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 27, 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: 001-39675

ALLEGRO MICROSYSTEMS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**46-2405937**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
955 Perimeter Road Manchester, New Hampshire	**03103**
(Address of principal executive offices)	**(Zip Code)**

(603) 626-2300
(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, par value $0.01 per share	ALGM	The Nasdaq Stock Market LLC

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

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

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

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

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

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

As of October 28, 2024, the registrant had 183,983,854 shares of common stock, par value $0.01 per share, outstanding.

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (the "Quarterly Report") contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this Quarterly Report, including statements regarding our future results of operations and financial position, business strategy, prospective products and the plans and objectives of management for future operations, may be forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

Statements regarding our future results of operations and financial position, business strategy and plans and objectives of management for future operations, including, among others, statements regarding the liquidity, growth and profitability strategies and factors and trends affecting our business are forward-looking statements. Without limiting the foregoing, in some cases, you can identify forward-looking statements by terms such as "aim," "may," "will," "should," "expect," "exploring," "plan," "anticipate," "could," "intend," "target," "project," "would," "contemplate," "believe," "estimate," "predict," "potential," "seek," or "continue" or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words. No forward-looking statement is a guarantee of future results, performance, or achievements, and one should avoid placing undue reliance on such statements.

Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to us. Such beliefs and assumptions may or may not prove to be correct. Additionally, such forward-looking statements are subject to a number of known and unknown risks, uncertainties and assumptions, and actual results may differ materially from those expressed or implied in the forward-looking statements due to various factors, including, but not limited to, those identified in Part I, Item 2. "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Part II, Item 1A. "Risk Factors" in this Quarterly Report and Part I, Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended March 29, 2024, filed with the Securities and Exchange Commission ("SEC") on May 23, 2024 (the "2024 Annual Report"), as any such factors may be updated from time to time in our Quarterly Reports on Form 10-Q, and our other filings with the SEC.

You should read this Quarterly Report and the documents that we reference completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements. All forward-looking statements speak only as of the date of this Quarterly Report, and except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements, whether as a result of any new information, future events, or otherwise.

Unless the context otherwise requires, references to "we," "us," "our," the "Company" and "Allegro" refer to the operations of Allegro MicroSystems, Inc. and its consolidated subsidiaries.

PART I – FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements (Unaudited)

ALLEGRO MICROSYSTEMS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except par value and share amounts)
(Unaudited)

	September 27, 2024	March 29, 2024
Assets		
Current assets:		
Cash and cash equivalents	$ 188,751	$ 212,143
Restricted cash	10,287	10,018
Trade accounts receivable, net	76,985	118,508
Inventories	176,648	162,302
Prepaid income taxes	38,636	31,908
Prepaid expenses and other current assets	32,253	33,584
Current portion of related party notes receivable	—	3,750
Total current assets	523,560	572,213
Property, plant and equipment, net	325,051	321,175
Operating lease right-of-use assets, net	22,343	20,374
Deferred income tax assets	61,839	54,496
Goodwill	203,151	202,425
Intangible assets, net	266,753	276,854
Related party notes receivable, less current portion	—	4,688
Equity investment in related party	30,186	26,727
Other assets	59,234	51,651
Total assets	$ 1,492,117	$ 1,530,603
Liabilities, Non-Controlling Interests and Stockholders' Equity		
Current liabilities:		
Trade accounts payable	$ 50,245	$ 35,964
Amounts due to related party	5,546	1,626
Accrued expenses and other current liabilities	57,203	71,126
Current portion of operating lease liabilities	5,539	5,263
Current portion of long-term debt	5,475	3,929
Total current liabilities	124,008	117,908
Long-term debt	396,056	249,611
Operating lease liabilities, less current portion	17,674	16,404
Other long-term liabilities	15,671	14,964
Total liabilities	553,409	398,887
Commitments and contingencies (Note 10)		
Stockholders' Equity:		
Preferred stock, $0.01 par value; 20,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock, $0.01 par value; 1,000,000,000 shares authorized, 183,983,240 shares issued and outstanding at September 27, 2024; 1,000,000,000 shares authorized, 193,164,609 issued and outstanding at March 29, 2024	1,840	1,932
Additional paid-in capital	993,988	694,332
(Accumulated deficit) retained earnings	(31,931)	463,012
Accumulated other comprehensive loss	(26,583)	(28,841)
Equity attributable to Allegro MicroSystems, Inc.	937,314	1,130,435
Non-controlling interests	1,394	1,281
Total stockholders' equity	938,708	1,131,716
Total liabilities, non-controlling interests and stockholders' equity	$ 1,492,117	$ 1,530,603

The accompanying notes are an integral part of these condensed consolidated financial statements.

ALLEGRO MICROSYSTEMS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)
(Unaudited)

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
Net sales	$ 187,391	$ 271,930	$ 354,310	$ 550,223
Net sales to related party	—	3,579	—	3,579
Total net sales	187,391	275,509	354,310	553,802
Cost of goods sold	101,729	114,095	193,877	234,438
Cost of goods sold to related party	—	1,911	—	1,911
Gross profit	85,662	159,503	160,433	317,453
Operating expenses:				
Research and development	43,510	43,428	88,714	86,403
Selling, general and administrative	38,085	43,160	78,282	87,389
Total operating expenses	81,595	86,588	166,996	173,792
Operating income (loss)	4,067	72,915	(6,563)	143,661
Other (expense) income:				
Interest expense	(10,353)	(758)	(15,730)	(1,527)
Interest income	420	850	914	1,693
Loss on change in fair value of forward repurchase contract	(34,752)	—	(34,752)	—
Other (expense) income, net	(2,465)	64	(3,525)	(2,652)
(Loss) income before income taxes	(43,083)	73,071	(59,656)	141,175
Income tax (benefit) provision	(9,470)	7,400	(8,430)	14,615
Net (loss) income	(33,613)	65,671	(51,226)	126,560
Net income attributable to non-controlling interests	62	54	124	93
Net (loss) income attributable to Allegro MicroSystems, Inc.	$ (33,675)	$ 65,617	$ (51,350)	$ 126,467
Net (loss) income per common share attributable to Allegro MicroSystems, Inc.:				
Basic	$ (0.18)	$ 0.34	$ (0.27)	$ 0.66
Diluted	$ (0.18)	$ 0.34	$ (0.27)	$ 0.65
Weighted average shares outstanding:				
Basic	189,182,850	192,431,094	191,324,281	192,214,210
Diluted	189,182,850	195,100,855	191,324,281	195,055,495

The accompanying notes are an integral part of these condensed consolidated financial statements.

ALLEGRO MICROSYSTEMS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(in thousands)
(Unaudited)

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
Net (loss) income	$ (33,613)	$ 65,671	$ (51,226)	$ 126,560
Net income attributable to non-controlling interests	62	54	124	93
Net (loss) income attributable to Allegro MicroSystems, Inc.	(33,675)	65,617	(51,350)	126,467
Other comprehensive income (loss):				
Foreign currency translation adjustment, net of tax	5,435	(4,348)	2,247	(4,806)
Comprehensive (loss) income	(28,240)	61,269	(49,103)	121,661
Other comprehensive (loss) gain attributable to non-controlling interests	(72)	37	11	81
Comprehensive (loss) income attributable to Allegro MicroSystems, Inc.	$ (28,312)	$ 61,306	$ (49,092)	$ 121,742

The accompanying notes are an integral part of these condensed consolidated financial statements.

ALLEGRO MICROSYSTEMS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(in thousands, except share amounts)
(Unaudited)

	Preferred Stock		Common Stock		Additional Paid-In	Retained	Accumulated Other Comprehensive	Non-Controlling	
	Shares	Amount	Shares	Amount	Capital	Earnings	Loss	Interests	Total Equity
Balance at June 30, 2023	—	$ —	192,371,784	$ 1,924	$ 674,692	$ 371,165	$ (21,198)	$ 1,182	$ 1,027,765
Net income	—	—	—	—	—	65,617	—	54	65,671
Stock-based compensation, net of forfeitures and restricted stock vested	—	—	97,947	1	10,868	—	—	—	10,869
Payments of taxes withheld on net settlement of equity awards	—	—	—	—	(1,669)	—	—	—	(1,669)
Foreign currency translation adjustment	—	—	—	—	—	—	(4,311)	(37)	(4,348)
Balance at September 29, 2023	—	$ —	192,469,731	$ 1,925	$ 683,891	$ 436,782	$ (25,509)	$ 1,199	$ 1,098,288

	Preferred Stock		Common Stock		Additional Paid-In	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive	Non-Controlling	
	Shares	Amount	Shares	Amount	Capital		Loss	Interests	Total Equity
Balance at June 28, 2024	—	$ —	193,836,578	$ 1,938	$ 693,253	$ 445,337	$ (31,946)	$ 1,260	$ 1,109,842
Net loss	—	—	—	—	—	(33,675)	—	62	(33,613)
Employee stock purchase plan issuances	—	—	82,774	1	1,986	—	—		1,987
Stock-based compensation, net of forfeitures and restricted stock vested	—	—	81,203	1	11,531	—	—	—	11,532
Issuance of common stock, net of underwriting discounts	—	—	28,750,000	288	665,562	—	—	—	665,850
Repurchases of common stock	—	—	(38,767,315)	(388)	(377,218)	(443,593)	—	—	(821,199)
Payments of taxes withheld on net settlement of equity awards	—	—	—	—	(1,126)	—	—	—	(1,126)
Foreign currency translation adjustment	—	—	—	—	—	—	5,363	72	5,435
Balance at September 27, 2024	—	$ —	183,983,240	$ 1,840	$ 993,988	$ (31,931)	$ (26,583)	$ 1,394	$ 938,708

The accompanying notes are an integral part of these condensed consolidated financial statements.

ALLEGRO MICROSYSTEMS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY - continued
(in thousands, except share amounts)
(Unaudited)

	Preferred Stock		Common Stock		Additional Paid-In	Retained	Accumulated Other Comprehensive	Non-Controlling	
	Shares	Amount	Shares	Amount	Capital	Earnings	Loss	Interests	Total Equity
Balance at March 31, 2023	—	$ —	191,754,292	$ 1,918	$ 674,179	$ 310,315	$ (20,784)	$ 1,187	$ 966,815
Net income	—	—	—	—	—	126,467	—	93	126,560
Employee stock purchase plan issuances	—	—	76,204	1	1,898	—	—	—	1,899
Stock-based compensation, net of forfeitures and restricted stock vested	—	—	639,235	6	21,905	—	—	—	21,911
Payments of taxes withheld on net settlement of equity awards	—	—	—	—	(14,091)	—	—	—	(14,091)
Foreign currency translation adjustment	—	—	—	—	—	—	(4,725)	(81)	(4,806)
Balance at September 29, 2023	—	$ —	192,469,731	$ 1,925	$ 683,891	$ 436,782	$ (25,509)	$ 1,199	$ 1,098,288

	Preferred Stock		Common Stock		Additional Paid-In	Retained Earnings	Accumulated Other Comprehensive	Non-Controlling	
	Shares	Amount	Shares	Amount	Capital	(Accumulated Deficit)	Loss	Interests	Total Equity
Balance at March 29, 2024	—	$ —	193,164,609	$ 1,932	$ 694,332	$ 463,012	$ (28,841)	$ 1,281	$ 1,131,716
Net loss	—	—	—	—	—	(51,350)	—	124	(51,226)
Employee stock purchase plan issuances	—	—	82,774	1	1,986	—	—	—	1,987
Stock-based compensation, net of forfeitures and restricted stock vested	—	—	753,172	7	21,623	—	—	—	21,630
Issuance of common stock, net of underwriting discounts	—	—	28,750,000	288	665,562	—	—	—	665,850
Repurchases of common stock	—	—	(38,767,315)	(388)	(377,218)	(443,593)	—	—	(821,199)
Payments of taxes withheld on net settlement of equity awards	—	—	—	—	(12,297)	—	—	—	(12,297)
Foreign currency translation adjustment	—	—	—	—	—	—	2,258	(11)	2,247
Balance at September 27, 2024	—	$ —	183,983,240	$ 1,840	$ 993,988	$ (31,931)	$ (26,583)	$ 1,394	$ 938,708

The accompanying notes are an integral part of these condensed consolidated financial statements.

