708
Amortization of acquisition-related intangibles	352	450	1,116	1,449
Licensing gain	(14)	(10)	(37)	(28)
Interest expense	(23)	(26)	(73)	(79)
Other income (expense), net	36	59	144	148
Income tax (benefit)	(27)	(39)	(38)	(49)
Equity income in investee	7	3	21	10

Gross Margin

Gross margin was 50% and 47% for the three months ended September 28, 2024 and September 30, 2023, respectively. Gross margin was 49% and 46% for the nine months ended September 28, 2024 and September 30, 2023, respectively. The increase in both periods was primarily driven by higher Data Center segment revenue.

Expenses

Research and Development Expenses

Research and development expenses of \$1.6 billion for the three months ended September 28, 2024 increased by \$129 million, or 9%, compared to \$1.5 billion for the prior year period. Research and development expenses of \$4.7 billion for the nine months ended September 28, 2024 increased by \$383 million, or 9%, compared to \$4.4 billion for the prior year period. The increase in both periods was primarily due to higher employee-related costs from an increase in headcount in support of our continued focus on our AI strategy.

Marketing, General and Administrative Expenses

Marketing, general and administrative expenses of \$721 million for the three months ended September 28, 2024 increased by \$145 million, or 25%, compared to \$576 million for the prior year period. Marketing, general and administrative expenses of \$2.0 billion for the nine months ended September 28, 2024 increased by \$283 million, or 17%, compared to \$1.7 billion for the prior year period. The increase in both periods was primarily due to an increase in go-to-market activities driven by revenue growth.

Amortization of Acquisition-Related Intangibles

Amortization of acquisition-related intangibles of \$585 million for the three months ended September 28, 2024 decreased by \$75 million, or 11%, compared to \$660 million for the prior year period. Amortization of acquisition-related intangibles of \$1.8 billion for the nine months ended September 28, 2024 decreased by \$366 million, or 17%, compared to \$2.2 billion for the prior year period. The decrease was primarily due to certain acquisition-related intangibles that were fully amortized in the prior fiscal year.

Interest Expense

Interest expense for the three and nine months ended September 28, 2024 was \$23 million and \$73 million, respectively, compared to \$26 million and \$79 million, respectively, for the prior year period. Our 2.95% Notes with a principal amount of \$750 million were repaid in June 2024.

Other Income (Expense), Net

Other income (expense), net is primarily comprised of interest income from short-term investments, changes in valuation of equity investments, and foreign currency transaction gains and losses.

Other income (expense), net for the three and nine months ended September 28, 2024 was \$36 million and \$144 million, respectively. Other income (expense), net for the prior year period was \$59 million and \$148 million, respectively. The decrease for the three months period was primarily due to lower interest income from lower balances held in short-term investments compared to the prior period.

Income Taxes

We determine income taxes for interim reporting periods by applying our estimated annual effective tax rate to the year-to-date results and adjusted for tax items discrete to each period.

For the three and nine months ended September 28, 2024, we recorded an income tax benefit of \$27 million and \$38 million representing an effective tax rate of (3.6)% and (3.3)%, respectively. The difference between the U.S. federal statutory tax rate of 21% and our estimated annual effective tax rate was primarily due to the income tax benefit from foreign-derived intangible income (FDII) and research and development (R&D) tax credits, partially offset by the tax rate detriment from foreign earnings. The tax benefit for the three and nine months ended September 28, 2024 reflected discrete tax benefits of \$28 million and \$68 million, respectively, primarily related to tax effects of stock-based compensation partially offset by the interest and penalties accrued for uncertain tax positions.

For the three months and nine months ended September 30, 2023, we recorded an income tax benefit of \$39 million and \$49 million representing an effective tax rate of (15.2)% and (35.8)%, respectively. The difference between the U.S. federal statutory tax rate of 21% and our estimated annual effective tax rate was primarily due to the income tax benefit from FDII and R&D tax credits. The tax benefit for the three months ended September 30, 2023 reflected a discrete tax benefit of \$17 million, primarily related to tax effects of stock-based compensation. The tax benefit for the nine months ended September 30, 2023 reflected a discrete tax benefit of \$29 million, primarily related to tax effects of stock-based compensation partially offset by the interest and penalties accrued for uncertain tax positions.

FINANCIAL CONDITION

Liquidity and Capital Resources

As of September 28, 2024 and December 30, 2023, our cash, cash equivalents and short-term investments were \$4.5 billion and \$5.8 billion, respectively. The percentage of cash, cash equivalents and short-term investments held domestically as of September 28, 2024 and December 30, 2023 were 85% and 77%, respectively.

Our operating, investing and financing activities for the nine months ended September 28, 2024 compared to the prior year period are as described below:

	Nine Months Ended	
	September 28, 2024	September 30, 2023
	(In millions)	
Net cash provided by (used in):		
Operating activities	\$ 1,742	\$ 1,286
Investing activities	113	(1,573)
Financing activities	(1,891)	(987)
Net (decrease) in cash and cash equivalents	<u>\$ (36)</u>	<u>\$ (1,274)</u>

We have \$3.0 billion available under an unsecured revolving credit facility that expires on April 29, 2027. We also have \$3.0 billion available under a commercial paper program.

As of September 28, 2024, our principal debt obligations were \$1.8 billion. Our 2.95% Notes with a principal amount of \$750 million were repaid in June 2024 and our remaining debt will mature starting in 2030.

As of September 28, 2024, we had unconditional purchase commitments of approximately \$4.3 billion, of which \$2.5 billion are for the remainder of fiscal year 2024. On an ongoing basis, we work with our suppliers on the timing of payments and deliveries of purchase commitments, taking into account business conditions.

During the three months ended September 28, 2024, we paid \$548 million for Silo AI, net of cash acquired, using available cash.

On August 17, 2024, we agreed to acquire ZT Systems (the Acquisition). Upon closing of the Acquisition, we will pay approximately \$3.4 billion in cash and 8,335,852 shares of the Company's common stock and to the extent certain conditions are met, we will pay an additional \$300 million of cash and up to 740,963 shares of the Company's common stock. The Acquisition is expected to close in the first half of fiscal year 2025, subject to certain regulatory approvals and other customary closing conditions. We intend to seek a strategic partner to acquire ZT Systems' manufacturing business.

We believe our cash, cash equivalents, short-term investments and cash flows from operations along with our revolving credit facility and commercial paper program will be sufficient to fund operations, capital expenditures, purchase commitments and acquisitions over the next 12 months and beyond. We believe we will be able to access the capital markets should we require additional funds. However, we cannot assure that such funds will be available on favorable terms, or at all.

Operating Activities

Our working capital cash inflows and outflows from operations are primarily cash collections from our customers, payments for inventory purchases and payments for employee-related expenditures.

Net cash provided by operating activities was \$1.7 billion in the nine months ended September 28, 2024, primarily due to our net income of \$1.2 billion, adjusted for non-cash and non-operating charges of \$2.6 billion and net cash outflows of \$2.0 billion from changes in our operating assets and liabilities. The primary drivers of the change in operating assets and liabilities were a \$1.9 billion increase in accounts receivable due to the timing of customer payments and higher revenue, a \$1.1 billion increase in inventory primarily to support the continued ramp of Data Center products in advanced process technology nodes and \$1.0 billion of tax payments.

Net cash provided by operating activities was \$1.3 billion in the nine months ended September 30, 2023, primarily due to our net income of \$187 million, adjusted for non-cash and non-operating charges of \$2.9 billion and net cash outflows of \$1.8 billion from changes in our operating assets and liabilities. The primary drivers of the change in operating assets and liabilities were a \$929 million increase in accounts receivable driven primarily by higher revenue in the last month of the quarter ended September 30, 2023 compared to the last month of the quarter ended December 31, 2022, and a \$674 million increase in inventory primarily to support the continued ramp of Data Center and Client products in advanced process technology nodes.

Investing Activities

Net cash provided by investing activities was \$113 million for the nine months ended September 28, 2024 which primarily consisted of \$1.9 billion of proceeds from the maturity and sale of short-term investments, partially offset by cash used in the purchases of short-term investments of \$707 million, cash used in acquisition, net of cash acquired of \$548 million, and purchases of property and equipment of \$428 million.

Net cash used in investing activities was \$1.6 billion for the nine months ended September 30, 2023 which primarily consisted of cash used in the purchases of short-term investments of \$3.3 billion and purchases of property and equipment of \$407 million, partially offset by \$2.2 billion of proceeds from the maturity and sale of short-term investments.

Financing Activities

Net cash used in financing activities was \$1.9 billion for the nine months ended September 28, 2024, which primarily consisted of repayment of the 2.95% Notes of \$750 million, stock repurchases for tax withholding on employee equity plans of \$686 million, and common stock repurchase of \$606 million.

Net cash used in financing activities was \$987 million for the nine months ended September 30, 2023, which primarily consisted of common stock repurchases of \$752 million and stock repurchases for tax withholding on employee equity plans of \$382 million, partially offset by a cash inflow of \$148 million from issuance of common stock under our employee equity plans.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Reference is made to “Part II, Item 7A, Quantitative and Qualitative Disclosures About Market Risk,” in our Annual Report on Form 10-K for the fiscal year ended December 30, 2023.

There have not been any material changes in interest rate risk, default risk or foreign exchange risk since December 30, 2023.

ITEM 4. CONTROLS AND PROCEDURES

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports made under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer (CEO) and Chief Financial Officer (CFO) as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and our management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As of September 28, 2024, the end of the period covered by this report, we carried out an evaluation under the supervision and with the participation of our management, including our CEO and CFO, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on the foregoing, our CEO and CFO concluded that our disclosure controls and procedures were effective at the reasonable assurance level.

There were no changes in our internal controls over financial reporting for the three months ended September 28, 2024 that materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

For a discussion of our legal proceedings, refer to Note 13—Commitments and Contingencies of the Notes to Condensed Consolidated Financial Statements (Part I, Item 1 of this Form 10-Q).

ITEM 1A. RISK FACTORS

The risks and uncertainties described below are not the only ones we face. If any of the following risks actually occurs, our business, financial condition or results of operations could be materially adversely affected. In addition, you should consider the interrelationship and compounding effects of two or more risks occurring simultaneously.

Risk Factors Summary

The following is a summary of the principal risks that could adversely affect our business, financial condition and results of operations.

Economic and Strategic Risks

- Intel Corporation's dominance of the microprocessor market and its aggressive business practices may limit our ability to compete effectively on a level playing field.
- Nvidia's dominance in the graphics processing unit market and its aggressive business practices may limit our ability to compete effectively on a level playing field.
- The markets in which our products are sold are highly competitive and rapidly evolving.
- The semiconductor industry is highly cyclical and has experienced severe downturns.
- The demand for our products depends in part on the market conditions in the industries into which they are sold.
- The success of our business depends on our ability to introduce products on a timely basis with features and performance levels that provide value to our customers while supporting significant industry transitions.
- The loss of a significant customer may have a material adverse effect on us.
- Economic and market uncertainty may adversely impact our business and operating results.
- Our operating results are subject to quarterly and seasonal sales patterns.
- If we cannot adequately protect our technology or other intellectual property through patents, copyrights, trade secrets, trademarks and other measures, we may lose a competitive advantage and incur significant expenses.
- Unfavorable currency exchange rate fluctuations could adversely affect us.

Operational and Technology Risks

- We rely on third parties to manufacture our products, and if they are unable to do so on a timely basis in sufficient quantities and using competitive technologies, our business could be materially adversely affected.
- Essential equipment, materials, substrates or manufacturing processes may not be available to us.
- We may fail to achieve expected manufacturing yields for our products.
- Our revenue from our semi-custom System-on-Chip (SoC) products is dependent upon our semi-custom SoC products being incorporated into customers' products and the success of those products.
- Our products may be subject to security vulnerabilities that could have a material adverse effect on us.
- IT outages, data loss, data breaches and cyberattacks could disrupt operations and compromise our intellectual property or other sensitive information, be costly to remediate or cause significant damage to our business, reputation, financial condition and results of operations.
- Uncertainties involving the ordering and shipment of our products could materially adversely affect us.

- Our ability to design and introduce new products includes the use of third-party intellectual property.
- We depend on third-party companies for the design, manufacture and supply of motherboards, software, memory and other computer platform components to support our business and products.
- If we lose Microsoft Corporation's support for our products or other software vendors do not design and develop software to run on our products, our ability to sell our products could be materially adversely affected.
- Our reliance on third-party distributors and add-in-board (AIB) partners subjects us to certain risks.
- Our business depends on the proper functioning of our internal business processes and information systems.
- Our products may not be compatible with some or all industry-standard software and hardware.
- Costs related to defective products could have a material adverse effect on us.
- We may fail to maintain the efficiency of our supply chain as we respond to changes in customer demand.
- We outsource to third parties certain supply-chain logistics functions.
- We may be unable to effectively control the sales of our products on the gray market.
- Climate change may have a long-term impact on our business.

