

Newcastle University Investment Fund

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**Allegro Microsystems Inc. – (NASDAQ: ALGM)**

Short: Target Price \$8.49 – **(72.3% Downside)**

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# Executive Summary

## Pitch Narrative

- Allegro Microsystems are a Producer of Semiconductors, operating with a key focus of Power Semiconductors and Integrated Circuit sensors. Clean Energy application and Electric Vehicles and the main uses of their products, with sales focused within Asia and the USA.
- An overestimate of the market recovery for semiconductors and Electric Vehicles, due to lower subsidies and a fall in demand for Electric Vehicles, will lead to a further trough within the industries, backed by cheaper competition from China.
- Our recommendation for investors of ALGM is a SHORT, with a target price of \$8.49, a 72.38% downside from its current valuation as of close on the 29<sup>th</sup> October 2025 (\$30.74).

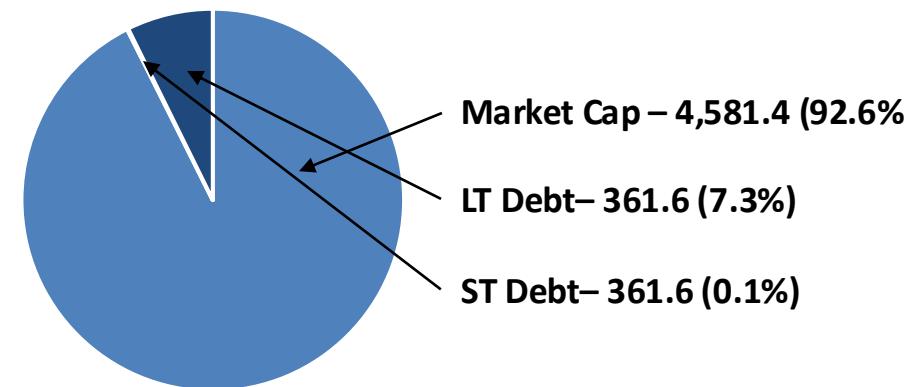
## Street vs Variant Views

Street View	Key Variance
<ul style="list-style-type: none"> <li>A positive valuation viewpoint of BUY assumes that there is strong growth and recovery within the semiconductor and electric vehicle industries, with a 20% increase in sales forecasted for 2024-2025.</li> <li>Valuations from analysts lead to a large BUY consensus based on positive comparable factors, weighing heavily on their valuation in comparison to the DCF model estimating a poor intrinsic value.</li> </ul>	<ul style="list-style-type: none"> <li>The projection of a 20% sales increase over the next year overestimates the recovery within the semiconductor industry and for Allegro from ongoing price competition and reduced subsidies.</li> <li>A clear reliance upon peer comparables to come to a BUY valuation is unreliable as it fails to represent the structural and cyclical foundation within, the Comparable.</li> <li>A DCF as the key measure gives a valuation based on the company's historical, providing a much more tailored valuation.</li> </ul>
<ul style="list-style-type: none"> <li>The market assumes that the semiconductor industry is in a trough currently and therefore assumes that there will be an upcoming recovery, therefore leading to growing margins because of improved utilisation.</li> </ul>	<ul style="list-style-type: none"> <li>The assumption that the trough is here for the market may be premature due to demand continuing to fall for EV, falling injection of subsidies.</li> <li>For a key supplier of semiconductors like Allegro, this could cause a fall in share price, as margins are hit.</li> </ul>

## Valuation Summary

	Bull	Base	Bear
Target Price	\$6.52	\$8.31	\$10.45
Return	78.79%	72.97%	66.01%
Probability	20%	55%	25%
Weighted Target Price		<b>\$8.49</b>	
Weighted Return			<b>72.38%</b>

## Capital Structure (\$millions)



The low leverage shows limited financial risk as they manage CAPEX and can adjust to the cyclical nature of the semiconductor market. Heavy reliance on equity however causes a higher cost of capital, in turn resulting in pressured returns in periods of slow growth

Key Ratios	FY2025
P/E	-82.7x
EBITDA Margin	6.17%
5 Year CAGR	5.23%
EV/EBITDA	112.8x

# Company Overview

## About Allegro

- A global leader within the Semiconductor industry, focusing on power semiconductors and Integrated circuit sensors for energy-efficient and motion control systems.
- Their focus is on electric vehicles (EVs) and clean energy applications within the automotive and industrial markets.



## Product Overview

- Sensors:** A Range of sensors from EVs to Robotics and home appliances. Rank as the market share leader within the sensor industry.
- Regulators and drivers:** Offer a range of products for automotive innovation, including LED drivers, Functional safety PMIC's and DCDC regulators.
- Motor Drivers:** Focused on safety and sustainability, Allegro Motors operates for Electric Vehicles, home appliances and renewable energy.