ALLEGRO MICROSYSTEMS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(Unaudited)

	Six-Month Period Ended	
	September 27, 2024	September 29, 2023
Cash flows from operating activities:		
Net (loss) income	$ (51,226)	$ 126,560
Adjustments to reconcile net (loss) income to net cash provided by operating activities:		
Depreciation and amortization	32,455	29,353
Amortization of deferred financing costs	1,087	107
Deferred income taxes	(7,795)	(18,134)
Stock-based compensation	21,663	21,919
Loss on change in fair value of forward repurchase contract	34,752	—
Provisions for inventory and expected credit losses	4,488	9,422
Change in fair value of marketable securities	—	3,579
Other non-cash reconciling items	6,577	43
Changes in operating assets and liabilities:		
Trade accounts receivable	41,417	(7,645)
Inventories	(18,831)	(31,221)
Prepaid expenses and other assets	(15,808)	(16,453)
Trade accounts payable	13,670	2,695
Due to and from related parties	4,132	6,112
Accrued expenses and other current and long-term liabilities	(16,838)	(29,944)
Net cash provided by operating activities	49,743	96,393
Cash flows from investing activities:		
Purchases of property, plant and equipment	(20,949)	(76,101)
Sales of marketable securities	—	16,175
Net cash used in investing activities	(20,949)	(59,926)
Cash flow from financing activities:		
Loan made to affiliate	—	(4,000)
Net proceeds from Refinanced 2023 Term Loan Facility	193,483	—
Payment of borrowings under 2023 Term Loan Facility	(50,000)	—
Finance lease payments	(385)	—
Receipts on related party notes receivable	1,875	1,875
Payments for taxes related to net share settlement of equity awards	(12,297)	(14,091)
Proceeds from issuance of common stock under employee stock purchase plan	1,987	1,899
Repurchases of common stock	(853,805)	—
Net proceeds from issuance of common stock	665,850	—
Payments of debt issuance costs	—	(1,450)
Net cash used in financing activities	(53,292)	(15,767)
Effect of exchange rate changes on cash and cash equivalents and restricted cash	1,375	(974)
Net (decrease) increase in cash and cash equivalents and restricted cash	(23,123)	19,726
Cash and cash equivalents and restricted cash at beginning of period	222,161	358,705
Cash and cash equivalents and restricted cash at end of period:	$ 199,038	$ 378,431

The accompanying notes are an integral part of these condensed consolidated financial statements.

1. Nature of the Business and Basis of Presentation

Allegro MicroSystems, Inc., together with its consolidated subsidiaries (the "Company"), is a global leader in designing, developing and manufacturing sensing and power solutions for motion control and energy-efficient systems in automotive and industrial markets. The Company is headquartered in Manchester, New Hampshire and has a global footprint across multiple continents.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP"). Certain information and footnote disclosures normally included in the Company's annual audited consolidated financial statements and accompanying notes have been condensed in, or omitted from, these interim financial statements. These unaudited condensed consolidated financial statements include the Company's accounts and those of its subsidiaries. All intercompany transactions and balances have been eliminated in consolidation. These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended March 29, 2024. The March 29, 2024 condensed consolidated balance sheet included herein is derived from the Company's audited consolidated financial statements. In the opinion of the Company's management, the financial statements for the interim periods presented reflect all adjustments necessary for a fair statement of the Company's financial position, results of operations and cash flows. The results reported in these unaudited condensed consolidated financial statements are not necessarily indicative of results that may be expected for the entire year.

Financial Periods

The Company's second quarter three-month period is a 13-week period. The Company's second quarter of fiscal year 2025 ended September 27, 2024, and the Company's second quarter of fiscal year 2024 ended September 29, 2023.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and disclosures of contingencies at the date of the consolidated financial statements and the reported amounts of net sales and expenses during the reporting period. On an ongoing basis, management evaluates its estimates, assumptions and judgments, including those related to the valuation of acquired intangible assets, impairment assessment and valuation of goodwill, intangible assets and tangible long-lived assets, the net realizable value of inventory, income taxes, stock-based compensation, and sales allowances. Actual results could differ from those estimates, and such differences may be material to the consolidated financial statements.

Reclassifications

Certain reclassifications have been made to prior-period amounts to conform to current-period reporting classifications.

Concentrations of Credit Risk

As of both September 27, 2024 and March 29, 2024, no distributor or customer accounted for 10% or more of the Company's outstanding trade accounts receivable, net.

For the three- and six-month periods ended September 27, 2024, no distributor or customer accounted for 10% or more of total net sales. For the three- and six-month periods ended September 29, 2023, one distributor customer accounted for 11.6% and 12.0% of total net sales, respectively.

(Amounts in thousands, except share and per share amounts)

Recent Accounting Pronouncements

In December 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2023-09, Income Taxes (Topic 740), Improvements to Income Tax Disclosures ("ASU 2023-09"). ASU 2023-09 requires entities to provide additional information of the Company's tax rate reconciliation, as well as additional disclosures about income taxes paid by jurisdiction. ASU 2023-09 is effective for annual reporting periods beginning after December 15, 2024, with early adoption permitted. ASU 2023-09 should be applied prospectively, but entities have the option to apply it retrospectively for each period presented. The Company does not anticipate this guidance will have an adverse impact on its results of operations, cash flows, or financial condition, but it will result in expanded disclosure within the financial statements.

In November 2023, the FASB issued ASU No. 2023-07, Segment Reporting (Topic 280), Improvements to Reportable Segment Disclosures ("ASU 2023-07"). ASU 2023-07 requires incremental disclosures in annual and interim periods related to a public entity's reportable segments (particularly on segment expenses) but does not change the definition of a segment, the method for determining segments, or the criteria for aggregating operating segments into reportable segments. The Company is in the process of evaluating the significant expenses of its single segment and determining the appropriate enhanced disclosures.

All other recent accounting pronouncements were determined to not have a material impact on the Company's financial position, results of operations, cash flows, or related disclosures.

3. Revenue from Contracts with Customers

The following tables summarize net sales disaggregated by market, by product and by geography for the three- and six-month periods ended September 27, 2024 and September 29, 2023. The categorization of net sales by market is determined using various characteristics of the product and the application into which the Company's product will be incorporated. The categorization of net sales by geography is determined based on the location to which the products are shipped.

Net sales by market:

During the preparation of the third quarter fiscal year 2024 interim condensed consolidated financial statements, the Company identified an immaterial error in the classification of net sales by market, whereby customer returns and sales allowances were incorrectly classified by market between Automotive, Industrial and Other in prior periods. There was no impact to previously reported total net sales or net (loss) income in any of the periods.

The Company assessed the materiality of the revision qualitatively and quantitatively and determined the revisions to be immaterial to the prior period interim fiscal year 2024, annual fiscal year 2023, and annual fiscal year 2022 consolidated financial statements. All prior period amounts have been revised in the table below.

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
Automotive	$ 141,893	$ 197,321	$ 273,077	$ 382,751
Industrial and other	45,498	78,188	81,233	171,051
Total net sales	$ 187,391	$ 275,509	$ 354,310	$ 553,802

Net sales by product:

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
Power integrated circuits	$ 58,691	$ 99,737	$ 110,501	$ 203,725
Magnetic sensors	128,700	175,772	243,809	350,077
Total net sales	$ 187,391	$ 275,509	$ 354,310	$ 553,802

(Amounts in thousands, except share and per share amounts)

Net sales by geography:

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
Americas:				
United States	$ 27,739	$ 47,724	$ 50,006	$ 96,548
Other Americas	6,426	9,539	11,650	18,047
EMEA:				
Europe	27,280	46,951	54,186	102,339
Asia:				
Greater China	48,995	69,463	80,855	131,679
Japan	37,716	47,275	78,359	88,855
South Korea	18,171	29,054	39,944	58,567
Other Asia	21,064	25,503	39,310	57,767
Total net sales	$ 187,391	$ 275,509	$ 354,310	$ 553,802

The Company recognizes sales net of returns and sales allowances, which comprises credits issued, price protection adjustments and stock rotation rights. At September 27, 2024 and March 29, 2024, the liabilities associated with returns and sales allowances were $41,346 and $44,797, respectively, and were netted against trade accounts receivable in the condensed consolidated balance sheets.

4. Fair Value Measurements

The following tables present information about the Company’s financial assets and liabilities as of September 27, 2024 and March 29, 2024, measured at fair value on a recurring basis:

	Fair Value Measurement at September 27, 2024:	
	Level 1	Total Fair Value
Assets:		
Cash equivalents:		
Money market fund	$ 36,986	$ 36,986
Restricted cash:		
Money market fund	10,287	10,287
Total assets	$ 47,273	$ 47,273

	Fair Value Measurement at March 29, 2024:	
	Level 1	Total Fair Value
Assets:		
Cash equivalents:		
Money market fund	$ 36,192	$ 36,192
Restricted cash:		
Money market fund	10,018	10,018
Total assets	$ 46,210	$ 46,210

Assets and liabilities measured at fair value on a recurring basis also consist of government securities, unit investment trust funds, loans, bonds, stock and other investments, which constitute the Company’s defined benefit plan assets. Fair value information for those assets and liabilities, including their classification in the fair value hierarchy, is included in Note 15, “Retirement Plans” within the Company’s Annual Report on Form 10-K for the year ended March 29, 2024. The changes in the Company’s defined benefit plan assets were not material for the six-month period ended September 27, 2024.

During the six-month periods ended September 27, 2024 and September 29, 2023, there were no transfers among Level 1, Level 2 and Level 3 assets or liabilities.

The fair value of the Company’s debt was $399,500 as of September 27, 2024. The fair value was determined based on the quoted price of the debt in an inactive market on the last trading date of the reporting period and has been classified as Level 2 within the fair value hierarchy.

(Amounts in thousands, except share and per share amounts)

5. Trade Accounts Receivable, net

Trade accounts receivable, net, consisted of the following:

	September 27, 2024	March 29, 2024
Trade accounts receivable	$ 118,353	$ 163,450
Less:		
Provision for expected credit losses	(22)	(145)
Returns and sales allowances	(41,346)	(44,797)
Total	$ 76,985	$ 118,508

The changes in the provision for expected credit losses were not material for any of the periods presented.

6. Inventories

Inventories include materials, labor and overhead and consisted of the following:

	September 27, 2024	March 29, 2024
Raw materials and supplies	$ 8,505	$ 9,549
Work in process	118,161	110,236
Finished goods	49,982	42,517
Total	$ 176,648	$ 162,302

The Company recorded inventory provisions totaling $2,110 and $4,487 for the three- and six-month periods ended September 27, 2024, respectively, and $4,360 and $9,436 for the three- and six-month periods ended September 29, 2023, respectively.

7. Property, Plant and Equipment, net

Property, plant and equipment, net, is stated at cost and consisted of the following:

	September 27, 2024	March 29, 2024
Land	$ 25,795	$ 25,595
Buildings, building improvements and leasehold improvements	66,240	65,626
Machinery and equipment	683,940	674,220
Office equipment	6,717	6,978
Right-of-use asset	8,480	8,218
Construction in progress	51,433	39,052
Total	842,605	819,689
Less accumulated depreciation	(517,554)	(498,514)
Total	$ 325,051	$ 321,175

Total depreciation expense amounted to $9,237 and $19,034 for the three- and six-month periods ended September 27, 2024, respectively, and $13,591 and $26,348 for the three- and six-month periods ended September 29, 2023, respectively. Total amortization expense for the right-of-use asset amounted to $349 and $698 for the three- and six-month periods ended September 27, 2024, respectively.

Property, plant and equipment, net, including improvements that significantly add to productive capacity or extend useful life, are stated at historical cost, less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The Company periodically reviews the estimated useful lives of property, plant and equipment. Changes to estimated useful lives are recorded prospectively from the date of the change. Maintenance and repairs expenditures are charged to expense as incurred.

(Amounts in thousands, except share and per share amounts)

The Company continues to expand and optimize its global manufacturing capacities, such as by its recent expansion of operations at its Philippines location, as well as its recent acquisition of Crocus Technology International Corp. ("Crocus"). Through its expansion efforts, newly acquired machinery and equipment and continuous maintenance and evaluation of on-hand equipment, the Company recognized advancements in equipment quality indicating increased estimated useful lives. During its first quarter, periodic review of the estimated useful lives of long-lived assets, the Company determined that the useful lives of its machinery and equipment should be increased. Effective March 30, 2024, the Company increased the useful lives of a significant portion of its machinery and equipment from seven years to ten years. For the three-month period ended September 27, 2024, these changes decreased depreciation expense by $4,463, decreased interim income tax benefit by $5,084 and increased net loss by $621, and there was no change per share. For the six-month period ended September 27, 2024, these changes decreased depreciation expense by $8,918, decreased interim income tax benefit by $1,476 and decreased net loss by $7,442, or $0.04 per share.

8. Goodwill and Intangible Assets

The table below summarizes the changes in the carrying amount of goodwill as follows:

	Total
Balance at March 29, 2024	$ 202,425
Measurement period adjustments	378
Foreign currency translation	348
Balance at September 27, 2024	$ 203,151

During the six-month period ended September 27, 2024, the Company recognized a $378 increase to goodwill related to the finalization of certain income tax matters in connection with the acquisition of Crocus. As of September 27, 2024, the purchase price allocation related to the acquisition is preliminary, pending finalization of the net working capital adjustment.