Legal and Regulatory Risks

- Government actions and regulations may limit our ability to export our products to certain customers.
- If we cannot realize our deferred tax assets, our results of operations could be adversely affected.
- Our business is subject to potential tax liabilities, including as a result of tax regulation changes.
- We are party to litigation and may become a party to other claims or litigation.
- We are subject to environmental laws, conflict minerals regulations, as well as a variety of other laws or regulations.
- Evolving expectations from governments, investors, customers and other stakeholders regarding corporate responsibility matters could result in additional costs, harm to our reputation and a loss of customers.
- Issues related to the responsible use of AI may result in reputational, competitive and financial harm and liability.
- The agreements governing our notes, our guarantee of Xilinx's notes, and our Revolving Credit Agreement impose restrictions on us that may adversely affect our ability to operate our business.

Merger, Acquisition, Divestiture, and Integration Risks

- Acquisitions, joint ventures, and/or investments, and the failure to integrate acquired businesses may fail to materialize their anticipated benefits and could disrupt our business.
- Our ability to complete the acquisition of ZT Systems is subject to closing conditions.
- Any impairment of our tangible, definite-lived intangible or indefinite-lived intangible assets, including goodwill, may adversely impact our financial position and results of operations.

General Risks

- Our worldwide operations are subject to political, legal and economic risks and natural disasters.
- We may incur future impairments of our technology license purchases.
- Our inability to continue to attract and retain qualified personnel may hinder our business.
- Our stock price is subject to volatility.

For a more complete discussion of the material risks facing our business, see below.

Economic and Strategic Risks

Intel Corporation's dominance of the microprocessor market and its aggressive business practices may limit our ability to compete effectively on a level playing field.

Intel's microprocessor market share position, significant financial resources, introduction of competitive new products, and existing relationships with top-tier OEMs have enabled it to market and price its products aggressively, to target our customers and our channel partners with special incentives and to influence customers who do business with us. These aggressive activities have in the past resulted in lower unit sales and a lower average selling price for many of our products and adversely affected our margins and profitability. Intel also dominates the computer system platform and has a heavy influence on PC manufacturers, other PC industry participants, and benchmarks. It is able to drive de facto standards and specifications for x86 microprocessors that could cause us and other companies to have delayed access to such standards. We may be materially adversely affected by Intel's business practices, including rebating and allocation strategies and pricing actions, designed to limit our market share and margins; product mix and introduction schedules; product bundling, marketing and merchandising strategies; and exclusivity payments to its current and potential customers, retailers and channel partners. We expect Intel to continue to heavily invest substantial resources in marketing, research and development, new manufacturing facilities and other technology companies.

Nvidia's dominance in the graphics processing unit market and its aggressive business practices may limit our ability to compete effectively on a level playing field.

Nvidia's Data Center GPU market share position, significant financial resources, introduction of competitive new products and proprietary software ecosystem have enabled it to market and price its products in a manner to encourage the selection of Nvidia-based systems and to influence customers who do business with us. We may be materially adversely affected by Nvidia's business practices, including allocation strategies and pricing actions; product mix and introduction schedules; and product bundling strategies. Nvidia's practices can limit customers' ability to choose non-Nvidia products, including our products, and in turn, may limit our market share and decrease our margins and profitability, which could have a material adverse effect on our business. We expect Nvidia to continue to heavily invest substantial resources in research and development, marketing and other technology companies.

The markets in which our products are sold are highly competitive and rapidly evolving.

The markets in which our products are sold are highly competitive and rapidly evolving. We expect that competition will continue to be intense due to rapid technological changes, new and evolving industry standards, changing customer preferences and requirements, and frequent introductions by our competitors or new competitors of products that may provide better performance/experience or that may include additional features that render our products comparatively less competitive.

In addition, we are entering markets with current and new competitors who may be able to adapt more quickly to customer requirements and emerging technologies. For example, the AI market is subject to rapid technological change, product obsolescence, frequent new product introductions and feature enhancements, changes in end-user requirements and evolving industry trends and legal standards. We cannot guarantee that we will be able to compete successfully against current or new competitors who may have stronger positions in these new markets or superior ability to anticipate customer requirements and emerging industry trends. While we see significant opportunity in AI, we expect intense competition from companies such as Nvidia in the supply of GPUs and other accelerators for the AI market. We may face competition from some of our customers who internally develop the same products as us. Increased adoption of ARM-based semiconductor designs could lead to further growth and development of the ARM ecosystem. We may also face delays or disruptions in research and development efforts, or we may be required to invest significantly greater resources in research and development than anticipated. In addition, the semiconductor industry has seen several mergers and acquisitions over the last number of years. Further consolidation could adversely impact our business due to there being fewer suppliers, customers and partners in the industry.

We believe that the main factors that determine our product competitiveness are total cost of ownership, timely product introductions, product quality, product features and capabilities (including accelerations for key workloads such as AI, energy efficiency (including power consumption and battery life, given their impact on total cost of ownership), reliability, performance, size (or form factor), selling price, cost, adherence to industry standards (and the creation of open industry standards), level of integration, software and hardware compatibility, ease of use and functionality of software design tools, completeness of applicable software solutions, security and stability, brand recognition and availability. If competitors introduce competitive new products into the market before us, demand for our products could be adversely impacted and our business could be adversely affected. Further, our competitors have significant marketing and sales resources which could increase the competitive environment in a declining market or during challenging economic times, leading to lower prices and a reduction in our margins. To the extent our competitors introduce competitive new products and technologies into the market before we do, or introduce products and technologies that provide better performance/experience or at better prices, our products and technologies may be comparatively less competitive and our competitive position may weaken, which could adversely harm our business and results of operations.

From time to time, governments provide incentives or make other investments that could benefit and give a competitive advantage to our competitors. For example, the United States government enacted the Creating Helpful Incentives to Produce Semiconductors for America and Science Act (CHIPS Act) of 2022 to provide financial incentives to the U.S. semiconductor industry. Government incentives, including the CHIPS Act, may not be available to us on acceptable terms or at all. If our competitors can benefit from such government incentives and we cannot, it could strengthen our competitors' relative position and have a material adverse effect on our business.

The semiconductor industry is highly cyclical and has experienced severe downturns that have materially adversely affected, and may continue to materially adversely affect, our business in the future.

The semiconductor industry is highly cyclical and has experienced significant downturns, often in conjunction with constant and rapid technological change, wide fluctuations in supply and demand, continuous new product introductions, price erosion and declines in general economic conditions. We have incurred substantial losses in previous downturns, due to substantial declines in average selling prices; the cyclical nature of supply and demand imbalances in the semiconductor industry; a decline in demand for end-user products that incorporate our products; and excess inventory levels and periods of inventory adjustment. Such industry-wide fluctuations may materially adversely affect us in the future. Global economic uncertainty and weakness have in the past impacted the semiconductor market as consumers and businesses have deferred purchases, which negatively impacted demand for our products. Our financial performance has been, and may in the future be, negatively affected by these downturns. The growth of our business is also dependent on continued demand for our products from high-growth adjacent emerging global markets. Our ability to be successful in such markets depends in part on our ability to establish adequate local infrastructure, as well as our ability to cultivate and maintain local relationships in these markets. If demand from these markets is below our expectations, sales of our products may decrease, which would have a material adverse effect on us.

The demand for our products depends in part on the market conditions in the industries into which they are sold. Fluctuations in demand for our products or a market decline in any of these industries could have a material adverse effect on our results of operations.

Industry-wide fluctuations in the computer marketplace have materially adversely affected us in the past and may materially adversely affect us in the future. We offer products that are used in different end markets and the demand for our products can vary among our Data Center, Client, Gaming and Embedded end markets. For instance, in our Data Center segment, we offer products that are optimized for generative AI applications and since the fourth quarter of 2023, we have experienced significant demand for our AI accelerators. The demand for such products in part will depend on the extent to which our customers utilize generative AI solutions in a wide variety of applications, and both the near-term and long-term trajectory of such generative AI solutions is unknown. Also, our Client segment revenue is focused on the consumer desktop and notebook PC segments and will depend in part on the market's adoption of AI PCs. We are actively building AI capabilities into all our Client products, such as Ryzen AI PC processors, but there can be no assurance about the rate and pace of adoption of such product offerings. In the past, revenues from the Client and Gaming segments have experienced a decline driven by, among other factors, the adoption of smaller and other form factors, increased competition and changes in replacement cycles.

In addition, our GPU revenue in the past has been affected in part by the volatility of the cryptocurrency mining market. If we are unable to manage the risks related to the volatility of the cryptocurrency mining market (including potential actions by global monetary authorities), our GPU business could be materially adversely affected. The success of our semi-custom SoC products in our Gaming segment is dependent on securing customers for our semi-custom design pipeline and consumer market conditions, including the success of game console systems and next generation consoles for Sony and Microsoft. Our Embedded segment primarily includes embedded CPUs and GPUs, APUs, FPGAs and Adaptive SoC products some of which are subject to macroeconomic trends and volatile business conditions. To the extent our embedded customers are faced with higher inventory levels, they may choose to draw down their existing inventory and order less of our products. Our Embedded segment revenue decreased as a result of an inventory correction in several end markets in the second half of 2023 and the first half of 2024.

The success of our business depends on our ability to introduce products on a timely basis with features and performance levels that provide value to our customers while supporting and coinciding with significant industry transitions.

Our success depends to a significant extent on the development, qualification, implementation and acceptance of new product designs and improvements that provide value to our customers. Our ability to identify industry changes, and adapt our strategy to develop, qualify and distribute, and have manufactured, new products and related technologies to meet evolving industry trends and requirements, at prices acceptable to our customers and on a timely basis, are significant factors in determining our competitiveness in our target markets. We cannot assure you that we will be able to meet the evolving needs of industry changes or that our efforts to execute our product roadmap will result in innovative products and technologies that provide value to our customers. If we fail to or are delayed in identifying, developing, qualifying or shipping new products or technologies that provide value to our customers and address these new trends, or if we fail to predict which new form factors, product features preferences or requirements consumers will adopt and adapt our business accordingly, we may lose competitive positioning, which could cause us to lose market share and require us to discount the selling prices of our products. Although we make substantial investments in research and development, we cannot be certain that we will be able to develop, obtain or successfully implement new products and technologies on a timely basis or that they will be well-received by our customers. Moreover, our investments in new products and technologies involve certain risks and uncertainties and could disrupt our ongoing business. New investments may not generate sufficient revenue, may incur unanticipated liabilities and may divert our limited resources and distract management from our current operations. We cannot be certain that our ongoing investments in new products and technologies will be successful, will meet our expectations and will not adversely affect our reputation, financial condition and operating results. For example, as part of our pervasive AI strategy, we have a portfolio of hardware products and software tools to allow our customers to develop scalable and pervasive AI solutions. We are actively building AI capabilities into our products, but there can be no assurance about the rate and pace of adoption of such product offerings. In our Data Center segment, we offer products that are optimized for generative AI applications and since the fourth quarter of 2023, we have experienced significant demand for our AI accelerators. The demand for such products in part will depend on the extent to which our customers utilize generative AI solutions in a wide variety of applications, and both the near-term and long-term trajectory of such generative AI solutions is unknown. If we fail to develop and timely offer or deploy such products and technologies, keep pace with the product offerings of our competitors, or adapt to unexpected changes in industry standards or disruptive technological innovation, our business could be adversely affected. Additionally, our efforts in developing new AI technology solutions are inherently risky and may not always succeed. We may incur significant costs, resources, investments and delays and not achieve a return on investment or capitalize on the opportunities presented by demand for AI solutions. Moreover, while AI adoption is likely to continue and may accelerate, the long-term trajectory of this technological trend is uncertain.