## Management Overview

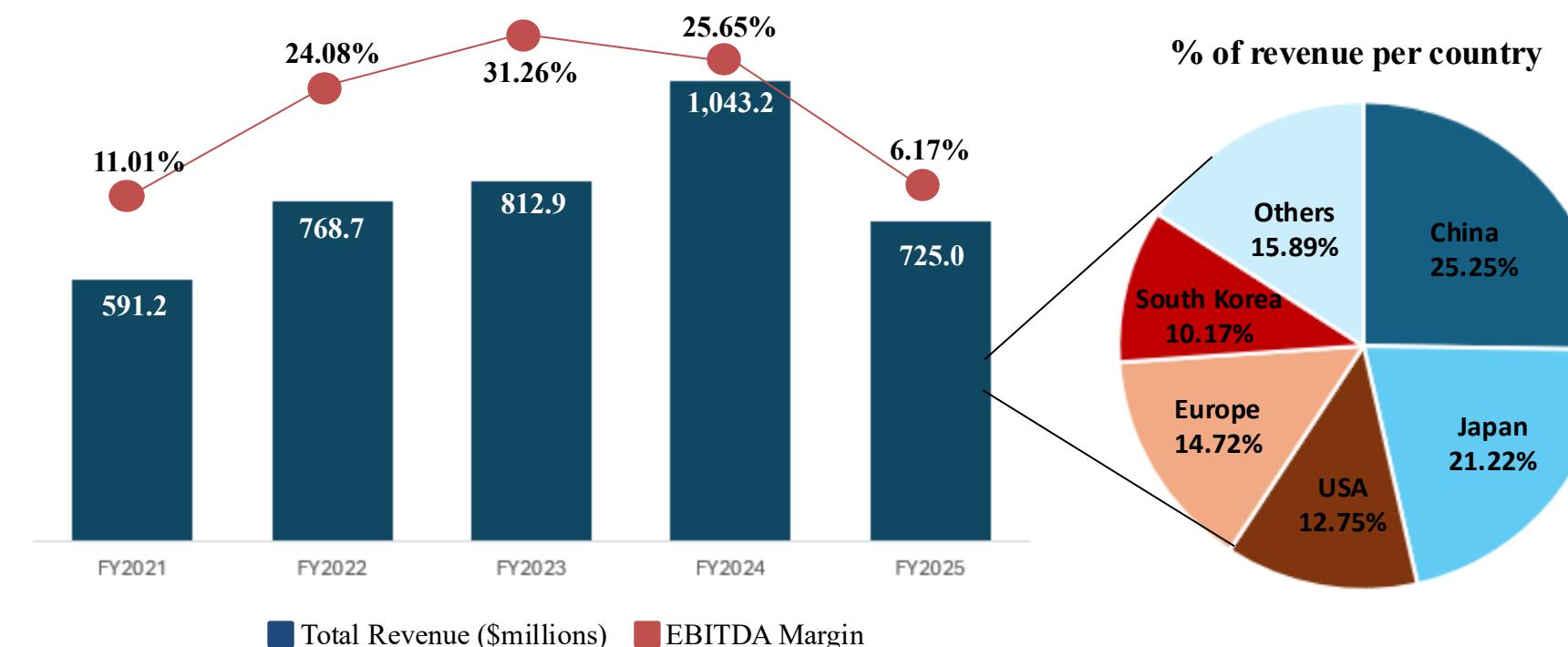
### Michael Doogue:

- President and CEO.
- Appointed February 2025.
- Holds over 75 US related semiconductor patents.

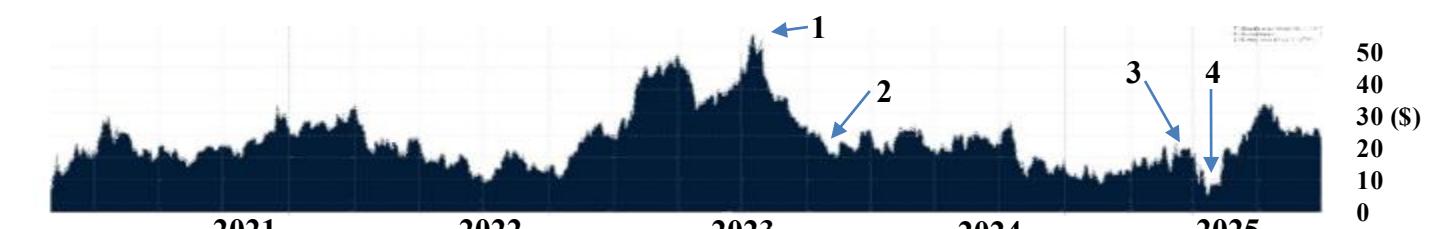
### Troy Coleman:

- SVP, General Manager, Products.
- 25 years in Semiconductor industry.
- Strong record of revenue growth and attractive GP margins.