Intangible assets, net, were as follows:

	September 27, 2024		
Description	Gross	Accumulated Amortization	Net Carrying Amount
Patents	$ 47,749	$ (23,918)	$ 23,831
Customer relationships	15,072	(3,810)	11,262
Completed technologies	249,508	(20,139)	229,369
Indefinite-lived process technology and trademarks	2,291	—	2,291
Trademarks and other	90	(90)	—
Total	$ 314,710	$ (47,957)	$ 266,753

	March 29, 2024		
Description	Gross	Accumulated Amortization	Net Carrying Amount
Patents	$ 44,894	$ (22,016)	$ 22,878
Customer relationships	14,977	(3,315)	11,662
Completed technologies	249,758	(9,719)	240,039
Indefinite-lived process technology and trademarks	2,275	—	2,275
Trademarks and other	87	(87)	—
Total	$ 311,991	$ (35,137)	$ 276,854

Intangible assets amortization expense was $6,411 and $12,723 for the three- and six-month periods ended September 27, 2024, respectively, and $1,510 and $3,005 for the three- and six-month periods ended September 29, 2023, respectively.

(Amounts in thousands, except share and per share amounts)

9. Debt and Other Borrowings

The Company's debt obligations consisted of the following:

	September 27, 2024	March 29, 2024
2023 Term Loan Facility	$ 400,000	$ 249,375
Unamortized debt issuance costs	(6,951)	(4,273)
Total loans outstanding	393,049	245,102
Finance lease liabilities	8,482	8,438
Total debt	401,531	253,540
Current portion of long-term debt and finance lease liabilities	(5,475)	(3,929)
Total long-term debt and finance lease liabilities, less current portion	$ 396,056	$ 249,611

2023 Revolving Credit Facility

On June 21, 2023, the Company entered into a revolving credit facility credit agreement (as amended, the "2023 Revolving Credit Agreement") with Morgan Stanley Senior Funding, Inc., as administrative agent, collateral agent, a letter of credit issuer and a lender, and the other agents, lenders and letter of credit issuers parties. The 2023 Revolving Credit Agreement provided for a $224,000 secured revolving credit facility (the "2023 Revolving Credit Facility"), which includes a $20,000 letter of credit subfacility. Upon entry into Amendment No. 2 to the 2023 Revolving Credit Agreement (the "Second Amendment") with Allegro MicroSystems, LLC ("AML"), Morgan Stanley Senior Funding, Inc., as the administrative agent and the collateral agent, and each lender from time to time party thereto, on August 6, 2024 the total capacity of the 2023 Revolving Credit Facility was increased to $256,000. The 2023 Revolving Credit Facility is available until, and loans made thereunder will mature on, June 21, 2028. Under the terms of the 2023 Revolving Credit Agreement, interest is calculated at a rate equal to (i) Term SOFR (as defined in the 2023 Revolving Credit Agreement) in effect, plus the applicable spread (ranging from 1.50% to 1.75%) or (ii) the highest of (x) the Federal funds rate, as published by the Federal Reserve Bank of New York, plus 0.50%, (y) the prime lending rate, or (z) the one-month Term SOFR plus 1.0% in effect, plus the applicable spread (ranging from 0.50% to 0.75%). The applicable spreads are based on the Company's Total Net Leverage Ratio (as defined in the 2023 Revolving Credit Agreement) at the time of the applicable borrowing. Issuance costs related to the 2023 Revolving Credit Facility were not significant. As of September 27, 2024, there were no outstanding borrowings under the 2023 Revolving Credit Facility.

The Company will also pay a quarterly commitment fee of 0.20% to 0.25% on the daily amount by which the commitments under the 2023 Revolving Credit Facility exceed the outstanding loans and letters of credit under the 2023 Revolving Credit Facility. The 2023 Revolving Credit Agreement contains certain covenants applicable to the Company and its subsidiaries, including limitations on additional indebtedness, liens, various fundamental changes, dividends and distributions, investments (including acquisitions), transactions with affiliates, asset sales, prepayment of junior financing, changes in business and other limitations customary in senior secured credit facilities. In addition, the Company is required to maintain a Total Net Leverage Ratio of no more than 4.00 to 1.00 at the end of each fiscal quarter, which may, subject to certain limitations, be increased to 4.50 to 1.00 for four fiscal quarters subsequent to the Company completing an acquisition for consideration in excess of $500,000.

The 2023 Revolving Credit Agreement provides for customary events of default. Upon an event of default, the administrative agent with the consent of, or at the request of, the holders of more than 50% in principal amount of the loans and commitments, may terminate the commitments and accelerate the maturity of the loans and enforce certain other remedies.

2023 Term Loan Facility

On October 31, 2023, the Company entered into a $250,000 term loan maturing in 2030 (the "2023 Term Loan Facility"), the proceeds of which were used to refinance the $25,000 outstanding balance under the term loan credit agreement that the Company entered into on September 30, 2020 with Credit Suisse AG, Cayman Islands Branch, as administrative agent and collateral agent, and the other agents, arrangers and lenders party thereto, and to finance, in part, the acquisition of Crocus. The 2023 Term Loan Facility was executed as an incremental amendment (the "First Amendment") to the 2023 Revolving Credit Agreement. The 2023 Term Loan Facility amortizes at a rate of 0.25% per quarter and the initial margin applicable to the 2023 Term Loan Facility was 2.75% for SOFR-based loans and 1.75% for base rate loans. On August 6, 2024, the 2023 Term Loan Facility was paid in full in connection with the entry into the Second Amendment.

A payment of $50,000 was applied to the term loan balance on April 30, 2024.

(Amounts in thousands, except share and per share amounts)

Refinanced 2023 Term Loan Facility

On August 6, 2024, the Company entered into the Second Amendment, which increased the total capacity of the 2023 Revolving Credit Facility to $256,000. As of September 27, 2024, there were no outstanding borrowings under the 2023 Revolving Credit Facility.

The Second Amendment also provided for a new $400,000 tranche of term loans maturing in 2030 (the “Refinanced 2023 Term Loan Facility”), the proceeds of which were primarily used, to repurchase a portion of the Company’s common stock, pursuant to the certain Share Repurchase Agreement discussed in Note 14, as well as repay the 2023 Term Loan Facility. The Refinanced 2023 Term Loan Facility amortizes at a rate of 1.00% per annum. The Refinanced 2023 Term Loan Facility bears interest, at the Company’s option, at a rate equal to (i) Term SOFR in effect from time to time plus 2.25% or (ii) the highest of (x) the Federal funds rate, as published by the Federal Reserve Bank of New York, plus 0.50%, (y) the prime lending rate or (z) the one-month Term SOFR plus 1.0% in effect from time to time plus 1.25%. The Refinanced 2023 Term Loan Facility will mature on October 31, 2030. The Refinanced 2023 Term Loan Facility is subject to covenants consistent with the 2023 Revolving Credit Agreement covenants. As the terms of the refinancing were not substantially different than the terms of the Second Amendment, the refinancing was accounted for as a debt modification. In conjunction with the refinancing, the Company recognized $3,619 as a debt discount which will be amortized to interest expense over the remaining term using the effective interest method. Borrowings under the Second Amendment are collateralized by substantially all of the Company’s assets.

The Company was in compliance with its debt covenants as of September 27, 2024 and March 29, 2024.

A payment of $25,000 was applied to the term loan balance on October 31, 2024, which has eliminated future required minimum quarterly payments. The balance of the loan is required to be paid upon the expected maturity date of October 31, 2030.

10. Commitments and Contingencies

Legal proceedings

The Company is subject to various legal proceedings, claims, and regulatory examinations or investigations arising in the normal course of business, the outcomes of which are subject to significant uncertainty, and the Company’s ultimate liability, if any, is difficult to predict. The Company records an accrual for legal contingencies when it is determined that it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. In making such determinations, the Company evaluates, among other things, the degree of probability of an unfavorable outcome and, when it is probable that a liability has been incurred, the ability to make a reasonable estimate of the loss. If the occurrence of liability is probable and estimable, the Company will disclose the nature of the contingency and, if estimable, will provide the likely amount of such loss or range of loss. The Company is not aware of any pending or threatened legal proceeding against the Company that it believes could have a material adverse effect on the Company’s business, operating results, cash flows or financial condition.

11. Net (Loss) Income per Share

The following table sets forth the basic and diluted net (loss) income attributable to Allegro MicroSystems, Inc. per share:

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
Net (loss) income attributable to Allegro MicroSystems, Inc.	$ (33,675)	$ 65,617	$ (51,350)	$ 126,467
Basic weighted average shares of common stock	189,182,850	192,431,094	191,324,281	192,214,210
Dilutive effect of common stock equivalents	—	2,669,761	—	2,841,285
Diluted weighted average shares of common stock	189,182,850	195,100,855	191,324,281	195,055,495
Basic net (loss) income per common share attributable to Allegro MicroSystems, Inc. stockholders	$ (0.18)	$ 0.34	$ (0.27)	$ 0.66
Diluted net (loss) income per common share attributable to Allegro MicroSystems, Inc. stockholders	$ (0.18)	$ 0.34	$ (0.27)	$ 0.65

(Amounts in thousands, except share and per share amounts)

The computed net (loss) income per share for the three- and six-month periods ended September 27, 2024 and September 29, 2023 does not assume conversion of securities that would have an antidilutive effect on (loss) income per share. The following represents contingently issuable shares under the restricted stock units ("RSUs") and performance-based restricted stock units ("PSUs") excluded from the computation of net (loss) income per share, as such securities would have an antidilutive effect on net (loss) income per share if the Company had reported net income for those periods:

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
RSUs	1,644,248	22,706	1,177,126	11,353
PSUs	607,984	3,695	416,869	98,658

The following table represents issued and issuable weighted average dilutive share information underlying our outstanding RSUs, PSUs and participation in our employee stock purchase plan ("ESPP") for the respective periods:

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
RSUs	—	906,992	—	1,050,205
PSUs	—	1,749,345	—	1,773,627
ESPP	—	13,424	—	17,453
Total	—	2,669,761	—	2,841,285

12. Common Stock and Stock-Based Compensation

Restricted Stock Units

The following table summarizes the Company's RSU activity for the six-month period ended September 27, 2024:

	Shares	Weighted-Average Grant Date Fair Value
Outstanding at March 29, 2024	2,215,621	$ 29.82
Granted	1,362,512	28.47
Issued	(866,762)	28.98
Forfeited	(124,702)	29.49
Outstanding at September 27, 2024	2,586,669	$ 29.42

As of September 27, 2024, total unrecognized compensation expense for awards issued was $62,896, which is expected to be recognized over a weighted-average period of 2.15 years. The total grant date fair value of RSUs vested was $25,106 for the six-month period ended September 27, 2024.

Performance Stock Units

The following table summarizes the Company's PSU activity for the six-month period ended September 27, 2024:

	Shares	Weighted-Average Grant Date Fair Value
Outstanding at March 29, 2024	2,429,393	$ 25.64
Granted	528,213	31.06
Excess shares issued due to achievement of performance conditions	12,358	13.94
Issued	(310,917)	28.81
Forfeited	(65,078)	34.06
Outstanding at September 27, 2024	2,593,969	$ 26.07

Included in the outstanding shares are 76,306 shares as of March 29, 2024, which have vested but were issued during six-month period ended September 27, 2024. PSUs are included at 0% - 200% of target goals. The total compensation cost related to unvested awards not yet recorded at September 27, 2024 was $22,489, which is expected to be recognized over a weighted average period of 2.16 years. The total grant date fair value of PSUs vested was $8,958 for the six-month period ended September 27, 2024.

(Amounts in thousands, except share and per share amounts)

The Company recorded stock-based compensation expense in the following expense categories of its condensed consolidated statements of operations:

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
Cost of goods sold	$ 817	$ 946	$ 1,378	$ 3,552
Research and development	3,523	3,602	7,258	6,470
Selling, general and administrative	7,205	6,329	13,027	11,897
Total stock-based compensation	$ 11,545	$ 10,877	$ 21,663	$ 21,919

13. Income Taxes

The Company recorded the following tax (benefit) provision in its condensed consolidated statements of operations:

	Three-Month Period Ended		Six-Month Period Ended	
	September 27, 2024	September 29, 2023	September 27, 2024	September 29, 2023
(Benefit) provision for income taxes	$ (9,470)	$ 7,400	$ (8,430)	$ 14,615
Effective tax rate	22.0%	10.1%	14.1%	10.4%

The Company's (benefit) provision for income taxes is comprised of the year-to-date taxes based on an estimate of the annual effective tax rate plus the tax impact of discrete items.

The Company is subject to tax in the U.S. and various foreign jurisdictions. The Company's effective income tax rate fluctuates primarily because of the change in the mix of its U.S. and foreign income, the impact of discrete transactions and law changes, tax benefits generated by the foreign derived intangible income deduction including the permanent impacts of Internal Revenue Code Section 174 Capitalization, and research credits; offset by non-deductible stock-based compensation and other charges.

The increase in the effective tax rate for the three- and six-month periods results mainly from a decrease in forecasted US GAAP income before taxes, less tax deductions for share-based compensation, and an increase in nondeductible expenses primarily related to the Sanken Electric Co., Ltd. ("Sanken") and Polar Semiconductor, LLC ("PSL") transactions discussed in Note 14.