Delays in developing, qualifying or shipping new products can also cause us to miss our customers' product design windows or, in some cases, breach contractual obligations. If our customers do not include our products in the initial design of their computer systems or products, they will typically not use our products in their systems or products until at least the next design configuration. The process of being qualified for inclusion in a customer's system or product can be lengthy and could cause us to further miss a cycle in the demand of end-users, which also could result in a loss of market share and harm our business. We also depend on the success and timing of our customers' platform launches. If our customers delay their product launches or if our customers do not effectively market their platforms with our products, it could result in a delay in bringing our products to market and cause us to miss a cycle in the demand of end-users, which could materially adversely affect our business. The increasing frequency and complexity of our newly introduced products may result in unanticipated quality or production issues that could result in product delays. In addition, market demand requires that products incorporate new features and performance standards on an industry-wide basis. Over the life of a specific product, the sale price is typically reduced over time. The introduction of new products and enhancements to existing products is necessary to maintain the overall corporate average selling price. If we are unable to introduce new products with sufficiently high sale prices or to increase unit sales volumes capable of offsetting the reductions in the sale prices of existing products over time, our business could be materially adversely affected.

The loss of a significant customer may have a material adverse effect on us.

We depend on a small number of customers for a substantial portion of our business and we expect that a small number of customers will continue to account for a significant part of our revenue in the future. If one of our key customers decides to stop buying our products, materially reduces its operations or its demand for our products, or has operations that are materially impaired for a significant period of time such that it is unable to receive or utilize our products, our business would be materially adversely affected.

Economic and market uncertainty may adversely impact our business and operating results.

Uncertain global or regional economic conditions have and may in the future adversely impact our business. Uncertainty in the economic environment or other unfavorable changes in economic conditions, such as inflation, higher interest rates, recession, slowing growth, increased unemployment, tighter credit markets, changes in fiscal monetary or trade policy, or currency fluctuations, may negatively impact consumer confidence and spending causing our customers to stop or postpone purchases. For example, our Client segment revenue decreased in the first half of 2023, and our Embedded segment revenue decreased as a result of an inventory correction in several end markets in the second half of 2023 and the first half of 2024. During challenging economic times, our current or potential future customers may experience cash flow problems and as a result may modify, delay or cancel plans to purchase our products. Additionally, if our customers are not successful in generating sufficient revenue or are unable to secure financing, they may not be able to pay, or may delay payment of, accounts receivable that they owe us. The risk related to our customers potentially defaulting on or delaying payments to us is increased because we expect that a small number of customers will continue to account for a substantial part of our revenue. Any inability of our current or potential future customers to pay us for our products may adversely affect our earnings and cash flow. Moreover, our key suppliers may reduce their output or become insolvent, thereby adversely impacting our ability to manufacture our products. Adverse changes in economic conditions could increase costs of memory, equipment, materials or substrates and other supply chain expenses. If we are not able to procure a stable supply of materials on an ongoing basis and at reasonable costs to meet our production requirements, we could experience a supply shortage or an increase in production costs, which could negatively impact our gross margin and materially adversely affect our business. Our ability to forecast our operating results, make business decisions and execute our business strategy could be adversely impacted by challenging macroeconomic conditions. In addition, uncertain economic conditions could lead to higher borrowing costs and reduced availability of capital and credit markets, making it more difficult for us to raise funds through borrowings or private or public sales of debt or equity securities. An economic downturn or increased uncertainty could also lead to failures of counterparties including financial institutions and insurers, asset impairments and declines in the value of our financial instruments. If a banking institution in which we hold funds fails or is subject to significant adverse conditions in the financial or credit markets, we could be subject to a risk of loss of all or a portion of such uninsured funds or be subject to a delay in accessing all or a portion of such uninsured funds, which in turn could adversely impact our short-term liquidity and ability to meet our operating expense obligations.

Our operating results are subject to quarterly and seasonal sales patterns.

The profile of our sales may be weighted differently during the year. A large portion of our quarterly sales have historically been made in the last month of the quarter. This uneven sales pattern makes prediction of revenue for each financial period difficult and increases the risk of unanticipated variations in quarterly results and financial condition. In addition, our operating results tend to vary seasonally with the markets in which our products are sold. For example, historically, our net revenue has been generally higher in the second half of the year than in the first half of the year, although market conditions and product transitions could impact these trends. Many of the factors that create and affect quarterly and seasonal trends are beyond our control.

If we cannot adequately protect our technology or other intellectual property in the United States and abroad, through patents, copyrights, trade secrets, trademarks and other measures, we may lose a competitive advantage and incur significant expenses.

We rely on a combination of protections provided by contracts, including confidentiality and nondisclosure agreements, copyrights, patents, trademarks and common law rights, such as trade secrets, to protect our intellectual property. However, we cannot assure you that we will be able to adequately protect our technology or other intellectual property from third-party infringement or from misappropriation in the United States and abroad. Any patent licensed by us or issued to us could be challenged, invalidated, expire, or circumvented or rights granted thereunder may not provide a competitive advantage to us.

Furthermore, patent applications that we file may not result in issuance of a patent or, if a patent is issued, the patent may not be issued in a form that is advantageous to us. Despite our efforts to protect our intellectual property rights, others may independently develop similar products, duplicate our products or design around our patents and other rights. In addition, it is difficult to monitor compliance with, and enforce, our intellectual property on a worldwide basis in a cost-effective manner. In jurisdictions where foreign laws provide less intellectual property protection than afforded in the U.S. and abroad, our technology or other intellectual property may be compromised, and our business would be materially adversely affected.

Unfavorable currency exchange rate fluctuations could adversely affect us.

We have costs, assets and liabilities that are denominated in foreign currencies. As a consequence, movements in exchange rates could cause our foreign currency denominated expenses to increase as a percentage of revenue, affecting our profitability and cash flows. Whenever we believe appropriate, we hedge a portion of our foreign currency exposure to protect against fluctuations in currency exchange rates. We determine our total foreign currency exposure using projections of long-term expenditures for items such as payroll. We cannot assure you that these activities will be effective in reducing foreign exchange rate exposure. Failure to do so could have an adverse effect on our business, financial condition, results of operations and cash flow. In addition, the majority of our product sales are denominated in U.S. dollars. Fluctuations in the exchange rate between the U.S. dollar and the local currency can cause increases or decreases in the cost of our products in the local currency of such customers. An appreciation of the U.S. dollar relative to the local currency could reduce sales of our products.

Operational and Technology Risks

We rely on third parties to manufacture our products, and if they are unable to do so on a timely basis in sufficient quantities and using competitive technologies, our business could be materially adversely affected.

We utilize third-party wafer foundries to fabricate the silicon wafers for all of our products. We rely on Taiwan Semiconductor Manufacturing Company Limited (TSMC) for the production of all wafers for microprocessor and GPU products at 7 nanometer (nm) or smaller nodes, and we rely primarily on GLOBALFOUNDRIES Inc. (GF) for wafers for microprocessor and GPU products manufactured at process nodes larger than 7 nm. We also utilize TSMC, United Microelectronics Corporation (UMC) and Samsung Electronics Co., Ltd. for our integrated circuits (IC) in the form of programmable logic devices. We also rely on third-party manufacturers to assemble, test, mark and pack (ATMP) our products. Our third-party package assembly partners are responsible for packaging technology used to fabricate our products. It is important to have reliable relationships with all of these third-party manufacturing suppliers to ensure adequate product supply to respond to customer demand.

We cannot guarantee that these manufacturers or our other third-party manufacturing suppliers will be able to meet our near-term or long-term manufacturing requirements. If we experience supply constraints from our third-party manufacturing suppliers, we may be required to allocate the reduced quantities of affected products amongst our customers, which could have a material adverse effect on our relationships with these customers and on our financial condition. In addition, if we are unable to meet customer demand due to fluctuating or late supply from our manufacturing suppliers, it could result in lost sales and have a material adverse effect on our business. For example, if TSMC is not able to manufacture wafers for our microprocessor and GPU products at 7 nm or smaller nodes and our newest IC products in sufficient quantities to meet customer demand, it could have a material adverse effect on our business.

We do not have long-term commitment contracts with some of our third-party manufacturing suppliers. We obtain many of these manufacturing services on a purchase order basis and these manufacturers are not required to provide us with any specified minimum quantity of product beyond the quantities in an existing purchase order. Accordingly, we depend on these suppliers to allocate to us a portion of their manufacturing capacity sufficient to meet our needs, to produce products of acceptable quality and at acceptable manufacturing yields and to deliver those products to us on a timely basis and at acceptable prices. The manufacturers we use also fabricate wafers and ATMP products for other companies, including certain of our competitors. They could choose to prioritize capacity for other customers, increase the prices that they charge us on short notice, require onerous prepayments, or reduce or eliminate deliveries to us, which could have a material adverse effect on our business. If we overestimate our customer demand or experience a decrease in customer demand, either could result in excess inventory and an increase in our production costs. We are party to a wafer supply agreement with GF where GF will provide a minimum annual capacity allocation to us and set pricing through 2026. If our actual wafer requirements are less than the number of wafers required to meet the applicable annual wafer purchase target, we could have excess inventory or higher inventory unit costs, both of which may adversely impact our gross margin and our results of operations.

Other risks associated with our dependence on third-party manufacturers include limited control over delivery schedules, yield, cycle times, quality assurance, price increases, lack of capacity in periods of excess demand, misappropriation of our intellectual property, dependence on several subcontractors, and limited ability to manage inventory and parts. Moreover, if any of our third-party manufacturers (or their subcontractors) suffer any damage to facilities, lose benefits under material agreements, experience power outages, water shortages, or high heat events, lack sufficient capacity to manufacture our products, encounter financial difficulties, are unable to secure necessary raw materials from their suppliers, suffer any other disruption or reduction in efficiency, or experience uncertain environmental, social, atmospheric or natural, economic or political circumstances or conditions, we may encounter supply delays or disruptions. For example, in the first quarter of 2024, we experienced some inventory loss due to an incident at a contract manufacturer. If we are unable to secure sufficient or reliable supply of products, our ability to meet customer demand may be adversely affected and this could materially affect our business.

If we transition the production of some of our products to new manufacturers, we may experience delayed product introductions, lower yields or poorer performance of our products. If we experience problems with product quality or are unable to secure sufficient capacity from a particular third-party manufacturer, or if we for other reasons cease utilizing one of those manufacturers, we may be unable to timely secure an alternative supply for any specific product. We could experience significant delays in the shipment of our products if we are required to find alternative third-party manufacturers, which could have a material adverse effect on our business.

We are party to two ATMP joint ventures (collectively, the ATMP JVs) with affiliates of Tongfu Microelectronics Co., Ltd. The majority of our ATMP services are provided by the ATMP JVs and there is no guarantee that the ATMP JVs will be able to fulfill our long-term ATMP requirements. If we are unable to meet customer demand due to fluctuating or late supply from the ATMP JVs, it could result in lost sales and have a material adverse effect on our business.

If essential equipment, materials, substrates or manufacturing processes are not available to manufacture our products, we could be materially adversely affected.

We may purchase equipment, materials and substrates for use by our back-end manufacturing service providers from a number of suppliers and our operations depend upon obtaining deliveries of adequate supplies of equipment and materials of acceptable quality on a timely basis. Our third-party suppliers also depend on the same timely delivery of adequate quantities of equipment and materials of acceptable quality in the manufacture of our products. In addition, as many of our products increase in technical complexity, we rely on our third-party suppliers to update their processes in order to continue meeting our back-end manufacturing needs. Certain equipment and materials that are used in the manufacture of our products are available only from a limited number of suppliers, or in some cases, a sole supplier. We also depend on a limited number of suppliers to provide the majority of certain types of IC packages for our microprocessors, including our APU products. Similarly, certain non-proprietary materials or components such as memory, printed circuit boards (PCBs), interposers, substrates and capacitors used in the manufacture of our products are currently available from only a limited number of suppliers. If we are unable to procure a stable supply of memory, equipment, materials or substrates of acceptable quality on an ongoing basis and at reasonable costs to meet our production requirements, we could experience a shortage in memory, equipment, materials or substrate supply or an increase in production costs, which could have a material adverse effect on our business. We have long-term purchase commitments and prepayment arrangements with some of our suppliers. If the delivery of such supply is delayed or does not occur for any reason, it could materially impact our ability to procure and process the required volume of supply to meet customer demand. Conversely, if we overestimate our customer demand or experience a decrease in customer demand, either because customers cancel orders or choose to purchase from our competitors, it could result in excess inventory and an increase in our production costs, particularly since we have prepayment arrangements with certain suppliers. Because some of the equipment and materials that we and our third-party manufacturers purchase are complex, it is sometimes difficult to substitute one equipment or materials supplier for another.

From time to time, suppliers may extend lead times, limit supply or increase prices due to capacity constraints or other factors. Also, some of these materials and components may be subject to rapid changes in price, quality and availability. Interruption of supply or increased demand in the industry could cause shortages and price increases in various essential materials. Dependence on a sole supplier or a limited number of suppliers exacerbates these risks. If we are unable to procure certain of these materials for our back-end manufacturing operations, or our third-party manufacturers are unable to procure materials for manufacturing our products, our business would be materially adversely affected.