## Revenue and EBITDA Margins historicals



## Product Overview



1) 18-19<sup>th</sup> July 2023 (all-time peak): A strong increase in market demand for auto-sensor/chips, with momentum pushing all-time highs.

2) 9<sup>th</sup> November 2023 (decline/trough): macro/semiconductor headwinds and profit-taking produced this large peak-trough scenario.

3) 6<sup>th</sup> March 2025 (news-driven peak): rejected Onsemi \$35.10/share proposal leading to an instant market jump.

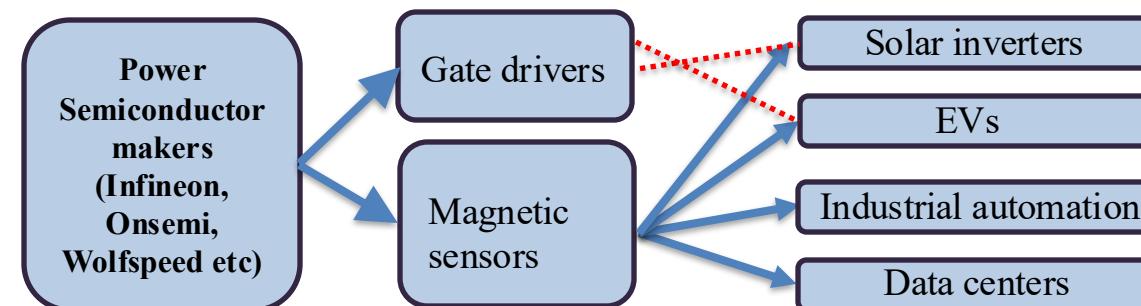
4) 15<sup>th</sup> April 2025 (deal drama): Onsemi withdrew the proposal, the market reacted negatively, taking it as a signal, leading to a sharp fall in share price.

# Industry Overview

Analogue Semiconductor Industry - Specifically focused on power-management and magnetic-sensing ICs

## Market Positioning

Allegro is positioned as the ‘middle man’ of the analogue semiconductor industry. This positioning allows:



## Competition Comparison



- Leading designer and manufacturer of magnetic sensors and power SiCs that enable precision motion control and energy efficiency



- Vertically integrated power semiconductor leader. Competes on SiC devices but diversification slows sensor innovation.



- High-volume SiC manufacturer serving EV OEMs. Benefits from vertical integration but competing with its own sensor customers.

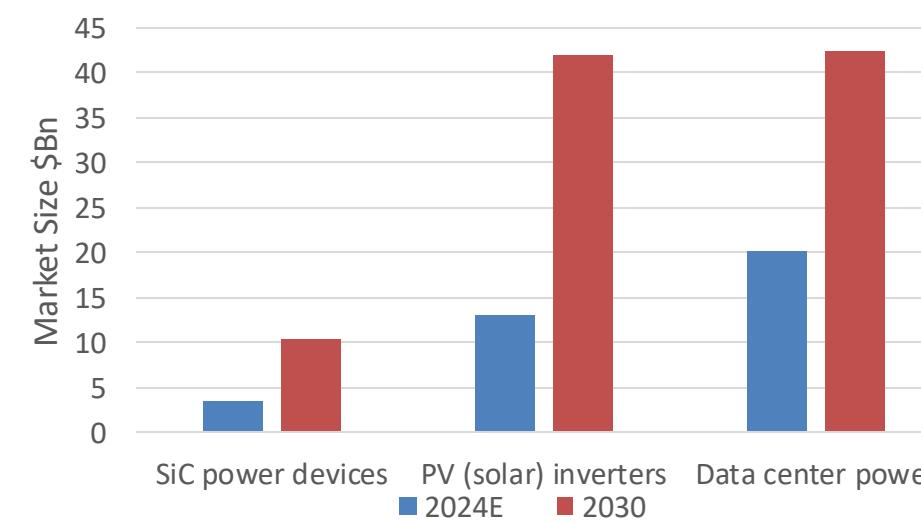


- EV sensor generalist focused on safety and body electronics. Strong in Europe but lacks SiC exposure.