14. Related Party Transactions

Share repurchase transactions with Sanken

On July 23, 2024, the Company entered into a share repurchase agreement with Sanken (the "Share Repurchase Agreement") pursuant to which the Company agreed to repurchase 38,767,315 shares of the Company's common stock from Sanken in a privately negotiated transaction at a price per share equal to the price per share at which the underwriters in a public underwritten equity offering of shares of our common stock would purchase the shares (the "Equity Offering"). The repurchase of shares of common stock occurred in two separate closings, with the first closing taking place after the closing of the Equity Offering (the "First Closing") and the second closing occurring after the receipt of the proceeds from borrowings under the Refinanced 2023 Term Loan Facility (the "Second Closing"). The First Closing of the share repurchase was conditioned upon the closing of the Equity Offering and certain other conditions, and the Second Closing of the share repurchase was conditioned upon the receipt of net proceeds of no less than $300,000 from incremental term loans under the Refinanced 2023 Term Loan Facility. Pursuant to the terms of the Share Repurchase Agreement, Sanken reimbursed the Company for the expenses incurred by the Company in connection with the transactions contemplated by the Share Repurchase Agreement, and paid a facilitation fee of $35,000, which were recorded within additional paid-in-capital within the condensed consolidated statements of changes in equity.

To fund the First Closing, the Company entered into an underwriting agreement (the "Underwriting Agreement") with Barclays Capital Inc. and Morgan Stanley & Co. LLC, as representatives of the several underwriters (the "Underwriters"), on July 24, 2024, pursuant to which the Company agreed to sell 25,000,000 shares of the Company's common stock, to the Underwriters at a price of $23.16 per share. Under the terms of the Underwriting Agreement, the Company granted the Underwriters a 30-day option to purchase up to an additional 3,750,000 shares of Common Stock at the same purchase price, which option was exercised in full prior to the closing of the Equity Offering.

On July 26, 2024, the Company completed the Equity Offering pursuant to the Underwriting Agreement of 28,750,000 shares of its common stock at a public offering price of $24.00 per share resulting in net proceeds to the Company of approximately $665,850, after deducting $24,150 of underwriting discounts. As described above, the Company used the net proceeds of the Equity Offering to complete the First Closing under the Share Repurchase Agreement.

On July 29, 2024, the Company completed the First Closing under the Share Repurchase Agreement, repurchasing 28,750,000 shares of the Company's common stock for aggregate consideration of $628,256, which was the Equity Offering price, less the facilitation fee of $35,000, underwriting discounts, and reimbursable transaction expenses. The shares repurchased in the First Closing were retired.

On August 7, 2024, the Company completed the Second Closing under the Share Repurchase Agreement, repurchasing 10,017,315 shares of the Company's common stock for aggregate cash consideration of $225,549, which was the Equity Offering price, less underwriting discounts and reimbursable transaction expenses. As described above, the Company used a portion of the proceeds from the Refinanced 2023 Term Loan Facility and existing cash on hand to complete the Second Closing. The shares repurchased in the Second Closing were retired.

The Share Repurchase Agreement was accounted for as a forward repurchase contract as there were certain terms that could have caused the obligation not to be fulfilled. Accordingly, the contract was initially recorded as a liability at its fair value with subsequent remeasurements recognized in loss on change in fair value of forward repurchase contract until the completion of the First Closing and Second Closing. The Company recognized a loss of $34,752 as a result of the fair value forward repurchase contract in the condensed consolidated statements of operations.

In connection with the Share Repurchase Agreement, the Company entered into a Second Amended and Restated Stockholders Agreement with Sanken (the "Second Amended and Restated Stockholders Agreement"), which amended and restated the Amended and Restated Stockholders Agreement, dated as of June 16, 2022, by and among the Company, Sanken and OEP SKNA, L.P. ("OEP"). The Second Amended and Restated Stockholders Agreement, which became effective in accordance with its terms on July 29, 2024, removed OEP as a party and amended certain rights and obligations of the Company and Sanken.

Other transactions involving Sanken

Although certain costs are shared or allocated, cost of goods sold and gross margins attributable to related party sales are consistent with those of third-party customers. There were no trade accounts receivables, net, from Sanken as of September 27, 2024 or March 29, 2024. Other accounts receivable from Sanken totaled $160 as of March 29, 2024. There were no other accounts receivable from Sanken as of September 27, 2024. As of both September 27, 2024 and March 29, 2024, accounts payable to Sanken was not significant.

As of September 27, 2024, Sanken held approximately 32.5% of the Company's outstanding common stock.

Transactions involving Polar Semiconductor, LLC ("PSL")

On April 25, 2024, the Company, Sanken, PSL and PS Investment Aggregator, L.P. ("Subscriber") entered into a Sale and Subscription Agreement (the "PSL Agreement"), pursuant to which Subscriber and certain of its affiliates agreed to make capital contributions to PSL of $175,000 in exchange for an equity interest in PSL, which closed on September 20, 2024 (the "PSL Closing"). As contemplated by the PSL Agreement, the Company agreed to discharge all outstanding PSL Promissory Notes (as defined below) held by the Company for a value of $10,350 in exchange for PSL equity interests. Following the PSL Closing, the Company owned approximately 10.2% of PSL. As a result of PSL's share issuance to Subscriber, the Company recognized a net loss of $2,804 primarily related to the difference between the selling price per share and its carrying amount per share and after a gain from the conversion of the PSL Promissory Notes. The loss is included in Other (expense) income, net in the condensed consolidated statements of operations.

At the PSL Closing, the Company, Sanken and Subscriber entered into an amended and restated limited partnership agreement (the "Limited Partnership Agreement") with Polar Semiconductor GP I, LLC. The Limited Partnership Agreement contains representations, warranties and covenants of the parties customary for a transaction of this type, the reimbursement of expenses and costs, and restrictions on transfers.

The Company purchases in-process products from PSL. Purchases of various products from PSL totaled $14,378 and $29,334 for the three- and six-month periods ended September 27, 2024, respectively, and $14,630 and $30,732 for the three- and six-month periods ended September 29, 2023, respectively. Accounts payable to PSL included in amounts due to related party totaled $5,542 and $1,621 as of September 27, 2024 and March 29, 2024, respectively.

Notes Receivable from PSL

On December 2, 2021, AML entered into a loan agreement with PSL wherein PSL provided an initial promissory note to AML for a principal amount of $7,500 (the “Initial PSL Loan”). The Initial PSL Loan was to be repaid in equal installments, comprised of principal and interest accrued at 1.26% per annum, over a term of four years, with payments due on the first day of each calendar year quarter (April 1, July 1, October 1, and January 1). On July 1, 2022, PSL borrowed an additional $7,500 under the same terms of the Initial PSL Loan (the “Secondary PSL Loan” and, together with the Initial PSL Loan, the “PSL Promissory Notes”). The Secondary PSL Loan was to be repaid in equal installments, comprised of principal and interest accrued at 2.99% per annum, over a term of four years, with payments due on the first day of each calendar year quarter (April 1, July 1, October 1, and January 1). The PSL Promissory Notes were discharged in full in connection with the PSL Closing.

Prior to discharge, during the six-month period ended September 27, 2024, PSL made required quarterly payments to AML totaling $1,964, which included $89 of interest. The remaining outstanding principal balance and accrued interest on the PSL Promissory Notes of $6,596 was discharged in full in connection with the PSL Agreement.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and the related notes and other information included elsewhere in this Quarterly Report, as well as the audited financial statements and the related notes thereto, and the discussion under "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business" included in our Annual Report on Form 10-K for the year ended March 29, 2024, filed with the SEC on May 23, 2024 (the "2024 Annual Report").

In addition to historical data, this discussion contains forward-looking statements about our business, results of operations, cash flows, financial condition and prospects based on current expectations that involve risks, uncertainties and assumptions. Our actual results could differ materially from such forward-looking statements. Factors that could cause or contribute to those differences include, but are not limited to, those identified below and those discussed in the section titled "Forward-Looking Statements" and in Part I, Item 1A. "Risk Factors" of our 2024 Annual Report, and Part II, Item 1A. "Risk Factors" of this Quarterly Report. Additionally, our historical results are not necessarily indicative of the results that may be expected for any period in the future.

We operate on a 52- or 53-week fiscal year ending on the last Friday of March. Each fiscal quarter has 13 weeks, except in a 53-week year, when the fourth fiscal quarter has 14 weeks. All references to the three- and six-month periods ended September 27, 2024 and September 29, 2023 relate to the 13- and 26-week periods ended September 27, 2024 and September 29, 2023, respectively. All references to "2025," "fiscal year 2025" or similar references relate to the 52-week period ending March 28, 2025. All references to "2024," "fiscal year 2024" or similar references relate to the 52-week period ended March 29, 2024.

Overview

We are a leading global designer, developer, fabless manufacturer and marketer of sensor integrated circuits ("ICs") and application-specific analog power ICs enabling the most critical technologies in the automotive and industrial markets. We are a leading supplier of magnetic sensor IC solutions worldwide, based on market share, driven by our market leadership in the automotive market. Our products are foundational to automotive and industrial electronic systems. Our sensor ICs enable our customers to precisely measure motion, speed, position and current, while our power ICs include high-temperature and high-voltage capable motor drivers, power management ICs, light emitting diode driver ICs and isolated gate drivers. We believe that our technology expertise, combined with our deep applications knowledge and strong customer relationships, enable us to develop solutions that provide more value to customers than typical ICs. Compared to a typical IC, our solutions are more integrated, intelligent and sophisticated for complex applications and easier for customers to use.

We are headquartered in Manchester, New Hampshire and have a global footprint across multiple continents. Our portfolio includes more than 1,000 products, and we ship over 1.5 billion units annually to more than 10,000 customers worldwide. During the three- and six-month periods ended September 27, 2024, we generated $187.4 million and $354.3 million in total net sales, respectively, with $(33.6) million and $(51.2) million in net loss, respectively. During the three- and six-month periods ended September 29, 2023, we generated $275.5 million and $553.8 million in total net sales, respectively, with $65.7 million and $126.6 million in net income, respectively.

Business Updates

On July 23, 2024, we entered into a share repurchase agreement (the "Share Repurchase Agreement" and the transaction thereunder, the "Sanken Transaction") with Sanken Electric Co., Ltd. ("Sanken"), pursuant to which we agreed to repurchase 38,767,315 shares of our common stock from Sanken at a price per share equal to the price per share at which the underwriters in a public underwritten equity offering of shares of our common stock would purchase shares (the "Equity Offering"). The repurchase of shares of common stock occurred in two separate closings, with the first closing taking place after the closing of the Equity Offering (the "First Closing") and the second closing (the "Second Closing") occurring after the receipt of the proceeds from borrowings under the Refinanced 2023 Term Loan Facility (as defined below). The First Closing of the share repurchase was conditioned upon the closing of the Equity Offering and certain other conditions, and the Second Closing of the share repurchase was conditioned upon the receipt of net proceeds of no less than $300.0 million from incremental term loans under the Refinanced 2023 Term Loan Facility. Pursuant to the terms of the Share Repurchase Agreement, Sanken reimbursed us for the expenses incurred by us in connection with the transactions contemplated by the Share Repurchase Agreement, plus a facilitation fee of $35.0 million.

To fund the First Closing, we entered into an underwriting agreement (the "Underwriting Agreement") with Barclays Capital Inc. and Morgan Stanley & Co. LLC, as representatives of the several underwriters (the "Underwriters") on July 24, 2024, pursuant to which we agreed to sell 25,000,000 shares of our common stock, to the Underwriters at a price of $23.16 per share. Under the terms of the Underwriting Agreement, we granted the Underwriters a 30-day option to purchase up to an additional 3,750,000 shares of common stock at the same purchase price, which option was exercised in full prior to the closing of the Equity Offering.

On July 26, 2024, we completed the Equity Offering pursuant to the Underwriting Agreement of 28,750,000 shares of our common stock at a public offering price of $24.00 per share resulting in net proceeds to us of approximately $665.9 million, after deducting approximately $24.2 million of underwriting discounts. As described above, we used the net proceeds of the Equity Offering to complete the First Closing under the Share Repurchase Agreement.

On July 29, 2024, we completed the First Closing under the Share Repurchase Agreement, repurchasing 28,750,000 shares of our common stock for aggregate consideration of $628.3 million, which was the Equity Offering price, less the facilitation fee of $35.0 million, underwriting discounts, and reimbursable transaction expenses. The shares repurchased in the First Closing were retired.

In connection with the Share Repurchase Agreement, we entered into a Second Amended and Restated Stockholders Agreement with Sanken (the "Second Amended and Restated Stockholders Agreement"), which amended and restated the Amended and Restated Stockholders Agreement, dated as of June 16, 2022, by and among us, Sanken and OEP SKNA, L.P. ("OEP"). The Second Amended and Restated Stockholders Agreement, which became effective in accordance with its terms on July 29, 2024, removed OEP as a party and amended certain rights and obligations of us and Sanken.