Failure to achieve expected manufacturing yields for our products could negatively impact our results of operations.

Semiconductor manufacturing yields are a result of product design, process technology and packaging technology, which is typically proprietary to the manufacturer, and low yields can result from design failures, packaging technology failures, process technology failures or a combination of some or all of these. Our third-party manufacturers are responsible for the process technologies used to fabricate silicon wafers. If our third-party manufacturers experience manufacturing inefficiencies or encounter disruptions, errors or difficulties during production, we may fail to achieve acceptable yields or we may experience product delivery delays. We cannot be certain that our third-party manufacturers will be able to develop, expand, obtain or successfully implement leading-edge manufacturing process or packaging technologies needed to manufacture future generations of our products profitably or on a timely basis or that our competitors will not develop new technologies, products or processes earlier. Moreover, during periods when our third-party manufacturers are implementing new process or packaging technologies, their manufacturing facilities may not be fully productive. A substantial delay in the technology transitions to smaller process technologies could have a material adverse effect on us, particularly if our competitors transition to more cost effective technologies before us. For example, we are presently focusing our 7 nm and lower product microprocessor and GPU portfolio on TSMC's processes. If TSMC is not able to manufacture wafers for our products at 7 nm or smaller nodes in sufficient quantities to meet customer demand, it could have a material adverse effect on our business. Moreover, we rely on TSMC, UMC and our other foundries to produce wafers with competitive performance attributes for our IC products. Therefore, the foundries, particularly TSMC which manufactures our newest IC products, must be able to transition to advanced manufacturing process technologies and increased wafer sizes, produce wafers at acceptable yields and deliver them in a timely manner.

Any decrease in manufacturing yields could result in an increase in per unit costs, which would adversely impact our gross margin and/or force us to allocate our reduced product supply amongst our customers, which could harm our relationships and reputation with our customers and materially adversely affect our business.

Our revenue from our semi-custom SoC products is dependent upon our semi-custom SoC products being incorporated into customers' products and the success of those products.

The revenue that we receive from our semi-custom SoC products is in the form of non-recurring engineering fees charged to third parties for design and development services and revenue received in connection with sales of our semi-custom SoC products to these third parties. As a result, our ability to generate revenue from our semi-custom products depends on our ability to secure customers for our semi-custom design pipeline, our customers' desire to pursue the project and our semi-custom SoC products being incorporated into those customers' products. Any revenue from sales of our semi-custom SoC products is directly related to sales of the third-party's products and reflective of their success in the market. Moreover, we have no control over the marketing efforts of these third parties, and we cannot make any assurances that sales of their products will be successful in current or future years. Consequently, the semi-custom SoC product revenue expected by us may not be fully realized and our operating results may be adversely affected.

Our products may be subject to security vulnerabilities that could have a material adverse effect on us.

The products that we sell are complex and have been and may in the future be subject to security vulnerabilities that could result in, among other things, the loss, corruption, theft or misuse of confidential data or system performance issues. Our efforts to prevent and address security vulnerabilities may decrease performance, be only partially effective or not successful at all. We may depend on vendors to create mitigations to their technology that we incorporate into our products and they may delay or decline to make such mitigations. We may also depend on third parties, such as customers and end users, to deploy our mitigations alone or as part of their own mitigations, and they may delay, decline or modify the implementation of such mitigations. Our relationships with our customers could be adversely affected as some of our customers may stop purchasing our products, reduce or delay future purchases of our products, or use competing products. Any of these actions by our customers could adversely affect our revenue. We have and may in the future be subject to claims and litigation related to security vulnerabilities. Actual or perceived security vulnerabilities of our products may subject us to adverse publicity, damage to our brand and reputation, and could materially harm our business or results of operations.

IT outages, data loss, data breaches and cyberattacks could disrupt operations and compromise our intellectual property or other sensitive information, be costly to remediate or cause significant damage to our business, reputation, financial condition and results of operations.

Our business relies on technology hardware, software, cloud services, infrastructure, networks and systems (collectively, IT Systems). We own and manage some IT Systems but also rely on critical third-party IT Systems, products and services. In the ordinary course of business, we and various third-party providers and business partners process and maintain sensitive data, including personal information about workers, customers and others, as well as intellectual property and proprietary or confidential information relating to our business and that of our customers and business partners (collectively, Confidential Data). Maintaining the availability, integrity and security of our IT Systems and Confidential Data is critical to our business and reputation. While we and others have implemented various controls and defenses, AMD and companies like AMD and our vendors and customers have been and are increasingly subject to cybersecurity attacks, risks and threats. Threat actors range in sophistication from individual hackers and insiders to ransom gangs and state-sponsored attackers. Cyber threats may be generic, or they may be custom-crafted against our IT Systems or supply chain. The increased prevalence of remote working arrangements at AMD and our providers present additional operational risks and attack vectors to our IT Systems. Our IT Systems and Confidential Data are vulnerable to a range of cybersecurity risks and threats, including malicious code that is added to widely available open-source software, compromised commercial software or security vulnerabilities in our products or systems, or those of a third party, that are being used by attackers prior to mitigations being put in place, such as zero-day attacks. Cyberattacks have and may come into our IT Systems through the compromise of users' access credentials. Users' access credentials can be compromised by phishing, vishing, smishing, multi-factor authentication (MFA) prompt bombing, hacking, or other social engineering, cybersecurity, or theft activities.

Threat actors are also increasingly using tools and techniques that circumvent controls, evade detection, and remove forensic evidence, which means that we and others may be unable to implement adequate preventative measures against, anticipate, detect, deflect, contain or recover from cyberattacks in a timely or effective manner. As AI capabilities improve and are increasingly adopted, we may see more sophisticated threats created through the use of AI technology to launch more automated, targeted and coordinated cyberattacks. These attacks could be crafted with an AI tool to directly attack IT Systems with increased speed and/or efficiency than a human threat actor or create more effective phishing emails. In addition, the threat could be introduced from the result of our or our customers and business partners incorporating the output of an AI tool that includes a threat, such as introducing malicious code by incorporating AI generated source code. Our network and storage applications, as well as those of our customers, business partners, and third-party providers, may be subject to unauthorized access by hackers or breached due to operator error, malfeasance or other system disruptions.

Cyberattacks that breach our security measures, or those of our third-party service providers, customers or business partners, could result in any or all of the following, which individually or collectively could materially adversely affect our financial condition, our competitive position; unauthorized access to, misuse or disclosure of Confidential Data (such as intellectual property, sensitive business information or personally identifiable information (PII)); reputational harm and/or diminution in our competitiveness; loss of existing and/or future customers; litigation and/or regulatory investigations or enforcement; significant remediation, restoration and compliance costs; and the diversion of management's attention and key information technology resources. In addition, many governments have enacted and are continuing to enact strict privacy and security laws, such as the UK's and European Union's General Data Protection Regulation (GDPR) and the California Consumer Privacy Act of 2018 (CCPA), as amended by the California Privacy Rights Act (CPRA), which provide for fines, penalties, and in the case of the CCPA and similar legislation, the basis for private claims for certain types of data breaches. We anticipate ongoing and increasing costs related to enhancing and implementing information security controls, including costs related to upgrading application, computer, and network security components; training workers to maintain and monitor our security controls; investigating, responding to and remediating any data security breach, and addressing any related litigation or regulatory proceedings; mitigating reputational harm; and complying with external regulations.

Uncertainties involving the ordering and shipment of our products could materially adversely affect us.

We typically sell our products pursuant to individual purchase orders. We generally do not have long-term supply arrangements with our customers or minimum purchase requirements except that orders generally must be for standard pack quantities. Generally, our customers may cancel orders for standard products more than 30 days prior to shipment without incurring significant fees. We base our inventory levels in part on customers' estimates of demand for their products, which may not accurately predict the quantity or type of our products that our customers will want in the future or ultimately end up purchasing. Our ability to forecast demand is further complicated when our products are sold indirectly through downstream channel distributors and customers, as our forecasts for demand are then based on estimates provided by multiple parties throughout the downstream channel. To the extent we fail to forecast demand and product mix accurately or are unable to increase production or secure sufficient capacity and there is a mismatch between supply and demand for our products, it could limit our ability to meet customer demand and have a material adverse effect on our business. Many of our markets are characterized by short product lifecycles, which can lead to rapid obsolescence and price erosion. In addition, our customers may change their inventory practices on short notice for any reason. For example, our Client segment revenue decreased due to a decline in the PC market in the first half of 2023, and our Embedded segment revenue decreased as a result of an inventory correction in several end markets in the second half of 2023 and the first half of 2024. We may build inventories during periods of anticipated growth, and the cancellation or deferral of product orders or overproduction due to failure of anticipated orders to materialize could result in excess or obsolete inventory, which could result in write-downs of inventory and an adverse effect on gross margins. Our customers may also experience a shortage of, or delay in receiving certain components to build their products, which in turn may affect the demand for or the timing of our products.

Excess or obsolete inventory have resulted in, and may in the future result in, write-downs of the value of our inventory. Factors that may result in excess or obsolete inventory, a reduction in the average selling price, or a reduction in our gross margin include: a sudden or significant decrease in demand for our products; a production or design defect in our products; a higher incidence of inventory obsolescence because of rapidly changing technology and customer requirements; a failure to accurately estimate customer demand for our products, including for our older products as our new products are introduced; or our competitors introducing new products or taking aggressive pricing actions.

Our ability to design and introduce new products in a timely manner includes the use of third-party intellectual property.

In the design and development of new and enhanced products, we rely on third-party intellectual property such as development and testing tools for software and hardware. Furthermore, certain product features may rely on intellectual property acquired from third parties that we incorporate into our software or hardware. The design requirements necessary to meet customer demand for more features and greater functionality from semiconductor products may exceed the capabilities of the third-party intellectual property or development or testing tools available to us. If the third-party intellectual property that we use becomes unavailable, is not available with required functionality or performance in the time frame, manufacturing technology, or price point needed for our new products or fails to produce designs that meet customer demands, or laws are adopted that affect our use of third party intellectual property in certain regions or products, our business could be materially adversely affected.

We depend on third-party companies for the design, manufacture and supply of motherboards, software, memory and other computer platform components to support our business and products.

We depend on third-party companies for the design, manufacture and supply of motherboards, graphics cards, software (e.g., BIOS, operating systems, drivers), memory and other components that we use to design, support and sell, and our customers utilize to support and/or use our product offerings. We also rely on our AIB partners to support our products. In addition, our microprocessors are not designed to function with motherboards and chipsets designed to work with Intel microprocessors. If the designers, manufacturers, AIBs and suppliers of motherboards, graphics cards, software, memory and other components cease or reduce their design, manufacture or production of current or future products that are based on, utilized in, or support our products, or laws are adopted that result in the same, our business could be materially adversely affected.

If we lose Microsoft Corporation's support for our products or other software vendors do not design and develop software to run on our products, our ability to sell our products could be materially adversely affected.

Our ability to innovate beyond the x86 instruction set controlled by Intel depends partially on Microsoft designing and developing its operating systems to run on or support our x86-based microprocessor products. With respect to our graphics products, we depend in part on Microsoft to design and develop its operating system to run on or support our graphics products. Similarly, the success of our products in the market, such as our APU products, is dependent on independent software providers designing and developing software to run on our products. If Microsoft does not continue to design and develop its operating systems so that they work with our x86 instruction sets or does not continue to develop and maintain their operating systems to support our graphics products, independent software providers may forego designing their software applications to take advantage of our innovations and customers may not purchase PCs with our products. In addition, some software drivers licensed for use with our products are certified by Microsoft. If Microsoft did not certify a driver, or if we otherwise fail to retain the support of Microsoft or other software vendors, our ability to market our products would be materially adversely affected.

Our reliance on third-party distributors and AIB partners subjects us to certain risks.

We market and sell our products directly and through third-party distributors and AIB partners pursuant to agreements that can generally be terminated for convenience by either party upon prior notice. These agreements are non-exclusive and permit both our distributors and AIB partners to offer our competitors' products. We are dependent on our distributors and AIB partners to supplement our direct marketing and sales efforts. If any significant distributor or AIB partner or a substantial number of our distributors or AIB partners terminated their relationship with us, decided to market our competitors' products over our products or decided not to market our products at all, our ability to bring our products to market would be impacted and we would be materially adversely affected. We extend credit to certain of our distributors and AIB partners. If we are unable to collect accounts receivable from our significant distributors and/or AIB partners or incur higher allowances for credit losses, it could have a material adverse effect on our business. If we are unable to manage the risks related to the use of our third-party distributors and AIB partners or offer appropriate incentives to focus them on the sale of our products, our business could be materially adversely affected.