On August 6, 2024, we entered into Amendment No. 2 (the "Second Amendment") to the revolving credit facility credit agreement entered into on June 21, 2023 (as amended, the "2023 Revolving Credit Agreement" and the credit facility thereunder, as amended, the "2023 Revolving Credit Facility") with Allegro MicroSystems, LLC, Morgan Stanley Senior Funding, Inc., as the administrative agent and the collateral agent, and each lender from time to time party thereto. The Second Amendment increased the total capacity of the 2023 Revolving Credit Facility to $256.0 million.

The Second Amendment also provided for a new $400 million tranche of term loans maturing in 2030 (the "Refinanced 2023 Term Loan Facility"), the proceeds of which were primarily used to (i) repurchase a portion of our common stock in connection with the Second Closing, (ii) refinance the 2023 Term Loan Facility (as defined in Note 9, "Debt and Other Borrowings" to the condensed consolidated financial statements included in this Quarterly Report), (iii) pay fees and expenses in connection with the foregoing and (iv) for general corporate purposes. The Refinanced 2023 Term Loan Facility amortizes at a rate of 1.00% per annum. The Refinanced 2023 Term Loan Facility bears interest, at our option, at a rate equal to (i) Term SOFR (as defined in the 2023 Revolving Credit Agreement) in effect from time to time plus 2.25% or (ii) the highest of (x) the Federal funds rate, as published by the Federal Reserve Bank of New York, plus 0.50%, (y) the prime lending rate or (z) the one-month Term SOFR plus 1.0% in effect from time to time plus 1.25%. The 2023 Term Loan Refinancing will mature on October 31, 2030. The Refinanced 2023 Term Loan Facility is subject to covenants consistent with the 2023 Revolving Credit Agreement covenants. As the terms of the refinancing were not substantially different than the terms of the Second Amendment, the refinancing was accounted for as a debt modification. In conjunction with the refinancing, we recognized $3.6 million as a debt discount which will amortized to interest expense over the remaining term using the effective interest method. Borrowings under the Second Amendment are collateralized by substantially all of our assets.

On August 7, 2024, we completed the Second Closing under the Share Repurchase Agreement, repurchasing 10,017,315 shares of our common stock for aggregate cash consideration of $225.5 million, which was the Equity Offering price less underwriting discounts and reimbursable transaction expenses. As described above, we used a portion of the proceeds from the Refinanced 2023 Term Loan Facility and existing cash on hand to complete the Second Closing. The shares repurchased in the Second Closing were retired.

On September 20, 2024, we, along with Sanken, Polar Semiconductor LLC ("PSL"), and PS Investment Aggregator, L.P. ("Subscriber"), completed the transaction (the "PSL Closing") contemplated by a Sale and Subscription Agreement that we, Sanken, PSL and Subscriber entered into on April 25, 2024 (the "PSL Agreement" and the transaction thereunder, the "PSL Transaction"). As contemplated by the PSL Agreement, Subscriber and certain of its affiliates agreed to make capital contributions to PSL of $175.0 million in exchange for an equity interest in PSL, and we agreed to discharge the PSL Promissory Notes (as defined in Note 14, "Related Party Transactions" to the condensed consolidated financial statements included in this Quarterly Report) held by us for a value of $10.4 million in exchange for PSL equity interests. Following the PSL Closing, we owned approximately 10.2% of PSL. As a result of the share issuance to Subscriber, we recognized a net loss of $2.8 million related to the difference between the selling price per share and its carrying amount per share and after a gain from the conversion of the PSL Promissory Notes. The loss is included in Other (expense) income, net in the condensed consolidated statements of operations.

At the PSL Closing, we, Sanken and Subscriber entered into an amended and restated limited partnership agreement (the "Limited Partnership Agreement") with Polar Semiconductor GP I, LLC. The Limited Partnership Agreement contains representations, warranties and covenants of the parties customary for a transaction of this type, the reimbursement of expenses and costs, and restrictions on transfers.

Other Key Factors and Trends Affecting Our Operating Results

Our financial condition and results of operations have been, and will continue to be, affected by numerous other factors and trends, including the following:

Inflation

Inflation rates in the markets in which we operate have increased and may continue to rise. Inflation over the last several quarters has led us to experience higher costs, including higher labor costs, wafer and other costs for materials from suppliers, and transportation and energy costs. Our suppliers have raised their prices and may continue to raise prices, and in the competitive markets in which we operate, we may not be able to make corresponding price increases to preserve our gross margins and profitability. If inflation rates continue to rise or remain elevated for a sustained period of time, they could have a material adverse effect on our business, financial condition, results of operations and liquidity. While we have generally been able to offset increases in these costs through various productivity and cost reduction initiatives, as well as adjusting our selling prices and releasing new products with improved gross margins, our ability to increase our average selling prices depends on market conditions and competitive dynamics. Given the timing of our actions compared to the timing of these inflationary pressures, there may be periods during which we are unable to fully recover the increases in our costs.

Design Wins with New and Existing Customers

Our end customers continually develop new products in existing and new application areas, and we work closely with our significant original equipment manufacturer customers in most of our target markets to understand their product roadmaps and strategies. For new products, the time from design initiation and manufacturing until we generate sales can be lengthy, typically between two and four years. As a result, our future sales are highly dependent on our continued success at winning design mandates from our customers. Further, despite current inflationary conditions, we expect the average sales prices ("ASPs") of our products to decline over time, and we consider design wins to be critical to our future success as they help mitigate declines in ASPs. We anticipate being increasingly dependent on revenue from newer design wins for our newer products. The selection process is typically lengthy and may require us to incur significant design and development expenditures in pursuit of a design win, with no assurance that our solutions will be selected. As a result, the loss of any key design win or any significant delay in the ramp-up of volume production of the customer's products into which our product is designed could adversely affect our business. In addition, volume production is contingent upon the successful introduction and market acceptance of our customers' end products, which may be affected by several factors beyond our control.

Customer Demand, Orders and Forecasts

Demand for our products is highly dependent on market conditions in the end markets in which our customers operate, which are generally subject to seasonality, cyclicality and competitive conditions. In addition, a substantial portion of our total net sales is derived from sales to customers that purchase large volumes of our products. These customers generally provide periodic forecasts of their requirements. However, these forecasts do not commit such customers to minimum purchases, and customers can revise these forecasts without penalty. In addition, as is customary in the semiconductor industry, customers are generally permitted to cancel orders for our products within a specified period. Cancellations of orders could result in the loss of anticipated sales without allowing us sufficient time to reduce our inventory and operating expenses. In addition, changes in forecasts or the timing of orders from customers expose us to the risks of inventory shortages or excess inventory. We are currently operating in an inflationary environment for our products.

Manufacturing Costs and Product Mix

Gross margin has been, and will continue to be, affected by a variety of factors, including the ASPs of our products, product mix in a given period, material costs, yields, manufacturing costs and efficiencies. We believe the primary driver of gross margin is the ASP negotiated between us and our customers relative to material costs and yields. Our pricing and margins depend on the volumes and the features of the products we produce and sell to our customers. As our products mature and unit volumes increase, we expect their ASPs to decline in the long term. We continually monitor and work to reduce the cost of our products and improve the potential value our solutions provide to our customers, as we target new design win opportunities and manage the product life cycles of our existing customer designs. We also maintain a close relationship with our suppliers and subcontractors to improve quality, increase yields and lower manufacturing costs. As a result, these declines often coincide with improvements in manufacturing yields and lower wafer, assembly, and testing costs, which offset some or all of the margin reduction that results from declining ASPs. However, we expect our gross margin to fluctuate on a quarterly basis as a result of changes in ASPs due to product mix, new product introductions, transitions into volume manufacturing and manufacturing costs. Gross margin generally decreases if production volumes are lower as a result of decreased demand as it did in the first quarter, which leads to a reduced absorption of our fixed manufacturing costs. Gross margin generally increases when the opposite occurs.

Cyclical Nature of the Semiconductor Industry

The semiconductor industry has historically been highly cyclical and is characterized by increasingly rapid technological change, product obsolescence, competitive pricing pressures, evolving standards, short product life cycles in consumer and other rapidly changing markets and fluctuations in product supply and demand. New technology may result in sudden changes in system designs or platform changes that may render some of our products obsolete and require us to devote significant research and development resources to compete effectively. Periods of rapid growth and capacity expansion are occasionally followed by significant market corrections in which sales decline, inventories accumulate, and facilities go underutilized. During periods of expansion, our margins generally improve as fixed costs are spread over higher manufacturing volumes and unit sales. In addition, we may build inventory to meet increasing market demand for our products during these times, which serves to absorb fixed costs further and increase our gross margins. During an expansion cycle, we may increase capital spending and hiring to add to our production capacity. During periods of slower growth or industry contractions, our sales, production and productivity and margins generally decline.

2017 Tax Cuts and Jobs Act

Pursuant to the 2017 Tax Cuts and Jobs Act, beginning in fiscal year 2023, U.S. tax law now requires us to capitalize and amortize domestic and foreign research and development expenditures over five and 15 years, for domestic and foreign research, respectively (“174 Capitalization”). The impact of 174 Capitalization for fiscal year 2025 is an increase in annual cash taxes of approximately $5.0 million and a foreign derived intangible income benefit of $5.5 million. Additionally, the Internal Revenue Service has issued Notice 2024-12 and is expected to issue final guidance which may modify this law or change its impact.

Results of Operations

Three-Month Period Ended September 27, 2024 Compared to Three-Month Period Ended September 29, 2023

The following table summarizes our results of operations and our results of operations as a percentage of total net sales for the three-month periods ended September 27, 2024 and September 29, 2023.

	Three-Month Period Ended		Three-Month Period Ended		Change	
	September 27, 2024	As a % of Net Sales	September 29, 2023	As a % of Net Sales	$	%
	(Dollars in thousands)					
Total net sales[(1)]	$ 187,391	100.0 %	$ 275,509	100.0 %	$ (88,118)	(32.0)%
Cost of goods sold [(1)]	101,729	54.3 %	116,006	42.1 %	(14,277)	(12.3)%
Gross profit	85,662	45.7 %	159,503	57.9 %	(73,841)	(46.3)%
Operating expenses:						
Research and development	43,510	23.2 %	43,428	15.8 %	82	0.2 %
Selling, general and administrative	38,085	20.3 %	43,160	15.7 %	(5,075)	(11.8)%
Total operating expenses	81,595	43.5 %	86,588	31.4 %	(4,993)	(5.8)%
Operating income	4,067	2.2 %	72,915	26.5 %	(68,848)	(94.4)%
Other (expense) income, net:						
Interest expense	(10,353)	(5.5)%	(758)	(0.3)%	(9,595)	1,265.8 %
Interest income	420	0.2 %	850	0.3 %	(430)	(50.6)%
Loss on change in fair value of forward repurchase contract	(34,752)	(18.5)%	—	— %	(34,752)	— %
Other (expense) income, net	(2,465)	(1.3)%	64	0.0 %	(2,529)	(3,951.6)%
(Loss) income before income tax (benefit) provision	(43,083)	(23.0)%	73,071	26.5 %	(116,154)	(159.0)%
Income tax (benefit) provision	(9,470)	(5.1)%	7,400	2.7 %	(16,870)	(228.0)%
Net (loss) income	(33,613)	(17.9)%	65,671	23.8 %	(99,284)	(151.2)%
Net income attributable to non-controlling interests	62	0.0 %	54	0.0 %	8	14.8 %
Net (loss) income attributable to Allegro MicroSystems, Inc.	$ (33,675)	(18.0)%	$ 65,617	23.8 %	$ (99,292)	(151.3)%

(1) Our total net sales and cost of goods sold for the periods presented above include related party sales and cost of goods sold generated with Sanken. See our unaudited condensed consolidated financial statements included in this Quarterly Report for additional information regarding our related party net sales for the periods set forth above.

Total net sales

Total net sales decreased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023. The decrease was primarily driven by an overall reduction in customer held inventory and corresponding to a decline in shipments across all end markets. The decline in shipments impacted all applications, including e-Mobility products, safety comfort and convenience applications, and broad-based and other industrial applications, including clean energy and automation, and data center applications, partially offset by an increase in smart home applications.

Sales Trends by Market

The following table summarizes total net sales by market. The categorization of net sales by market is based on the characteristics of the end product and application into which our product will be designed.

	Three-Month Period Ended		Change	
	September 27, 2024	September 29, 2023	Amount	%
	(Dollars in thousands)			
Automotive	$ 141,893	$ 197,321	$ (55,428)	(28.1)%
Industrial and other	45,498	78,188	(32,690)	(41.8)%
Total net sales	$ 187,391	$ 275,509	$ (88,118)	(32.0)%

Automotive net sales decreased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023, primarily due to inventory rebalancing with our automotive contract manufacturing customers looking to manage excess supply, as well as changes in product mix across all general applications.

Industrial and other net sales decreased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023, primarily due to a decrease in demand for our broad-based and other industrial applications, in addition to distributor inventory reductions, partially offset by an increase in sales of smart home applications.

Sales Trends by Product

The following table summarizes net sales by product.

	Three-Month Period Ended		Change	
	September 27, 2024	September 29, 2023	Amount	%
	(Dollars in thousands)			
Power integrated circuits (“PIC”)	$ 58,691	$ 99,737	$ (41,046)	(41.2)%
Magnetic sensors (“MS”) and other	128,700	175,772	(47,072)	(26.8)%
Total net sales	$ 187,391	$ 275,509	$ (88,118)	(32.0)%

The decline in PIC sales was primarily driven by a decrease in demand for our motor products. The decrease in MS and other sales was primarily due to a decline in demand for our current and isolator products, as well as our magnetic speed and position sensors, partially offset by an increase of sales for our tunnel magnetoresistance (“TMR”) solutions.

Sales Trends by Geographic Location

The following table summarizes net sales by geographic location based on ship-to location.

	Three-Month Period Ended		Change	
	September 27, 2024	September 29, 2023	Amount	%
	(Dollars in thousands)			
Americas:				
United States	$ 27,739	$ 47,724	$ (19,985)	(41.9)%
Other Americas	6,426	9,539	(3,113)	(32.6)%
EMEA:				
Europe	27,280	46,951	(19,671)	(41.9)%
Asia:				
Greater China	48,995	69,463	(20,468)	(29.5)%
Japan	37,716	47,275	(9,559)	(20.2)%
South Korea	18,171	29,054	(10,883)	(37.5)%
Other Asia	21,064	25,503	(4,439)	(17.4)%
Total net sales	$ 187,391	$ 275,509	$ (88,118)	(32.0)%

Americas net sales decreased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023, primarily due to the decline in demand in the United States automotive and industrial and other markets across all applications. In addition, Greater China net sales declined in automotive markets primarily driven by reduced net sales of electric vehicles and advanced driver assistance systems applications. Europe net sales declined in automotive and industrial and other markets, primarily driven by lower net sales across all applications.

Cost of goods sold

Cost of goods sold decreased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023, primarily due to a reduction in shipped volume, as well as change in product mix, partially offset by an increase in amortization of intangible assets in relation to the acquisition of Crocus Technology International Corp. (“Crocus”).

Cost of goods sold as a percentage of our total net sales was 54.3% and 42.1% for the three-month period ended September 27, 2024 and September 29, 2023, respectively. The increase was primarily due to the reduction in production volume, as well as a change in product mix noted above.

Gross profit and gross margin

Gross profit decreased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023, primarily due to the decrease in net sales and a change in product mix noted above.

Gross margin was 45.7% and 57.9% for the three-month period ended September 27, 2024 and September 29, 2023, respectively. The decrease was primarily due to the decline in net sales and product mix noted above.

Research and development expenses

Research and development (“R&D”) expenses increased in the three-month period ended September 27, 2024 in comparison to the comparable period in fiscal year 2024, primarily due to the increase in R&D supplies, partially offset by a reduction from R&D tax credits and personnel costs, including the annual incentive program.

R&D expenses as a percentage of our total net sales was 23.2% and 15.8% for the three-month periods ended September 27, 2024 and September 29, 2023, respectively. The increase was primarily due to the increase in R&D supplies, partially offset by reduction from R&D tax credits and personnel costs including the annual incentive program, in addition to the decline in net sales.

Selling, general and administrative expenses

Selling, general and administrative (“SG&A”) expenses decreased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023, primarily due to a decrease in the annual incentive program and outside service costs, partially offset by an increase in personnel and severance expenses.

SG&A expenses as a percentage of our total net sales was 20.3% and 15.7% in the three-month periods ended September 27, 2024 and September 29, 2023, respectively. The increase as a percentage of total net sales was primarily due to a decrease in the annual incentive program and outside service costs, partially offset by an increase in personnel and severance expenses in addition to the decline in net sales.

Interest expense

Interest expense increased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023, due to higher interest payments on the Refinanced 2023 Term Loan Facility, which increased our total outstanding debt balance.

Interest income

Interest income decreased in the three-month period ended September 27, 2024 compared to the three-month period ended September 29, 2023, primarily due to lower cash and cash equivalent balances.

Loss on change in fair value of forward repurchase contract

We recorded a loss on the change in fair value of a forward repurchase contract in the three-month period ended September 27, 2024, due to the various settlement dates under the Share Repurchase Agreement.

Other (expense) income, net

The foreign currency gain recorded in the three-month period ended September 27, 2024 was primarily due to U.S. Dollar strengthening against the Philippine Peso. The foreign currency gain recorded in the three-month period ended September 29, 2023, was primarily due to realized and unrealized gains from the British Pound strengthening against the Euro in our United Kingdom location, partially offset by the U.S. Dollar strengthening against the Philippine Peso.

We also recorded a net loss of $2.8 million as a result of the PSL Closing in the three-month period ended September 27, 2024 related to the difference between the selling price per share and its carrying amount per share and after a gain from the conversion of the PSL Promissory notes. Unrealized losses of $2.3 million related to our investment in marketable securities were offset by $3.7 million of gains related to sales of our investment in marketable securities and earnings in our money market fund deposits in the three-month period ended September 29, 2023.

Income tax (benefit) provision

Income tax benefit and the effective income tax rate were $(9.5) million and 22.0%, respectively, in the three-month period ended September 27, 2024, compared to income tax provision and effective income tax rate of $7.4 million and 10.1%, respectively, in the three-month period ended September 29, 2023. The increase in the effective tax rate ("ETR") was mainly due to a decrease in forecasted GAAP income before taxes, less tax deductions for share-based compensation, and an increase in nondeductible expenses primarily related to the Sanken Transaction and PSL Transaction.

Six-Month Period Ended September 27, 2024 Compared to Six-Month Period Ended September 29, 2023

The following table summarizes our results of operations and our results of operations as a percentage of total net sales for the six-month periods ended September 27, 2024 and September 29, 2023.

	Six-Month Period Ended		Six-Month Period Ended		Change	
	September 27, 2024	As a % of Net Sales	September 29, 2023	As a % of Net Sales	$	%
	(Dollars in thousands)					
Total net sales [1]	$ 354,310	100.0 %	$ 553,802	100.0 %	$ (199,492)	(36.0)%
Cost of goods sold [1]	193,877	54.7 %	236,349	42.7 %	(42,472)	(18.0)%
Gross profit	160,433	45.3 %	317,453	57.3 %	(157,020)	(49.5)%
Operating expenses:						
Research and development	88,714	25.0 %	86,403	15.6 %	2,311	2.7 %
Selling, general and administrative	78,282	22.1 %	87,389	15.8 %	(9,107)	(10.4)%
Total operating expenses	166,996	47.1 %	173,792	31.4 %	(6,796)	(3.9)%
Operating (loss) income	(6,563)	(1.9)%	143,661	25.9 %	(150,224)	(104.6)%
Other (expense) income, net:						
Interest expense	(15,730)	(4.4)%	(1,527)	(0.3)%	(14,203)	930.1 %
Interest income	914	0.3 %	1,693	0.3 %	(779)	(46.0)%
Loss on change in fair value of forward repurchase contract	(34,752)	(9.8)%	—	— %	(34,752)	— %
Other (expense) income, net	(3,525)	(1.0)%	(2,652)	(0.5)%	(873)	32.9 %
(Loss) income before income tax (benefit) provision	(59,656)	(16.8)%	141,175	25.5 %	(200,831)	(142.3)%
Income tax (benefit) provision	(8,430)	(2.4)%	14,615	2.6 %	(23,045)	(157.7)%
Net (loss) income	(51,226)	(14.5)%	126,560	22.9 %	(177,786)	(140.5)%
Net income attributable to non-controlling interests	124	0.0 %	93	0.0 %	31	33.3 %
Net (loss) income attributable to Allegro MicroSystems, Inc.	$ (51,350)	(14.5)%	$ 126,467	22.8 %	$ (177,817)	(140.6)%

(1) Our total net sales and cost of goods sold for the periods presented above include related party sales and cost of goods sold generated with Sanken. See our unaudited condensed consolidated financial statements included in this Quarterly Report for additional information regarding our related party net sales for the periods set forth above.

Total net sales

Total net sales decreased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023. The decrease was primarily driven by an overall reduction in customer held inventory and corresponding to a decline in shipments across all end markets. The decline in shipments impacted all applications including e-Mobility products, safety comfort and convenience applications, and broad-based and other industrial applications, including clean energy and automation, data center applications and consumer and smart home products.

Sales Trends by Market

The following table summarizes total net sales by market. The categorization of net sales by market is based on the characteristics of the end product and application into which our product will be designed.

	Six-Month Period Ended		Change	
	September 27, 2024	September 29, 2023	Amount	%
	(Dollars in thousands)			
Automotive	$ 273,077	$ 382,751	$ (109,674)	(28.7)%
Industrial and other	81,233	171,051	(89,818)	(52.5)%
Total net sales	$ 354,310	$ 553,802	$ (199,492)	(36.0)%

Automotive net sales decreased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023, primarily due to inventory rebalancing with our automotive contract manufacturing customers looking to manage excess supply, as well as changes in product mix across all general markets.

Industrial and other net sales decreased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023, primarily due to a decrease in demand for our broad-based and other industrial applications, in addition to distributor inventory reductions.

Sales Trends by Product

The following table summarizes net sales by product.

	Six-Month Period Ended		Change	
	September 27, 2024	September 29, 2023	Amount	%
	(Dollars in thousands)			
PIC	$ 110,501	$ 203,725	$ (93,224)	(45.8)%
MS and other	243,809	350,077	(106,268)	(30.4)%
Total net sales	$ 354,310	$ 553,802	$ (199,492)	(36.0)%

The decline in PIC sales was primarily driven by a decrease in demand for our motor products. The decrease in MS and other sales was due to a decline in demand for our current and isolator products, as well as our magnetic speed and position sensors, partially offset by an increase in sales of our TMR solutions.

Sales Trends by Geographic Location

The following table summarizes net sales by geographic location based on ship-to location.

	Six-Month Period Ended		Change	
	September 27, 2024	September 29, 2023	Amount	%
	(Dollars in thousands)			
Americas:				
United States	$ 50,006	$ 96,548	$ (46,542)	(48.2)%
Other Americas	11,650	18,047	(6,397)	(35.4)%
EMEA:				
Europe	54,186	102,339	(48,153)	(47.1)%
Asia:				
Greater China	80,855	131,679	(50,824)	(38.6)%
Japan	78,359	88,855	(10,496)	(11.8)%
South Korea	39,944	58,567	(18,623)	(31.8)%
Other Asia	39,310	57,767	(18,457)	(32.0)%
Total net sales	$ 354,310	$ 553,802	$ (199,492)	(36.0)%

Americas net sales decreased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023, primarily due to the decline in the United States automotive and industrial markets across all applications. In Greater China, net sales declined in automotive markets and industrial markets across all applications, which are served through distributors currently managing inventory levels. In addition, Europe net sales declined in automotive and industrial, where demand in internal combustion engine has declined. South Korea net sales declined in the automotive industries, primarily safety, comfort and convenience applications, Other Asia net sales declined across industrial markets, while Japan net sales declined in safety, comfort and convenience applications, data center applications and advanced driver assistance systems, partially offset by an increase in broad-based applications and electric vehicles.

Cost of goods sold

Cost of goods sold decreased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023, primarily due to a reduction in shipped volume as well as a change in product mix, partially offset by an increase in amortization of intangible assets in relation to the acquisition of Crocus.

Cost of goods sold as a percentage of our total net sales was 54.7% and 42.7% for the six-month period ended September 27, 2024 and September 29, 2023, respectively. The increase was primarily due to the reduction in production volume, as well as a change in product mix noted above.

Gross profit and gross margin

Gross profit decreased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023, due to the decrease in net sales and a change in product mix noted above.

Gross margin was 45.3% and 57.3% for the six-month period ended September 27, 2024 and September 29, 2023, respectively. The decrease was primarily due to the decline in net sales and product mix noted above.

Research and development expenses

Research and development ("R&D") expenses increased in the six-month period ended September 27, 2024 in comparison to the comparable period in fiscal year 2024, primarily due to an increase in R&D supplies and personnel costs partially offset by a reduction from R&D tax credits.

R&D expenses as a percentage of our total net sales was 25.0% and 15.6% for the six-month periods ended September 27, 2024 and September 29, 2023, respectively. The increase was primarily due to the increase in R&D supplies and personnel costs partially offset by a reduction from R&D tax credits noted above in addition to the decline in net sales.

Selling, general and administrative expenses

Selling, general and administrative ("SG&A") expenses decreased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023, primarily due to a decrease in the annual incentive program and outside service costs, partially offset by an increase in personnel and severance expenses.

SG&A expenses as a percentage of our total net sales was 22.1% and 15.8% in the six-month periods ended September 27, 2024 and September 29, 2023, respectively. The increase as a percentage of total net sales was primarily due to a decrease in the annual incentive program and outside service costs, partially offset by an increase in personnel and severance expenses in addition to the decline in net sales.