Additionally, distributors and AIB partners typically maintain an inventory of our products. In most instances, our agreements with distributors protect their inventory of our products against price reductions, as well as provide return rights for any product that we have removed from our price book that is less than 12 months older than the manufacturing date. Some agreements with our distributors also contain standard stock rotation provisions permitting limited levels of product returns. Our agreements with AIB partners protect their inventory of our products against price reductions. In the event of a significant decline in the price of our products, the price protection rights we offer would materially adversely affect us because our revenue and corresponding gross margin would decline.

Our business depends on the proper functioning of our internal business processes and information systems and modification or interruption of such systems may disrupt our business, processes and internal controls.

We rely upon a number of internal business processes and information systems to support key business functions, and the efficient operation of these processes and systems is critical to our business. Our business processes and information systems need to be sufficiently scalable to support the growth of our business and may require modifications or upgrades that expose us to a number of operational risks. As such, our information systems will continually evolve and adapt in order to meet our business needs. These changes may be costly and disruptive to our operations and could impose substantial demands on management time.

These changes may also require changes in our information systems, modification of internal control procedures and significant training of employees and third-party resources. We continuously work on simplifying our information systems and applications through consolidation and standardization efforts. There can be no assurance that our business and operations will not experience any disruption in connection with this transition. Our information technology systems, and those of third-party information technology providers or business partners, may also be vulnerable to damage or disruption caused by circumstances beyond our control including catastrophic events, power anomalies or outages, natural disasters, viruses or malware, cyberattacks, insider threat attacks, unauthorized system or data modifications, data breaches and computer system or network failures, exposing us to significant cost, reputational harm and disruption or damage to our business.

In addition, as our IT environment continues to evolve, we are embracing new ways of communicating and sharing data internally and externally with customers and partners using methods such as mobility and the cloud that can promote business efficiency. However, these practices can also result in a more distributed IT environment, making it more difficult for us to maintain visibility and control over internal and external users, and meet scalability and administrative requirements. If our security controls cannot keep pace with the speed of these changes or if we are not able to meet regulatory and compliance requirements, our business would be materially adversely affected.

If our products are not compatible with some or all industry-standard software and hardware, we could be materially adversely affected.

Our products may not be fully compatible with some or all industry-standard software and hardware. Further, we may be unsuccessful in correcting any such compatibility problems in a timely manner. If our customers are unable to achieve compatibility with software or hardware, we could be materially adversely affected. In addition, the mere announcement of an incompatibility problem relating to our products could have a material adverse effect on our business.

Costs related to defective products could have a material adverse effect on us.

Products as complex as those we offer may contain defects or failures when first introduced or when new versions or enhancements to existing products are released. We cannot assure you that, despite our testing procedures, errors will not be found in new products or releases after commencement of commercial shipments in the future, which could result in loss of or delay in market acceptance of our products, material recall and replacement costs, loss of revenue, writing down the inventory of defective products, the diversion of the attention of our engineering personnel from product development efforts, defending against litigation related to defective products or related liabilities, including property damage, personal injury, damage to our reputation in the industry and loss of data or intangible property, and could adversely affect our relationships with our customers. In addition, we may have difficulty identifying the end customers of the defective products in the field. As a result, we could incur substantial costs to implement modifications to correct defects. Any of these problems could materially adversely affect our business.

We could be subject to potential product liability claims if one of our products causes, or merely appears to have caused, an injury, whether tangible or intangible. Claims may be made by consumers or others selling our products, and we may be subject to claims against us even if an alleged injury is due to the actions of others. A product liability claim, recall or other claim with respect to uninsured liabilities or for amounts in excess of insured liabilities could have a material adverse effect on our business.

If we fail to maintain the efficiency of our supply chain as we respond to changes in customer demand for our products, our business could be materially adversely affected.

Our ability to meet customer demand for our products depends, in part, on our ability to deliver the products our customers want on a timely basis. Accordingly, we rely on our supply chain for the manufacturing, distribution and fulfillment of our products. As we continue to grow our business, expand to high-growth adjacent markets, acquire new customers and strengthen relationships with existing customers, the efficiency of our supply chain will become increasingly important because many of our customers tend to have specific requirements for particular products, geographic requirements, and specific time-frames in which they require delivery of these products. If we are unable to consistently deliver the right products to our customers on a timely basis in the right locations, our customers may reduce the quantities they order from us, which could have a material adverse effect on our business.

We outsource to third parties certain supply-chain logistics functions, including portions of our product distribution, transportation management and information technology support services.

We rely on third-party providers to operate our regional product distribution centers and to manage the transportation of our work-in-process and finished products among our facilities, to our third-party manufacturers and to our customers. In addition, we rely on third parties to provide certain information technology services to us, including help desk support, desktop application services, business and software support applications, server and storage administration, data center operations, database administration and voice, video and remote access. We cannot guarantee that these providers will fulfill their respective responsibilities in a timely manner in accordance with the contract terms, in which case our internal operations and the distribution of our products to our customers could be materially adversely affected. Also, we cannot guarantee that our contracts with these third-party providers will be renewed, in which case we would have to transition these functions in-house or secure new providers, which could have a material adverse effect on our business if the transition is not executed appropriately.

Our inability to effectively control the sales of our products on the gray market could have a material adverse effect on us.

We market and sell our products directly to OEMs and through authorized third-party distributors. From time to time, our products are diverted from our authorized distribution channels and are sold on the "gray market." Gray market products result in shadow inventory that is not visible to us, thus making it difficult to forecast demand accurately. Also, when gray market products enter the market, we and our distribution channels compete with these heavily discounted gray market products, which adversely affects demand for our products and negatively impacts our margins. In addition, our inability to control gray market activities could result in customer satisfaction issues because any time products are purchased outside our authorized distribution channels there is a risk that our customers are buying counterfeit or substandard products, including products that may have been altered, mishandled or damaged, or are used products represented as new.

Climate change may have a long-term impact on our business.

Climate change may have an adverse impact on our business and the business of our suppliers and customers. Global climate change may result in certain natural disasters and climate-related events occurring with increasing frequency and severity and its physical impact on the major regions where we have operations has the potential to disrupt our business and those of our customers and suppliers. Our headquarters and some of our operations and facilities are located in areas that are susceptible to earthquakes and tsunamis, wildfires, extreme storms, extreme heat, drought, freezing, tropical cyclones and other natural disasters. Water and energy availability and reliability in the regions where we have facilities and where our suppliers have operations is important to our business. Certain natural disasters, including drought, wildfires, storms, sea-level rise and flooding could disrupt our operations and our suppliers' or customers' operations, including by disrupting, the availability of energy or water necessary for the operations of our business or those of our suppliers and customers. Global climate change is also resulting in chronic changes that result in certain natural disasters occurring more frequently or with greater intensity, which could disrupt our operations, or the operations of our third parties. Such disruptions could cause delays in manufacturing or shipping our products, affect our supply chain and may result in the loss of business, and additional costs to maintain or resume operations, any of which could adversely affect our business and results of operation. We may also experience contractual disputes relating to supply chain delays resulting from climate change related disruptions, which could result in increased litigation and costs. Data centers depend on access to clean water and reliable energy, thus potential power or water shortages could impair our customers' ability to expand their data center capacity and consume our products and services, which in turn could adversely impact our ability to generate revenue.

Although we maintain insurance coverage for a variety of property, casualty, and other risks, the types and amounts of insurance we obtain vary depending on coverage, availability and cost. Some of our policies have large deductibles and broad exclusions. Additionally, our insurance providers may be unable or unwilling to pay a claim. Losses not covered by insurance may be large, which could materially harm our results of operations and financial condition.

Our business and the business of our suppliers and customers may also be subject to climate-related regulations, and contract terms, and may be subject to additional regulations and contract terms and lawsuits in the future. New increased regulations regarding carbon taxes, greenhouse gas emissions, fuel or energy taxes and other climate-related risks will likely result in greater costs; for example, as a result of carbon pricing impacts on electrical utilities and/or necessitating that we purchase more renewable energy than otherwise planned. Our supply chain manufacturing suppliers may be exposed to increased costs of doing business should they be affected by new climate-related expectations such as those affecting abatement equipment, renewable energy, and/or alter production processes and materials selections. The additional compliance costs incurred by our suppliers may be passed on to us and result in greater indirect costs to us. These costs and restrictions could materially harm our business and results of operations by increasing our expenses, impacting our reputation if there is actual or perceived non-compliance, or requiring us to alter our operations and products. The long-term effects of climate change on the global economy and the technology industry are unclear but could be severe. Additionally, we are or expect to be subject to various new or proposed climate-related disclosure requirements and we expect to incur costs and resources in order to comply. Failure to accurately comply with such reporting obligations may result in enforcement actions, reputational harm or private litigation that could have a material adverse effect on us.

Legal and Regulatory Risks

Government actions and regulations such as export regulations, tariffs, and trade protection measures may limit our ability to export our products to certain customers.

We have equity interests in two joint ventures (collectively, the THATIC JV) with Higon Information Technology Co., Ltd. (THATIC), a third-party Chinese entity. In June 2019, the Bureau of Industry and Security (BIS) of the United States Department of Commerce added certain Chinese entities to the Entity List, including THATIC and the THATIC JV. Since that time, the United States administration has called for changes to domestic and foreign policy, including policies with respect to China and Russia. Specifically, United States-China trade relations remain uncertain as the United States continues to add more Chinese companies to the Entity List and more regulations targeted to advanced computing, semiconductor manufacturing, and emerging technologies such as AI. Further, the United States and other countries and coalitions have issued sanctions and revisions to export control and other regulations against Russia, Belarus and the DNR and LNR regions of Ukraine, due to the conflict in Ukraine.

In October 2023, BIS issued new requirements for certain advanced computing items that apply to the export of products classified ECCN 3A090 or 4A090 to a party headquartered in, or with an ultimate parent headquartered in, any of Country Groups D1, D4 or D5, including China. These controls prevent us from shipping certain AMD Instinct™ integrated circuits and certain AMD Versal™ FPGAs to China, or to customers outside of the United States whose ultimate parent is headquartered in a D5 country (including China), without a license. These controls also require us to file a Notified Advanced Computing (NAC) notification with BIS 25 days before shipping certain Versal FPGAs to China, or to customers outside of the United States whose ultimate parent is headquartered in a D5 country (including China). The NAC notification process could result in BIS prohibiting a shipment or requiring a license application before shipping a product that is the subject of a NAC notification. BIS may issue new licensing requirements and regulatory controls in the future. Even new products that fall below the licensing thresholds may not be successful because we have no assurances BIS will agree that the alternative products are not subject to the new licensing requirements or that future regulations will not control the alternative products. A significant trade disruption or the establishment or increase of any tariffs, trade protection measures or restrictions, or retaliatory actions from foreign governments could result in lost sales adversely impacting our reputation and business. There is also a possibility of future tariffs, trade protection measures, import or export regulations or other restrictions imposed on our current and future products, customers, or suppliers by the United States, China or other countries that could have a material adverse effect on our business. New export control restrictions may adversely impact the ability of our research and development teams located outside of the United States from executing our product roadmaps in a timely manner or at all. In addition, deemed export restrictions could further affect our ability to provide services or develop products in the United States.

United States export control regulations include restrictions or prohibitions on the sale or supply of certain AI technologies to United States embargoed or sanctioned countries, governments, persons and entities. If there are changes to those regulations, or to the categorization of our products under those regulations, our ability to sell our products and services outside the United States may be harmed. The United States and its allies continue to focus on export restrictions targeting semiconductors associated with AI, including GPUs and associated products and services. The United States has imposed unilateral controls restricting GPUs and associated products, and in the future is likely to further adopt other unilateral or multilateral controls. The scope and application of such controls have been and may again be very broad, which may prohibit us from exporting or providing access to our products to any or all customers in one or more markets, including but not limited to China, and could negatively impact our manufacturing, testing and warehousing locations, or could impose other conditions that limit our ability to meet demand abroad. If these export controls targeting semiconductors associated with AI including GPUs and associated products and services are further tightened, our ability to export our technology, products or services could be further restricted. We may be at a competitive disadvantage if our competitors are not subject to the same or similar restrictions. Additionally, such export controls have, and may in the future, subject downstream recipients of our products to additional restrictions on the use, resale, repair or transfer of our products and may have a material adverse effect on us.