Interest expense

Interest expense increased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023, due to higher interest payments on the Refinanced 2023 Term Loan Facility, which increased our total outstanding debt balance.

Interest income

Interest income decreased in the six-month period ended September 27, 2024 compared to the six-month period ended September 29, 2023, primarily due to lower cash and cash equivalent balances.

Loss on change in fair value of forward repurchase contract

We recorded a loss on the change in fair value of a forward repurchase contract in the six-month period ended September 27, 2024, primarily due to the various settlement dates under the Share Repurchase Agreement.

Other (expense) income, net

The foreign currency loss recorded in the six-month period ended September 27, 2024 was primarily due to the U.S. Dollar strengthening against the Peso. The foreign currency loss recorded in the six-month period ended September 29, 2023 was primarily due to realized and unrealized losses from the U.S. Dollar strengthening against the Philippine Peso from our Philippine location.

We also recorded a net loss of $2.8 million as a result of the PSL Closing in the six-month period ended September 27, 2024 related to the difference between the selling price per share and its carrying amount per share and after a gain from the conversion of the PSL Promissory Notes, partially offset by $0.8 million of gains related to earnings in our money market fund deposits. We recorded unrealized losses of $11.2 million related to our investment in marketable securities, partially offset by $10.6 million of gains related to sales of our investment in marketable securities and earnings in our money market fund deposits in the six-month period ended September 29, 2023.

Income tax (benefit) provision

Income tax benefit and the effective income tax rate were $(8.4) million and 14.1%, respectively, in the six-month period ended September 27, 2024, compared to income tax provision and effective income tax rate of $14.6 million and 10.4%, respectively, in the six-month period ended September 29, 2023. The increase in the ETR was mainly due to a decrease in forecasted GAAP income before taxes, less tax deductions for share-based compensation, and an increase in nondeductible expenses primarily related to the Sanken Transaction and PSL Transaction.

Liquidity and Capital Resources

As of September 27, 2024, we had $188.8 million of cash and cash equivalents and $399.6 million of working capital, compared to $212.1 million of cash and cash equivalents and $454.3 million of working capital as of March 29, 2024. Working capital is impacted by the timing and extent of our business needs.

On August 6, 2024, we entered into the Second Amendment. The Second Amendment increased the total capacity of the 2023 Revolving Credit Facility to $256 million and provided for a new $400 million Refinanced 2023 Term Loan Facility, the proceeds of which were used, in relevant part to (i) repurchase a portion of our common stock, (ii) refinance the 2023 Term Loan Facility, (iii) pay fees and expenses in connection with the foregoing and (iv) for general corporate purposes. The Refinanced 2023 Term Loan Facility amortizes at a rate of 1.00% per annum. The Refinanced 2023 Term Loan Facility bears interest, at our option, at a rate equal to (i) Term SOFR (as defined in the Credit Agreement) in effect from time to time plus 2.25% or (ii) the highest of (x) the Federal funds rate, as published by the Federal Reserve Bank of New York, plus 0.50%, (y) the prime lending rate or (z) the one-month Term SOFR plus 1.0% in effect from time to time plus 1.25%. The Refinanced 2023 Term Loan Facility will mature on October 31, 2030.

Our primary requirements for liquidity and capital resources besides our growth initiatives are working capital, capital expenditures, principal and interest payments on our outstanding debt, and other general corporate needs. Historically, these cash requirements have been met through cash provided by operating activities and cash and cash equivalents. Our current capital deployment strategy for fiscal year 2025 is to utilize cash on hand and capacity under our 2023 Revolving Credit Facility to support our continued growth initiatives into select markets and planned capital expenditures, as well as consider potential acquisitions. As of September 27, 2024, the Company was not party to any off-balance sheet arrangements that have had or are reasonably likely to have a current or future material effect on our financial condition, results of operations, liquidity, capital expenditures, or capital resources. The cash requirements for the upcoming fiscal year relate to our operating leases, operating and capital purchase commitments, and expected contributions to our defined benefit and contribution plans. Additionally, we expect to continue to strategically invest in expanding our operations in China, Europe, Japan and India in order to directly manage and service our customers in these markets, which could result in increases in our total net sales, cost of goods sold and operating expenses. For information regarding the Company's expected cash requirements and timing of payments related to leases, noncancellable purchase commitments and pension and defined contribution plans, see Note 12, "Leases," Note 16, "Commitments and Contingencies" and Note 15, "Retirement Plans" to the audited consolidated financial statements in the Company's 2024 Annual Report.

We believe that our existing cash will be sufficient to finance our continued operations, growth strategy, planned capital expenditures and the additional expenses that we expect to incur during the next 12 months. In order to support and achieve our future growth plans, we may need or advantageously seek to obtain additional funding through equity or debt financing. We believe that our current operating structure will facilitate sufficient cash flows from operations to satisfy our expected long-term liquidity requirements beyond the next 12 months. If these resources are not sufficient to satisfy our liquidity requirements due to changes in circumstances, we may be required to borrow under our 2023 Revolving Credit Facility or seek additional financing. If we raise additional funds by issuing equity securities that are not used to repurchase existing shares outstanding, our stockholders will experience dilution. Debt financing, if available, may contain covenants that significantly restrict our operations or our ability to obtain additional debt financing in the future. Any additional financing that we raise may contain terms that are not favorable to us or our stockholders. We cannot assure you that we would be able to obtain additional financing on terms favorable to us or our existing stockholders, or at all.

Cash Flows from Operating, Investing and Financing Activities

The following table summarizes our cash flows for the six-month periods ended September 27, 2024 and September 29, 2023:

	Six-Month Period Ended	
	September 27, 2024	September 29, 2023
	(dollars in thousands)	
Net cash provided by operating activities	$ 49,743	$ 96,393
Net cash used in investing activities	(20,949)	(59,926)
Net cash used in financing activities	(53,292)	(15,767)
Effect of exchange rate changes on cash and cash equivalents and restricted cash	1,375	(974)
Net (decrease) increase in cash and cash equivalents and restricted cash	$ (23,123)	$ 19,726

Operating Activities

Net cash provided by operating activities was $49.7 million in the six-month period ended September 27, 2024, resulting primarily from a net loss of $51.2 million and noncash charges of $93.2 million, further adjusted by a net increase in cash from a decrease in net operating assets and liabilities of $7.7 million. Noncash charges include increases for $34.8 million for loss on change in fair value of forward repurchase contract, $32.5 million of depreciation and amortization, $21.7 million of stock-based compensation and $6.6 million of other non-cash reconciling items, partially offset by $7.8 million of deferred income taxes. The net decrease in operating assets and liabilities consisted of a $41.4 million decrease in trade accounts receivable, net, a $13.7 million increase in trade accounts payable and a $4.1 million increase in net amounts due to related party partially offset by an $18.8 million increase in inventories, a $15.8 million increase in prepaid expenses and other assets, and a $16.8 million decrease in accrued expenses and other current and long-term liabilities. The decrease in trade accounts receivable, net was primarily a result of decreased sales year-over-year. Trade accounts payable increased primarily due to the timing of payments to suppliers and vendors, including unpaid capital expenditures of $4.1 million. The increase in net amounts due to related parties was primarily due to variations in the timing of such payments in the ordinary course of business. The increase in inventories was primarily the result of inventory builds of standard products to support anticipated sales growth. The increase in prepaid expenses and other assets was mostly due to higher long-term deposits and the timing of tax payments. The decrease in accrued expenses and other current and long-term liabilities was primarily the result of a reduction in accrued personnel costs due to the timing of payments pursuant to our annual incentive compensation plan.

Net cash provided by operating activities was $96.4 million in the six-month period ended September 29, 2023, resulting primarily from net income of $126.6 million and noncash charges of $46.3 million, partially offset by a net decrease in cash from an increase in net operating assets and liabilities of $76.5 million. The net increase in operating assets and liabilities consisted of a $31.2 million increase in inventories, a $29.9 million decrease in accrued expenses and other current and long-term liabilities, a $16.5 million increase in prepaid expenses and other assets, and a $7.6 million increase in trade accounts receivable, net, partially offset by a $2.7 million increase in trade accounts payable and a $6.1 million increase in net amounts due from related parties. The increase in inventories was primarily the result of inventory builds to support anticipated sales growth for the remainder of fiscal year 2024. The increase in prepaid expenses and other assets were mostly due to higher long-term deposits and the timing of tax payments, including value-added taxes receivable, insurance and contract costs. The decrease in accrued expenses and other current and long-term liabilities was primarily the result of a reduction in accrued personnel costs due to timing of payments pursuant to our annual incentive compensation plan. The increase in trade accounts receivable, net, was primarily a result of increased sales year-over-year, as well as timing of receipts. Accounts payable increased primarily due to the timing of payments to suppliers and vendors, partially offset by higher operating purchases, including unpaid capital expenditures of $20.0 million. The increase in net amounts due to related parties was primarily due to variations in the timing of such payments in the ordinary course of business.

Investing Activities

Net cash used in investing activities was $20.9 million in the six-month period ended September 27, 2024, consisting of purchases of property, plant and equipment.

Net cash used in investing activities was $59.9 million in the six-month period ended September 29, 2023, consisting of purchases of property, plant and equipment of $76.1 million, partially offset by proceeds from the sale of marketable securities of $16.2 million.

Financing Activities

Net cash used in financing activities was $53.3 million in the six-month period ended September 27, 2024, consisting of $853.8 million of repurchases of our common stock, $50.0 million of payment on our 2023 Term Loan Facility and $12.3 million of taxes related to the net settlement of equity awards, offset by the issuance of common stock of $665.9 million, net proceeds of $193.5 million from the Refinanced 2023 Term Loan Facility, proceeds received in connection with the issuance of common stock under our employee stock purchase plan and proceeds received related to the quarterly payment from PSL on our related party loan.

Net cash used in financing activities was $15.8 million in the six-month period ended September 29, 2023, primarily consisting of taxes related to the net settlement of equity awards, additional funds loaned under the Note Purchase Agreement between us and Crocus and payments of debt issuance costs in connection with the 2023 Revolving Credit Facility, partially offset by proceeds received in connection with the issuance of common stock under our employee stock purchase plan and proceeds received related to the quarterly payment from PSL on our related party loan.

Debt Obligations

See Note 9, "Debt and Other Borrowings" to the unaudited condensed consolidated financial statements included in this Quarterly Report for information regarding our debt obligations.

Recent Accounting Pronouncements

See Note 2, "Summary of Significant Accounting Policies" to the unaudited condensed consolidated financial statements included in this Quarterly Report for a full description of recent accounting pronouncements, including the respective dates of adoption or expected adoption and effects on our condensed consolidated financial statements contained in Item 1 of this Quarterly Report.

Critical Accounting Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and disclosures of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Our significant accounting policies are described in Note 2, "Summary of Significant Accounting Policies" to our consolidated financial statements included in our 2024 Annual Report. There have been no material changes in our critical accounting policies and estimates since March 29, 2024.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

There have not been any material changes in our exposures to market risk since March 29, 2024. For details on the Company's interest rate, foreign currency exchange rate, and inflation risks, see Part I, Item 7A. "Quantitative and Qualitative Information About Market Risks" in our 2024 Annual Report.

Item 4. Controls and Procedures.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")), 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. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer (our principal executive officer and principal financial officer, respectively), evaluated the effectiveness of our disclosure controls and procedures as of September 27, 2024. Based on the evaluation of our disclosure controls and procedures as of September 27, 2024, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15(d)-15(f) under the Exchange Act) that occurred during the period covered by this Quarterly Report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, we may be involved in claims, regulatory examinations or investigations and proceedings arising in the ordinary course of our business. The outcome of any such claims or proceedings, regardless of the merits, and the Company's ultimate liability, if any, is inherently uncertain. We are not currently party to any material legal proceedings, and we are not aware of any pending or threatened legal proceeding against us that we believe could have a material adverse effect on our business, operating results, cash flows or financial condition.

Item 1A. Risk Factors.

Various risk factors associated with our business are included in our Annual Report, as filed with the SEC on May 23, 2024. There have been no material changes to those risk factors previously disclosed in our Annual Report.

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

None.

Item 5. Other Information.

During the three-month period ended September 27, 2024, no director or officer of the Company adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement" as each term is defined in Item 408(a) or Regulation S-K.

Amendment to Chief Executive Officer Employment Agreement

On October 31, 2024, the Company entered into an amendment (the "Amendment") to the employment agreement, dated May2, 2022, between the Company and Vineet Nargolwala, the Company's Chief Executive Officer (the "CEO Employment Agreement"). The Amendment was authorized by the Board of Directors of the Company (the "Board") at the recommendation of the Board's Compensation Committee (the "Committee") following a comprehensive market review by the Committee of all the Company's executive severance arrangements and based on advice and recommendations from the Committee's independent compensation consultant.