We may, from time to time, receive technical data from third parties that is subject to the International Traffic and Arms Regulations (ITAR), which are administered by the U.S. Department of State. Export Administration Regulation (EAR) governs the export and re-export of certain AMD products, including FPGAs, as well as the transfer of related technologies or provision of services, whether in the U.S. or abroad. We are required to maintain an internal compliance program and security infrastructure to meet EAR and ITAR requirements. An inability to obtain the required export licenses, or to predict when or pursuant to which conditions they will be granted, increases the difficulties of forecasting shipments. When we file license applications or Notification Advanced Computing (NAC) exception notices we have no assurance that BIS will grant any exemptions or licenses or that the BIS will act on the filings in a timely manner. Even if BIS grants a requested license, the license may come with burdensome conditions that we cannot or decide not to fulfill. In addition, security or compliance program failures that could result in penalties or a loss of export privileges, as well as stringent licensing restrictions that may make our products less attractive to overseas customers, could have a material adverse effect on our business, financial condition and/or operating results.

If we cannot realize our deferred tax assets, our results of operations could be adversely affected.

Our deferred tax assets include net operating losses and tax credit carryforwards that can be used to offset taxable income and reduce income taxes payable in future periods. Each quarter, we consider both positive and negative evidence to determine whether all or a portion of the deferred tax assets are more likely than not to be realized. If we determine that some or all of our deferred tax assets are not realizable, it could result in a material expense in the period in which this determination is made which may have a material adverse effect on our financial condition and results of operations.

In addition, a significant amount of our deferred tax assets related to net operating losses or tax credits which remain under a valuation allowance could be subject to limitations under Internal Revenue Code Section 382 or 383, separate return loss year rules, or dual consolidated loss rules. The limitations could reduce our ability to utilize the net operating losses or tax credits before the expiration of the tax attributes.

Our business is subject to potential tax liabilities, and exposure to greater-than-anticipated income tax liabilities as a result of changes in tax rules and regulations, changes in interpretation of tax rules and regulations, or unfavorable assessments from tax audits, could affect our effective tax rates, financial condition, and results of operations.

We are a U.S.-based multinational company subject to income tax, indirect tax or other tax claims in multiple U.S. and foreign tax jurisdictions in which we conduct business. Significant judgment is required in determining our worldwide provision for income taxes. Tax laws are dynamic and subject to change as new laws are passed and new interpretations of the law are issued or applied. Any changes to tax laws could have a material adverse effect on our tax obligations and effective tax rate. Our income tax obligations could be affected by many factors, including, but not limited to, changes to our corporate operating structure, intercompany arrangements, and tax planning strategies.

Our income tax expense is computed based on tax rates enacted at the time of the respective financial period. Our future effective tax rates, financial condition and results from operations could be unfavorably affected by changes in the tax rates in jurisdictions where our income is earned, by changes in the tax rules and regulations or the interpretation of tax rules and regulations in the jurisdictions in which we do business or by changes in the valuation of our deferred tax assets. Many countries have implemented legislation and other guidance to align their international tax rules with the Organization for Economic Co-operation and Development's (OECD) Base Erosion and Profit Shifting recommendations and action plan that aim to standardize and modernize global corporate tax policy, including changes to cross-border tax, transfer pricing documentation rules, and nexus-based tax incentive practices. The OECD is also continuing discussions surrounding fundamental changes in allocation of profits among tax jurisdictions in which companies do business, as well as the implementation of a global minimum tax (namely "Pillar One" and "Pillar Two"). Many countries we do business in have implemented laws based on Pillar Two, which may materially adversely impact our provision for income taxes, net income and cash flows. As a result of this heightened scrutiny, prior decisions by tax authorities regarding treatments and positions of corporate income taxes could be subject to review and inquiry, which could also result in changes in tax policies or existing tax rulings, and may have a material adverse effect on us.

In addition, we are subject to examinations of our income tax returns by domestic and foreign tax authorities. We regularly assess the likelihood of outcomes resulting from these examinations to determine the adequacy of our provision for income taxes and have reserved for potential adjustments that may result from the current examinations. There can be no assurance that the final determination of any of these examinations will not have an adverse effect on our effective tax rates, financial condition, and results of operations.

In the ordinary course of our business, there are many transactions and calculations where the ultimate income tax, indirect tax, or other tax determination is uncertain. Although we believe our tax estimates are reasonable, we cannot assure that the final determination of any tax audits or litigation will not be materially different from that which is reflected in historical tax provisions and accruals. Should additional taxes be assessed as a result of an audit, assessment or litigation, there could be a material adverse effect on our cash, tax provisions and results of operations in the period or periods for which that determination is made.

We are party to litigation and may become a party to other claims or litigation that could cause us to incur substantial costs or pay substantial damages or prohibit us from selling our products.

From time to time, we are a defendant or plaintiff in various legal actions, as described in Note 13 - Commitments and Contingencies of the Notes to our Consolidated Financial Statements. For example, we have been subject to certain claims concerning federal securities laws and corporate governance. Our products are purchased by and/or used by consumers, which could increase our exposure to consumer actions such as product liability claims and consumer class action claims. On occasion, we receive claims that individuals were allegedly exposed to substances used in our former semiconductor wafer manufacturing facilities and that this alleged exposure caused harm. Litigation can involve complex factual and legal questions, and its outcome is uncertain. It is possible that if a claim is successfully asserted against us, it could result in the payment of damages that could be material to our business.

With respect to intellectual property litigation, from time to time, we have been notified of, or third parties may bring or have brought, actions against us and/or against our customers based on allegations that we are infringing the intellectual property rights of others, contributing to or inducing the infringement of the intellectual property rights of others, improperly claiming ownership of intellectual property or otherwise improperly using the intellectual property of others. If any such claims are asserted, we may seek to obtain a license under the third parties' intellectual property rights. We cannot assure you that we will be able to obtain all of the necessary licenses on satisfactory terms, if at all. These parties may file lawsuits against us or our customers seeking damages (potentially up to and including treble damages) or an injunction against the sale of products that incorporate allegedly infringed intellectual property or against the operation of our business as presently conducted, which could result in our having to stop the sale of some of our products or to increase the costs of selling some of our products or which could damage our reputation. The award of damages, including material royalty payments, or other types of damages, or the entry of an injunction against the manufacture and sale of some or all of our products could have a material adverse effect on us. We could decide, in the alternative, to redesign our products or to resort to litigation to challenge such claims. Such challenges could be extremely expensive and time-consuming regardless of their merit, could cause delays in product release or shipment and/or could have a material adverse effect on us. We cannot assure you that litigation related to our intellectual property rights or the intellectual property rights of others can always be avoided or successfully concluded.

Even if we were to prevail, any litigation could be costly and time-consuming and would divert the attention of our management and key personnel from our business operations, which could have a material adverse effect on us.

We are subject to environmental laws, conflict minerals regulations, as well as a variety of other laws or regulations that could result in additional costs and liabilities.

Our operations and properties are subject to various United States and foreign laws and regulations, including those relating to materials used in our products and the manufacturing processes of our products, discharge of pollutants into the environment, the treatment, transport, storage and disposal of solid and hazardous wastes and remediation of contamination. In addition, our operations and those of our suppliers are further governed by regulations prohibiting the use of forced labor (e.g., mining conflict materials), and restrictions on other materials, as well as laws or regulations governing the operation of our facilities, sale and distribution of our products, and real property. For the manufacturing of our products, these laws and regulations require our suppliers to obtain permits for operations, including the discharge of air pollutants and wastewater. Although our management systems are designed to oversee our suppliers' compliance, we cannot assure you that our suppliers have been or will be in complete compliance with such laws, regulations and permits. If our suppliers violate or fail to comply with any of them, a range of consequences could result, including fines, suspension of production, alteration of manufacturing processes, import/export restrictions, sales limitations, criminal and civil liabilities or other sanctions. Such non-compliance from our manufacturing suppliers could result in disruptions in supply, higher sourcing costs, and/or reputational damage for us. We could also be held liable for any and all consequences arising out of exposure to hazardous materials used, stored, released, disposed of by us or located at, under or emanating from our current or former facilities or other environmental or natural resource damage. We have been named as a responsible party at three Superfund sites in Sunnyvale, California and we are subject to Final Site Clean-up Requirements Orders from the California Regional Water Quality Control Board relating to the three sites and we have entered into settlement agreements with other responsible parties on two of the orders. During the term of such agreements, other parties have agreed to assume most of the foreseeable costs as well as the primary role in conducting remediation activities under the orders. We remain responsible for additional costs beyond the scope of the agreements as well as all remaining costs in the event that the other parties do not fulfill their obligations under the settlement agreements. The progress of future remediation efforts cannot be predicted with certainty and these costs may change. Although we have not been, we could be named a potentially responsible party at other Superfund or contaminated sites in the future. In addition, contamination that has not been identified could exist at our other facilities.

Future environmental legal requirements may become more stringent or costly. As such, the costs of complying with current and future environmental and health and safety laws, and our liabilities arising from past and future releases of, or exposure to, hazardous substances may increase and could have a material adverse effect on us.

Environmental laws are complex, change frequently and tend to become more stringent over time. For example, the European Union (EU) and China are among a growing number of jurisdictions that have enacted restrictions on the use of lead and other materials in electronic products. These regulations affect semiconductor devices and packaging. As regulations restricting materials in electronic products continue to increase around the world, there is a risk that the cost, quality and manufacturing yields of products that are subject to these restrictions may be less favorable compared to products that are not subject to such restrictions, or that the transition to compliant products may not meet customer roadmaps, or produce sudden changes in demand, which may result in excess inventory. Jurisdictions including the EU, Australia, California and China are developing or have finalized market entry or public procurement regulations for computers and servers based on ENERGY STAR specifications, and the like, as well as additional energy consumption limits. Certain of our products may be excluded from some of these markets which could materially adversely affect us. We incur costs associated with complying with conflict minerals reporting requirements to our customers and the SEC. In addition to the SEC regulation, the EU, China and other jurisdictions are developing new policies focused on conflict minerals that may impact and increase the cost of our compliance program. Customers are increasingly seeking information about the source of minerals used in our supply chain beyond those addressed in laws and regulations. Given the complexity of mineral supply chains, we may be unable to sufficiently verify the origins of the subject minerals and thus our reputation may be harmed. Moreover, we are likely to encounter challenges to satisfy customers who require that all of the components of our products be certified as “conflict free.” If we cannot satisfy these customers, they may choose a competitor’s products. In addition, new or increased regulations limiting the use of such components, or regulation regarding greenhouse gas emissions and climate change-related risks, could increase our energy costs, for example as a result of carbon pricing impacts on electrical utilities and/or necessitating that we purchase more renewable energy than otherwise planned. Our supply chain manufacturing suppliers may be exposed to increased cost of doing business should they be affected by new climate-related regulations, for example, affecting abatement equipment, renewable energy, and/or alter production processes and materials selections.

In addition to our Company, customers, governments and authorities continue to focus on eliminating risks of forced labor in supply chains which may increase the cost of our compliance program. Several customers have also issued expectations to eliminate these occurrences, if any, that may impact us. While we have a Human Rights Policy and management systems to identify and avoid these practices in our supply chain, we cannot guarantee that our suppliers will always be in conformance with laws and expectations. Our failure to satisfy customer expectations on forced and trafficked labor policies may result in these customers choosing a competitor’s product or enforcement liability and reputational challenges.

In addition, many governments have enacted laws around PII, such as the GDPR and the CCPA, and the failure to comply could result in sanctions or other actions by the governments. The GDPR imposes significant requirements on how we collect, process and transfer personal data, as well as significant fines for non-compliance.

New emerging technology trends, such as AI, require us to keep pace with evolving regulations and industry standards. Given the complexity and rapid development of AI, there are various current and proposed regulatory frameworks relating to the use of AI in products and services. For example, the EU AI Act was adopted in June 2024 and its implementation will be phased in over the next few years. In other jurisdictions, similar legislation is being considered. Such laws and regulations may impede our ability to offer certain products and services in certain jurisdictions if we are unable to comply with them. We expect that the legal and regulatory environment relating to emerging technologies such as AI will continue to develop and could increase the cost of doing business, and create compliance risks and potential liability, all which may have a material adverse effect on our financial condition and results of operations. Governments are also considering the new issues in intellectual property law that AI creates, which could result in different intellectual property rights in technology we create with AI and development processes and procedures and could have a material adverse effect on our business.

Evolving expectations from governments, investors, customers and other stakeholders regarding corporate responsibility matters could result in additional costs, harm to our reputation and a loss of customers.

There are evolving expectations from governments, investors, customers and other stakeholders regarding corporate responsibility matters including those involving the environment and climate, energy and water consumption, diversity and inclusion, human rights and cybersecurity. Additionally, we are and expect to continue to be subject to various new and proposed climate-related and sustainability laws and requirements that may impact how we and our suppliers and customers conduct business or report on business by requiring the disclosure and tracking of greenhouse gas emissions, climate change-related risks and other sustainability matters related to our business. As the nature, scope and complexity of corporate responsibility reporting and disclosure requirements continue to evolve, we may incur additional compliance costs and indirect compliance costs from our customers and, suppliers that are passed on to us. In addition, certain corporate responsibility laws and regulations may require us to modify our business or supply chain in ways that are costly or less efficient. Emerging legal and regulatory requirements, can be unpredictable, are subject to change, and may be difficult for us to comply with given the complexity of our supply chain and our outsourced manufacturing. Our failure to comply, or the appearance of our failure to comply, with these legal and regulatory requirements can result in regulatory penalties, fines and legal liabilities, increase costs, and harm our reputation – any of which could materially adversely effect on our business, financial condition and results of operation. While we have engaged, and in the future may continue to engage in voluntary initiatives (such as voluntary disclosures, certifications, goals, or targets, among others) or commitments to improve our corporate responsibility profile and/or products or to respond to stakeholder expectations, such initiatives or achievement of such commitments may be costly, may not have the desired effect or may impact our reputation with other stakeholders and have a material adverse effect on our business.

For example, we have publicly announced certain corporate responsibility goals spanning multiple topics informed by input from various of our stakeholders, including customers, investors and employees. These goals, which reflect our current plans and aspirations based on known conditions, may change in the future or may not be achieved, as they are subject to various challenges, risks and expectations such as standards, processes, and methodologies that continue to evolve or emerge, and many of these matters are outside our control. Our progress towards some goals receives third-party limited assurance and not reasonable assurance, or may rely on receipt of others' information and data that may not be subject to either third-party limited or reasonable assurance. Any failure to achieve such goals, failure to achieve these goals within the set timeframe, or in the means expected, or the perception by stakeholders of such failure to achieve these goals may result in reputational or financial harm. Simultaneously, there are efforts by some stakeholders to reduce companies' efforts on certain environmental, social and sustainability-related matters. Both advocates and opponents of environmental, social and sustainability matters are increasingly resorting to a range of activism forms, including media campaigns and litigation, to advance their perspectives. To the extent we are subject to such activism or litigation, it may require us to incur costs or otherwise adversely impact our business. Stakeholder groups may find our stated goals to be insufficiently responsive to the implications of issues, such as climate change, and any failure to set or achieve corporate responsibility initiatives that meet stakeholder expectations may result in loss of customers or in investors selling their shares, which could harm our reputation and could have a material adverse effect on our business.

Issues related to the responsible use of AI may result in reputational, competitive and financial harm and liability.

We offer products that include capabilities to support AI deployment and we expect this part of our business to grow. As with many new emerging technologies, AI presents risks and challenges and increasing legal, social and ethical concerns relating to its responsible use that could affect the adoption of AI, and thus our business. Third-party misuse of AI applications, models, or solutions, or ineffective or inadequate AI development or deployment practices by us or our customers, could cause harm to individuals or society and impair the public's acceptance of AI. Moreover, we may be subject to competitive harm, regulatory action and legal liability as a result of new and proposed legislation regulating AI, as well as new applications of existing data protection, privacy and intellectual property and other laws. Such regulations and changes thereto could cause us to incur greater compliance costs, could impact our ability to sell or the ability of our customers and users worldwide to acquire, deploy and use systems that include our AI-related products and services and reduce the number of customers, which could negatively impact our business and financial results. As there continues to be an increasing focus on risks related to AI technologies, there may be an increasing focus on regulatory restrictions that target products and services that enable or facilitate AI and that may negatively impact some of our AI-related products and services. If the AI-related products that we offer have unintended consequences, infringe intellectual property rights or rights of publicity, or are misused by our customers or are otherwise controversial due to their perceived or actual impact on human rights, privacy, cybersecurity, employment or other social, economic or political issues the public's acceptance of AI may be impaired and this may also result in reputational, competitive and financial harm and liability to our business.

The agreements governing our notes, our guarantee of the Assumed Xilinx Notes, and our Revolving Credit Agreement impose restrictions on us that may adversely affect our ability to operate our business.

The indenture governing our 3.924% Senior Notes due 2032 and 4.393% Senior Notes due 2052 contains various covenants that limit our ability to, among other things: create liens on certain assets to secure debt, enter into certain sale and leaseback transactions; and consolidate with, merge into or sell, convey or lease all or substantially all of our assets to any other person.

We unconditionally guarantee, on a senior unsecured basis, Xilinx's obligations under the Xilinx's 2.375% Notes (the Assumed Xilinx Notes). The supplemental indenture governing the Assumed Xilinx Notes also contain various covenants which limit our ability to, among other things, create certain liens on principal property or the capital stock of certain subsidiaries, enter into certain sale and leaseback transactions with respect to principal property, and consolidate or merge with, or convey, transfer or lease all or substantially all our assets, taken as a whole, to another person.

We also have an unsecured revolving credit facility in the aggregate principal amount of \$3.0 billion (Revolving Credit Agreement). Our Revolving Credit Agreement contains various covenants which limit our ability to, among other things, incur liens; and consolidate or merge or sell our assets as an entirety or substantially as an entirety (in each case, except for certain customary exceptions). In addition, our Revolving Credit Agreement requires us to maintain a minimum consolidated interest coverage ratio at the end of each fiscal quarter. The agreement governing our convertible notes and our Revolving Credit Agreement contains provisions whereby a payment default or acceleration under certain agreements with respect to other material indebtedness would result in cross defaults under our convertible indenture or the Revolving Credit Agreement and allow note holders or the lenders under our Revolving Credit Agreement to declare all amounts outstanding under certain of our indentures or the Revolving Credit Agreement to be immediately due and payable. If the lenders under our Revolving Credit Agreement accelerate the repayment of borrowings, we cannot assure you that we will have sufficient assets to repay those borrowings.

Also, we enter into sale and factoring arrangements from time to time with respect to certain accounts receivables, which arrangements are non-recourse to us in the event that an account debtor fails to pay for credit-related reasons and are not included in our indebtedness. We could become obligated to repurchase such accounts receivables or otherwise incur liability to the counterparties under these arrangements under certain circumstances, such as where a commercial dispute arises between us and an account debtor.

Merger, Acquisition, Divestiture, and Integration Risks

Acquisitions, joint ventures, and/or investments, and the failure to integrate acquired businesses, may fail to materialize their anticipated benefits and could disrupt our business, which could adversely affect our results of operation and financial condition.

We have acquired and invested in businesses, and may continue to do so, that offer products, services and technologies that we believe will help expand our product offerings and services and grow our business in response to changing technologies, customer demands and competitive pressures. Acquisitions and joint ventures include numerous risks including: our inability to identify suitable opportunities in a timely manner or on terms acceptable to us; failure to complete a transaction in a timely manner, or at all, inability to obtain, or delay in obtaining, regulatory approvals or IP disputes or other litigation; difficulty in obtaining financing on terms acceptable to us or at all; failure of a transaction to advance our business strategy or other unforeseen factors. For example, in August 2024, we completed our acquisition of Silo AI Oy (Silo AI), and we entered into an agreement to acquire ZT Group Int'l, Inc. (ZT Systems), which is currently expected to close in the first half of 2025, subject to certain regulatory approvals and other customary closing conditions. Our ability to realize any of the anticipated benefits from an acquisition depends on us successfully integrating the acquired business into our business. Any acquisitions we may undertake, including Silo AI and ZT Systems, involve certain integration risks and uncertainties including, but not limited to: difficulty in integrating the technology, systems, products, policies, processes or operations and integrating and retaining the employees including key personnel of the acquired business; diversion of capital and other resources, including management's attention from our existing business; unanticipated costs or liabilities, such as increased interest expense and compliance with debt covenants or other obligations; coordinating and integrating in countries in which we have not previously operated; the potential impact of the acquisitions on our relationships with employees, vendors, suppliers and customers; our inability to effectively retain suppliers, vendors and customers of the acquired businesses; entry into geographic or business markets in which we have little or no experience; adverse changes in general economic conditions in regions in which we and the acquired companies operate; potential litigation associated with the acquisitions; difficulties in the assimilation of employees and culture; difficulties in managing the expanded operations of a larger and more complex company; and difficulties with integrating and upgrading our and the acquired companies' financial reporting systems. If we cannot successfully integrate or are delayed in integrating newly acquired businesses, it could negatively impact our ability to develop or sell new products and impair our ability to grow our business, which could materially adversely affect our financial conditions, results of operations or cash flows. Even if the businesses we acquire are successfully integrated, the benefits of such transactions may not be realized within the anticipated time frame or at all. To complete an acquisition, as contemplated by our intent to acquire ZT Systems, we may issue equity securities, which would dilute our stockholders' ownership and could adversely affect the price of our common stock, and/or incur debt, assume contingent liabilities or have amortization expenses and write-downs of acquired assets, which could adversely affect our results of operations.

We may not adequately assess the risks of new business initiatives and subsequent events may arise that alter the risks that were initially considered. Acquisitions, joint ventures and other investments involve significant challenges and risks and could impair our ability to grow our business, develop new products or sell our products, which could have a negative impact on our results of operations. Acquisitions or joint ventures may also reduce our cash available for operation and other uses which could harm our business. For example, the majority of our ATMP services are provided by the ATMP JVs, and there is no guarantee that the JVs will be able to fulfill our long-term ATMP requirements. If we are unable to meet customer demand due to fluctuating or late supply from the ATMP JVs, it could result in lost sales and have a material adverse effect on our business. We may not realize the expected benefits from the THATIC JV's expected future performance, including the receipt of any future milestone payments and any royalties from certain licensed intellectual property. In June 2019, the BIS added certain Chinese entities to the Entity List, including THATIC and the THATIC JV. We are complying with U.S. law pertaining to the Entity List designation.

Furthermore, we may at times invest in private companies to further our strategic objectives and to support certain key business initiatives. Many of the instruments that we invest in are non-marketable and illiquid at the time of our initial investment, and we are not always able to achieve a return. To the extent any of the companies in which we invest in are not successful, we could recognize an impairment and/or lose all or part of our investment.

Our ability to complete the acquisition of ZT Systems is subject to closing conditions, including the receipt of consents and approvals from government authorities, which may impose conditions that could adversely affect us or cause the acquisition to not be completed.

Our acquisition of ZT Systems (the Acquisition), which is expected to occur in the first half of 2025, is subject to the satisfaction or waiver of a number of customary conditions as specified in the purchase agreement (the Agreement), including receipt of certain specified required regulatory approvals, the absence of laws or orders restraining the consummation of the Agreement, among others. We cannot assure you that we will receive the necessary regulatory approvals at all or in a timely manner or that closing conditions will be satisfied. Any delay in completing the Acquisition could cause us to not realize, or to be delayed in realizing, some or all of the benefits we expect to achieve from this transaction. Additionally, if the Acquisition is not completed, we may incur significant acquisitions costs that we may be unable to recover, which could negatively affect our business and results of operations. We would be required to pay ZT Systems a termination fee of \$300 million if the Agreement is terminated in certain circumstances related to the failure to obtain required regulatory approvals.

We intend to seek a strategic partner to acquire ZT Systems' manufacturing business, and we may not realize the anticipated benefits of this transaction. We may not be able to divest the ZT Systems' manufacturing business on acceptable terms or at all. Divestitures involve certain risks and uncertainties such as: inability to find potential buyers on favorable terms; failure to receive regulatory or governmental approvals, or delay in receiving such approvals; restrictions due to regulatory or governmental approval, litigation, contractual terms, or other conditions; changes in market conditions or geopolitical conditions affecting the regions or industries in which we or our counterparties operate; distraction of management; failure to effectively transfer liabilities, contracts, facilities and employees to buyer; continued financial obligations and unanticipated liabilities; and closing delays. Any one of these factors could delay the achievement of our strategic objectives or cause us to incur additional transaction expenses.

Any impairment of our tangible, definite-lived intangible or indefinite-lived intangible assets, including goodwill, may adversely impact our financial position and results of operations.