The Amendment revised the severance amount under the CEO Employment Agreement that would apply in the case of a termination without cause or resignation for good reason outside of a change in control ("CIC") scenario from 2.0 times base salary (and a pro-rated target level bonus for the year of termination) and up to 12 months of health care continuation payments to 2.0 times base salary plus target annual bonus (and a pro-rated target level bonus for the year of termination) and up to 18 months of health care continuation payments. The Amendment does not change the severance amount under the CEO Employment Agreement that would apply in the case of termination without cause or resignation for good reason within 24 months after the occurrence of a CIC, which remains at a 2.0 times base salary plus target annual bonus and up to 24 months of health care continuation payments. The Amendment also specifies that the CIC "protection" period, during which termination without cause or resignation for good reason would trigger full equity award vesting acceleration is 24 months following the occurrence of a CIC, notwithstanding the fact that this period is 12 months in Mr. Nargolwala's outstanding equity award agreements.

The foregoing description of the Amendment does not purport to be complete and is qualified in its entirety by reference to the complete text of the Amendment, a copy of which is filed as Exhibit 10.5 to this Quarterly Report and incorporated by reference herein.

Amendments to Other Executive Severance Arrangements

As a result of the market review by the Committee, the Committee also authorized the Company to modify the Company's standard form of executive severance agreement to be entered into with any new executive officers going forward (the "New Severance Agreement"). The New Severance Agreement would provide that in the case of termination without cause or resignation for good reason of the relevant officer, he or she would receive severance payments equal to 1.0 times base salary plus target annual bonus (and a pro-rated target level bonus for the year of termination). The New Severance Agreement also adds a Section 280G "best net benefit" provision, which provides that if the executive's total payments and benefits in connection with a CIC transaction ("Total Payments") would be subject to the excise tax imposed by Section 4999 of the Internal Revenue Code of 1986, as amended (the "Excise Tax"), such Total Payments would be reduced solely to the extent necessary to ensure that no portion of the Total Payments is subject to the Excise Tax (the "Reduced Payments"), but only if such Reduced Payments would be larger than the original Total Payments to the executive on an after-tax basis. Consistent with our current policies and agreements, none of our executive officers would be entitled to receive any "gross up" payments on account of any Excise Tax.

The New Severance Agreement does not amend the severance agreements that the Company has previously entered into with its executive officers (other than Mr. Nargolwala), would only be used for newly hired or promoted executives going forward and has not yet been entered into with any individual officers.

To further align with current market practice, the Committee also authorized the Company to amend all of the Company's outstanding executive restricted stock unit and performance stock unit award agreements to increase the CIC "protection" period from 12 to 24 months following a CIC event, where a termination without cause or resignation for good reason during such period would trigger full equity award vesting acceleration.

Item 6. Exhibits

(a) Exhibits

Exhibit No.	Description of Exhibit
10.1	Amended and Restated Limited Partnership Agreement of Polar Semiconductor, LP, by and among Polar Semiconductor, LP, Polar Semiconductor GP I, LLC, Allegro MicroSystems, Inc., Sanken Electric Co., Ltd., and PS Investment Aggregator, LP dated as of September 20, 2024 (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 24, 2024).
10.2	Amendment No. 2 to the Credit Agreement by and among Allegro MicroSystems, Inc., Allegro MicroSystems, LLC, Morgan Stanley Senior Funding, Inc. and each lender from time to time party thereto, effective as of August 6, 2024 (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 7, 2024).
10.3	Share Repurchase Agreement, dated as of July 23, 2024, between the Company and Sanken (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 23, 2024).
10.4	Second Amended and Restated Stockholders Agreement, dated as of July 23, 2024, between the Company and Sanken (incorporated by reference from Exhibit 10.2 to the Company's Current Report on Form 8-K filed on July 23, 2024).
10.5*†	Amendment, dated October 31, 2024, to the Employment Agreement, dated May 2, 2022, by and between Allegro MicroSystems, Inc. and Vineet Nargolwala.
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	Inline XBRL Instance Document. The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema with Embedded Linkbases Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101 filed herewith).

* Filed herewith.
** Furnished herewith.
† Indicates management contract or compensatory plan, contract or arrangement.

SIGNATURES

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

ALLEGRO MICROSYSTEMS, INC.

Date: November 1, 2024	By:	/s/ Vineet Nargolwala
		Vineet Nargolwala
		President and Chief Executive Officer
		(principal executive officer)
Date: November 1, 2024	By:	/s/ Derek P. D'Antilio
		Derek P. D'Antilio
		Executive Vice President, Chief Financial Officer and Treasurer
		(principal financial officer)

Exhibit 10.5

AMENDMENT TO EMPLOYMENT AGREEMENT

This Amendment (this "***Amendment***") is entered into as of October 31, 2024 (the "***Effective Date***") and amends the Employment Agreement (the "***Agreement***") entered into as of May 2, 2022 between Vineet Nargolwala (the "***Executive***") and Allegro MicroSystems, Inc., a Delaware corporation (together with any of its subsidiaries and affiliates as may employ Executive from time to time, and any successor(s) thereto, the "***Company***"). Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Agreement.

RECITALS

A. The Company and the Executive entered into the Agreement in connection with the Executive joining the Company as President and Chief Executive Officer in June 2022 (the "***Hiring***").

B. The payments and benefits upon termination section of the Agreement (the "***CEO Termination Benefits***") were negotiated and agreed to in connection with the Hiring.

C. The Committee recently reviewed the CEO Termination Benefits relative to those provided to the Company's other executive officers and comparable executives at peer companies and recommended that certain changes be made to the CEO Termination Benefits.

D. The Board approved the revisions to the Agreement upon the Committee's recommendation and authorized the Company to amend the Agreement to revise the CEO Termination Benefits as set forth herein.

E. In accordance with Section 10.7 of the Agreement, the parties wish to amend the Agreement to modify the CEO Termination Benefits as set forth in this Amendment, as recommended by the Committee and approved by the Board.

NOW THEREFORE, in consideration of the Executive's continued employment with the Company and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereby agree as follows, effective as of the Effective Date:

1. Payments and Benefits Upon Termination. Sections 4.2 and 4.3 of the Agreement are hereby deleted in their entirety, and the following new Sections 4.2 and 4.3 are hereby substituted into the Agreement:

"4.2 Qualifying Termination Outside of the Change of Control Period. Subject to Executive's delivery to the Company of a Release that becomes effective and irrevocable in accordance with Section 10.5(c) below and Executive's continued compliance with the Restrictive Covenants, in the event of termination of Executive's employment due to a Qualifying Termination outside of the Change of Control Period (each as defined in Section 4.3 below), then in addition to the Accrued Obligations, Executive shall be entitled to the following (the "Regular Severance Benefits"):

(a) *Base Salary Severance*. The Company shall pay to Executive an amount equal to 2.0x the sum of the Annual Base Salary plus the Target Bonus, each as in effect as of the Termination Date (disregarding any reduction thereto constituting Good Reason) (the "Base Salary and Target Bonus Severance") payable, less applicable withholdings and deductions, in a single lump sum cash payment on the first regular payroll date following the date the Release becomes effective and irrevocable or as otherwise provided in Section 10.5(c) below.

(b) *Prorated Bonus*. The Company shall pay to Executive a prorated Annual Bonus for the fiscal year in which the Termination Date occurs, determined by multiplying the Target Bonus on the Termination Date by a ratio equal to the number of completed days of employment in the fiscal year prior to and including the Termination Date divided by the total number of days in such fiscal year (the "Prorated Bonus"), payable, less applicable withholdings and deductions, in a single lump sum cash payment on the first regular payroll date following the date the Release becomes effective and irrevocable or as otherwise provided in Section 10.5(c) below.

(c) *COBRA*. If Executive is a participant on the Termination Date in a group health plan of the Company that is subject to Section 601 et seq. of the Employee Retirement Income Security Act of 1974, as amended, or similar state health care continuation coverage law ("COBRA"), and if Executive timely elects to accept continued health insurance coverage under COBRA, the Company shall pay or reimburse to Executive an amount equal to the full monthly cost of Executive's COBRA coverage until the earlier of eighteen (18) months after the Termination Date or such date as Executive becomes eligible for health insurance coverage through any subsequent employment (the "COBRA Subsidy Period"). If Executive desires to continue health care coverage under COBRA after becoming eligible for other health insurance coverage or otherwise after the COBRA Subsidy Period, Executive may do so for the balance of the applicable COBRA period at Executive's expense consistent with the requirements of COBRA. Notwithstanding the foregoing, the Company shall not be required to provide Executive with the healthcare continuation coverage benefits in this Section 4.2(c) if doing so would result in the imposition of penalties or other adverse consequences to the Company pursuant to the Patient Protection and Affordable Care Act of 2010, as amended, or any successor legislation or regulations thereunder.

(d) *Equity Acceleration*. The Sign-On RSU Award will vest in full to the extent unvested as of the Termination Date. The vesting of Executive's outstanding equity awards (other than the Sign-On RSU Award) as of the Termination Date that are not subject to performance-based vesting requirements shall be accelerated effective as of immediately prior to such Termination Date with respect to that number of shares subject thereto that would have become vested on the next applicable vesting date following the Termination Date as if Executive had remained employed by the Company through such vesting date. The vesting of Executive's outstanding equity awards as of the Termination Date that are subject to performance-based vesting requirements shall be accelerated effective as of immediately prior to such Termination Date with respect to a pro-rated portion of the shares subject thereto (determined based on the number of days that Executive was employed during the applicable performance period relative to the total number of days in the performance period), with the performance conditions being deemed achieved at the greater of the target performance level or the "trending performance" level determined by the Committee using the most recent scorecard submitted to the Committee immediately prior to the Termination Date.

4.3 Qualifying Termination within the Change of Control Period. Subject to Executive's delivery to the Company of a Release that becomes effective and irrevocable in accordance with Section 10.5(c) below and Executive's continued compliance with the Restrictive Covenants, in the event of termination of Executive's employment due to a Qualifying Termination within the twenty-four (24)-month period immediately following the consummation of a Change of Control (as defined in the 2020 Plan) (the "Change of Control Period"), in addition to the Accrued Obligations, and in lieu of the Regular Severance Benefits, Executive shall be entitled to receive (the "Change of Control Severance Benefits"): (a) the Base Salary and Target Bonus Severance described in Section 4.2(a) above; (b) the Prorated Bonus described in Section 4.2(b) above; (c) the healthcare continuation coverage benefits described in Section 4.2(c) above, except that the COBRA Subsidy Period shall be 24 months instead of 18 months, and (d) notwithstanding anything to the contrary contained in any award agreement issued pursuant to awards granted under the 2020 Plan, or any incentive compensation plan later adopted by the Company, which are explicitly superseded by this provision to the extent that they may be inconsistent, 100% vesting of all outstanding equity awards effective as of immediately prior to the Termination Date, with vesting of awards that are subject to performance-based vesting requirements that would otherwise continue to apply following the Change in Control transaction being deemed achieved at the greater of the target performance level or the "trending performance" level determined by the Committee using the most recent scorecard submitted to the Committee immediately prior to the Termination Date. For purposes of this Section 4, a "Qualifying Termination" shall mean any termination of Executive's employment by the Company without Cause or a resignation by the Executive for Good Reason."

GENERAL

1. This Amendment shall be and hereby is incorporated into the Agreement.
2. Except as expressly provided herein, the parties acknowledge and agree that all terms and conditions of the Agreement shall remain in full force and effect, including, without limitation, Section 10.4, Employment At-Will, and Section 10.5, Application of Section 409A.
3. This Amendment will be governed and construed in accordance with the laws of the State of New Hampshire, without reference to principles of conflict of laws.

[*Remainder of page left blank intentionally; signature page follows*]

IN WITNESS WHEREOF, the parties have executed this Amendment as of the Effective Date.

ALLEGRO MICROSYSTEMS, INC.

By:___/s/ Erin E. Hagen_____________
Name: Erin E. Hagen
Title: Senior Vice President and Chief Human Resources Officer

EXECUTIVE

By:_______/s/ Vineet Nargolwala________
Name: Vineet Nargolwala

Exhibit 31.1

CERTIFICATION

I, Vineet Nargolwala, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Allegro MicroSystems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

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

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

Date: November 1, 2024	By:	/s/ Vineet Nargolwala
		Vineet Nargolwala President and Chief Executive Officer (principal executive officer)

Exhibit 31.2

CERTIFICATION

I, Derek P. D’Antilio, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Allegro MicroSystems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

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

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

Date: November 1, 2024	By:	/s/ Derek P. D’Antilio
		Derek P. D’Antilio Executive Vice President, Chief Financial Officer and Treasurer (principal financial officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Allegro MicroSystems, Inc. (the “Company”) for the quarterly period ended September 27, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 1, 2024	By:	/s/ Vineet Nargolwala
		Vineet Nargolwala President and Chief Executive Officer (principal executive officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Allegro MicroSystems, Inc. (the “Company”) for the quarterly period ended September 27, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 1, 2024	By:	/s/ Derek P. D’Antilio
		Derek P. D’Antilio Executive Vice President, Chief Financial Officer and Treasurer (principal financial officer)