We account for certain acquisitions, including the Xilinx, Inc. (Xilinx), Pensando Systems Inc. (Pensando) and Silo AI acquisitions, using the acquisition method of accounting under the provisions of ASC 805, Business Combinations, with AMD representing the accounting acquirer under this guidance. We record assets acquired, including identifiable intangible assets, and liabilities assumed, at their respective fair values at the acquisition date. Any excess of the purchase price over the net fair value of such assets and liabilities will be recorded as goodwill. In connection with the Xilinx, Pensando and Silo AI acquisitions, we recorded significant goodwill and other intangible assets on our consolidated balance sheet. Indefinite-lived intangible assets, including goodwill, are tested for impairment at least annually, and all tangible and intangible assets including goodwill will be tested for impairment when certain indicators are present. If, in the future, we determine that tangible or intangible assets, including goodwill, are impaired, we would record an impairment charge at that time. Impairment testing of goodwill requires significant use of judgment and assumptions, particularly as it relates to the determination of fair value. Subsequent to our annual goodwill impairment analysis, we monitor for any events or changes in circumstances, such as significant adverse changes in business climate or operating results, changes in management's business strategy, an inability to successfully introduce new products in the marketplace, an inability to successfully achieve internal forecasts or significant declines in our stock price, which may represent an indicator of impairment. A decrease in the long-term economic outlook and future cash flows of our business could significantly impact asset values and potentially result in the impairment of tangible and intangible assets, including goodwill, and may require us to record future impairment charges, which may have a material adverse impact on our financial position and results of operations.

General Risks

Our worldwide operations are subject to political, legal and economic risks and natural disasters, which could have a material adverse effect on us.

We maintain operations around the world, including in the United States, Canada, Europe, Australia, Latin America and Asia. We rely on third-party wafer foundries in the United States, Europe and Asia. Nearly all product assembly and final testing of our products is performed at third-party operated manufacturing facilities, in China, Malaysia and Taiwan. Our shipping services are provided by third-party subcontractors. We also have international sales operations. International sales, as a percent of net revenue, were 72% for the three months ended September 28, 2024. We expect that international sales will continue to be a significant portion of total sales in the foreseeable future. The political, legal and economic risks associated with our worldwide operations include, without limitation: expropriation; changes in a specific country's or region's political or economic conditions; changes in tax laws, trade protection measures and import or export licensing requirements and restrictions; difficulties in protecting our intellectual property; difficulties in managing staffing and exposure to different employment practices and labor laws; changes in foreign currency exchange rates; restrictions on transfers of funds and other assets of our subsidiaries between jurisdictions; changes in freight rates; changes to macroeconomic conditions, including interest rates, inflation and recession; transportation restrictions or disruptions; loss or modification of exemptions for taxes and tariffs; and compliance with U.S. laws and regulations related to international operations, including export control and economic sanctions laws and regulations and the Foreign Corrupt Practices Act. Recently, the U.S. and other countries and coalitions have issued sanctions and revisions to export control and other regulations against Russia, Belarus, and the DNR and LNR regions of Ukraine, due to the conflict in Ukraine. Also, geopolitical changes between China and Taiwan could disrupt the operations of our Taiwan-based third-party wafer foundries, manufacturing facilities and subcontractors, and materially adversely affect delivery of products and our business, financial condition and/or operating results. Moreover, the Ukraine-Russia and Israel-Hamas conflicts could escalate and expand, which in turn could have negative impacts on the global economy and financial markets.

In addition, our worldwide operations (or those of our business partners) could be subject to natural disasters and climate change such as earthquakes, tsunamis, flooding, tropical cyclones, droughts, fires, sea-level rise, extreme heat and volcanic eruptions that disrupt our operations, or those of our manufacturers, vendors or customers. For example, our California operations are located near major earthquake fault lines. In April 2024, Taiwan experienced an earthquake where our third-party wafer foundries are located. We also have operations and employees in regions that have experienced extreme weather such as prolonged heat waves, wildfires and freezing. Extreme weather events and natural disasters can also disrupt the ability of our suppliers to deliver expected manufacturing parts and/or services for periods of time. In addition, certain natural disasters, including drought, wildfires, storms, sea-level rise and flooding, could disrupt the availability of water necessary for the operations of our business or the business of our suppliers or customers. Global climate change also may result in chronic changes that result in certain natural disasters occurring more frequently or with greater intensity, which could disrupt our operations, or the operations of our third parties. There may be conflict or uncertainty in the countries in which we, our customers and suppliers operate, including public health issues, epidemics and pandemics, safety issues, natural disasters, fire, disruptions of service from utilities, nuclear power plant accidents or general economic or political factors. Global health outbreaks, such as COVID-19, have and may continue to adversely affect our employees, disrupt our business operations, as well those of our customers and suppliers. Public health measures by government authorities may cause us to incur additional costs, limit our operations, modify our business practices, diminish employee productivity or disrupt our supply chain, which may have a material adverse effect on our business.

The U.S. has been and may continue to be involved in armed conflicts that could have a further impact on our sales and our supply chain. The consequences of armed conflict, political instability or civil or military unrest are unpredictable, and we may not be able to foresee events that could have a material adverse effect on us. Terrorist attacks or other hostile acts may negatively affect our operations, or adversely affect demand for our products, and such attacks or related armed conflicts may impact our physical facilities or those of our suppliers or customers. Furthermore, these attacks or hostile acts may make travel and the transportation of our products more difficult and more expensive, which could materially adversely affect us. Any of these events could cause consumer spending to decrease or result in increased volatility in the U.S. economy and worldwide financial markets.

Any of the above risks, should they occur, could result in increased costs, shipment delays, general business interruptions, the inability to obtain, or delays in obtaining export licenses for certain technology, penalties or a loss of export privileges, as well as stringent licensing restrictions that may make our products less attractive to international customers, tariffs and other barriers and restrictions, longer payment cycles, increased taxes, restrictions on the repatriation of funds and the burdens of complying with a variety of foreign laws, any of which could ultimately have a material adverse effect on our business.

We may incur future impairments of our technology license purchases.

We license certain third-party technologies and tools for the design and production of our products. We report the value of those licenses as other non-current assets on the balance sheet and we periodically evaluate the carrying value of those licenses based on their future economic benefit to us. Factors such as the life of the assets, changes in competing technologies, and changes to the business strategy may represent an indicator of impairment. The occurrence of any of these events may require us to record future technology license impairment charges.

Our inability to continue to attract and retain qualified personnel may hinder our business.

Much of our future success depends upon the continued service of numerous qualified engineering, marketing, sales and executive employees. Competition for highly skilled executives and employees in the technology industry, especially in the areas of AI and machine learning, is intense and our competitors have targeted individuals in our organization that have desired skills and experience. If we are not able to continue to attract, train and retain our leadership team and our qualified employees necessary for our business, the progress of our product development programs could be hindered, and we could be materially adversely affected. We use share-based incentive awards to help attract, retain and motivate our executives and qualified employees. If the value of such stock awards does not appreciate as measured by the performance of the price of our common stock, or if our share-based compensation otherwise ceases to be viewed as a valuable benefit, our ability to attract, retain and motivate our executives and employees could be weakened, which could harm our results of operations. Also, if the value of our stock awards increases substantially, this could potentially create great personal wealth for our executives and employees and affect our ability to retain our personnel. In addition, any future restructuring plans may adversely impact our ability to attract and retain key employees.

Our stock price is subject to volatility.

Our stock price has experienced price and volume fluctuations and could be subject to wide fluctuations in the future. The trading price of our stock may fluctuate widely due to various factors including actual or anticipated fluctuations in our financial conditions and operating results, changes in financial estimates by us or financial estimates and ratings by securities analysts, changes in our capital structure, including issuance of additional debt or equity to the public, interest rate changes, inflation, news regarding our products or products of our competitors, and broad market and industry fluctuations. Stock price fluctuations could impact the value of our equity compensation, which could affect our ability to recruit and retain employees. In addition, volatility in our stock price could adversely affect our business and financing opportunities.

We have an approved stock repurchase program that authorizes repurchases of up to \$12 billion of our common stock (Repurchase Program). As of September 28, 2024, \$4.9 billion remained available for future stock repurchases under the Repurchase Program. The Repurchase Program does not obligate us to acquire any common stock, has no termination date and may be suspended or discontinued at any time. Our stock repurchases could affect the trading price of our stock, the volatility of our stock price, reduce our cash reserves, and may be suspended or discontinued at any time, which may result in a decrease in our stock price.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS**Issuer Purchases of Equity Securities**

We have an approved stock repurchase program authorizing repurchases of up to \$12 billion of our common stock (Repurchase Program). We expect to fund repurchases through cash generated from operations. Our Repurchase Program does not obligate us to acquire any common stock, has no termination date and may be suspended or discontinued at any time.

The following table provides information relating to our repurchase of common stock for the three months ended September 28, 2024:

	Total Number of Shares Repurchased	Average Price Paid per Share	Total Number of Shares Repurchased as Part of Publicly Announced Program	Maximum Dollar Value of Shares That May Yet be Purchased Under the Program (In millions)
Jun 30, 2024 to Jul 27, 2024	823,790	\$ 146.88	823,790	\$ 5,078
Jul 28, 2024 to Aug 24, 2024	930,003	\$ 138.71	930,003	\$ 4,949
Aug 25, 2024 to Sep 28, 2024	—	\$ —	—	\$ 4,949
Total	<u>1,753,793</u>			

The amounts above do not include the 1% excise tax on stock repurchases enacted by the Inflation Reduction Act of 2022.

Equity Award Share Withholding

During the three months ended September 28, 2024, there were \$459 million in employee withholding taxes due upon the vesting of net settled equity awards. We withheld approximately 3.2 million shares of common stock from employees in connection with such net share settlement at an average price of \$145.48 per share. These shares may be deemed to be "issuer purchases" of shares.

ITEM 5. OTHER INFORMATION

Rule 10b5-1 Trading Plans

During the quarter ended September 28, 2024, none of our directors or officers (as defined in Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended) adopted, modified or terminated a “Rule 10b5-1 trading arrangement” or a “non-Rule 10b5-1 trading arrangement”, as each term is defined in Item 408(a) of Regulation S-K.

ITEM 6. EXHIBITS

2.1*	Stock Purchase Agreement dated as of August 17, 2024, by and among Advanced Micro Devices, Inc., ZT Group Int'l, Inc., the Sellers listed therein, as the representative of the Sellers, filed as Exhibit 2.1 to AMD's Current Report on Form 8-K dated August 19, 2024, is hereby incorporated by reference.
10.1**	Retirement Transition Agreement and General Release between Victor Peng and Advanced Micro Devices, Inc., dated July 30, 2024, filed as Exhibit 10.2 to AMD's Quarterly Report on Form 10-Q dated July 31, 2024, is hereby incorporated by reference.
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of the Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document

*Schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. Buyer hereby undertakes to furnish supplemental copies of any of the omitted annexes, schedules and exhibits upon request by the SEC.

**Management contracts and compensatory plans or arrangements.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ADVANCED MICRO DEVICES, INC.

October 30, 2024

By: */s/ Jean Hu*

Name: Jean Hu

Title: Executive Vice President, Chief Financial Officer and Treasurer
Signing on behalf of the Registrant as the Principal Financial Officer

Certification of Chief Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Lisa T. Su, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Advanced Micro Devices, Inc. (the “Company”);
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
 4. The Company’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the Company’s most recent fiscal quarter (the Company’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
 5. The Company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of the Company’s board of directors (or persons performing the equivalent functions):
-

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: October 30, 2024

/s/Lisa T. Su

Lisa T. Su
Chair, President and Chief Executive Officer
(Principal Executive Officer)

Certification of Chief Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jean Hu, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Advanced Micro Devices, Inc. (the "Company");
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
 4. The Company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the Company's internal control over financial reporting that occurred during the Company's most recent fiscal quarter (the Company's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
 5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
-

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: October 30, 2024

/s/Jean Hu

Jean Hu
Executive Vice President,
Chief Financial Officer and Treasurer
(Principal Financial Officer)

Certification of Principal Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Advanced Micro Devices, Inc. (the "Company") hereby certifies, to such officer's knowledge, that:

- (i.) the Quarterly Report on Form 10-Q of the Company for the period ended September 28, 2024 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
- (ii.) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: October 30, 2024

/s/Lisa T. Su

Lisa T. Su
Chair, President and Chief Executive Officer
(Principal Executive Officer)

Certification of Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Advanced Micro Devices, Inc. (the "Company") hereby certifies, to such officer's knowledge, that:

- (i.) the Quarterly Report on Form 10-Q of the Company for the period ended September 28, 2024 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
- (ii.) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: October 30, 2024

/s/Jean Hu

Jean Hu
Executive Vice President,
Chief Financial Officer and Treasurer
(Principal Financial Officer)