5 Year CAGR (Revenue)	
Allegro (ALGM)	5.23%
Onsemi (ON)	(3.50%)
Infineon (IFNNY)	7.10%
Melexis (MELE)	8.70%
Average	4.10%

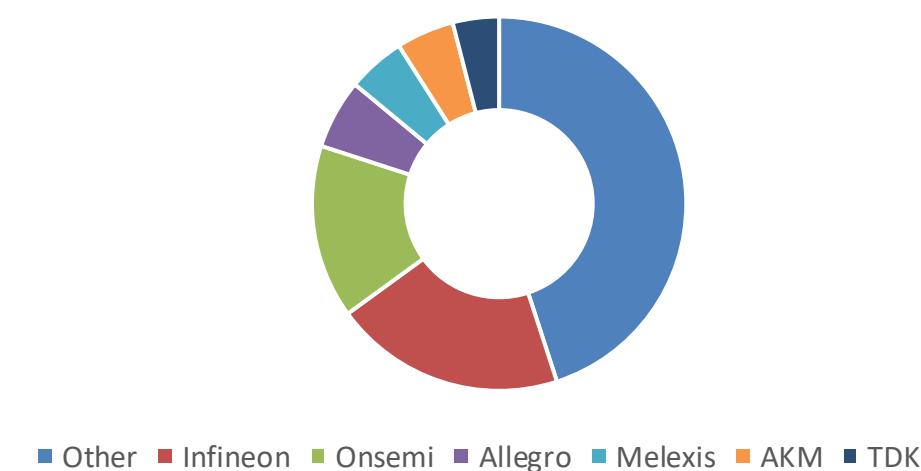
## Intersects 3 Markets with Accelerated Growth

SiC power devices, solar energy and data centers all expected significant growth by 2030 due to progression in energy efficiency and global transition towards renewables.



## Niche leadership

Allegro are the 3<sup>rd</sup> largest in the industry and own 6% of the market share across magnet/current sensors, but 1<sup>st</sup> in focusing on electrification. This gives Allegro the lead as EVs, solar and data centers electrify.



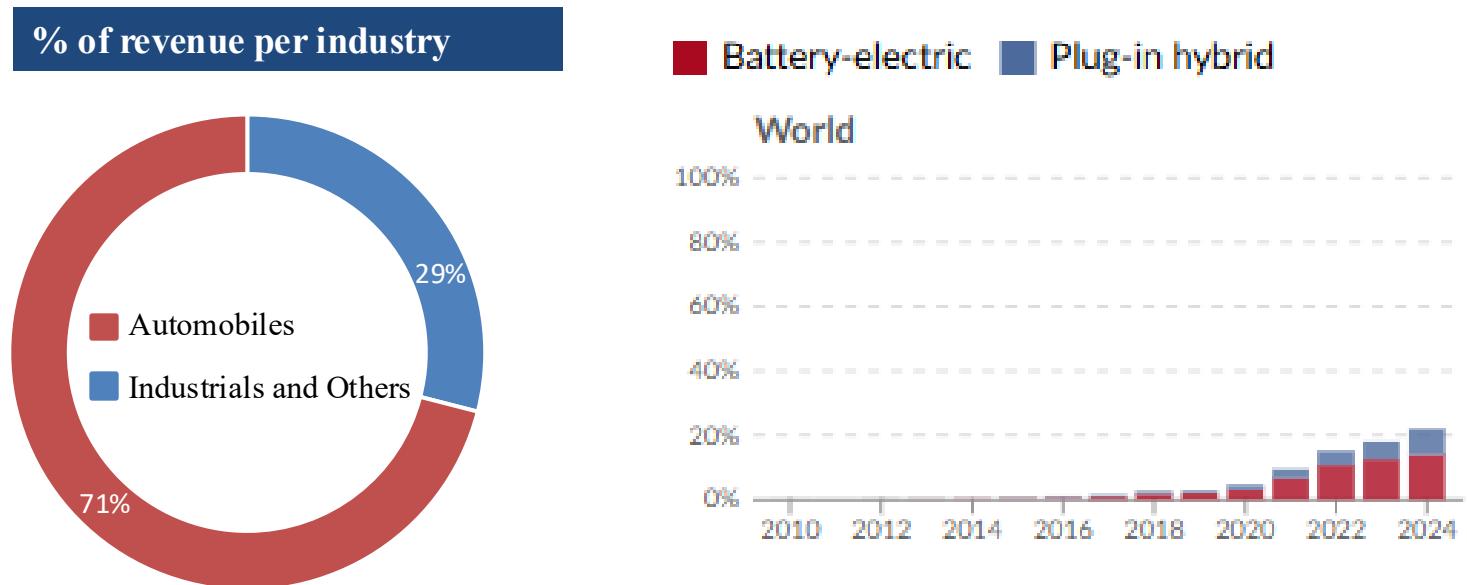
## Key Market Factors

- Several global automakers are scaling down their electrification targets, hurt by slowing demand for fully electric vehicles due to lack of affordable models, slow roll-out of charging points, growing trade tensions and increased competition from cheaper Chinese rivals
- Higher global rates tighten financing for EV adoption and factory automation.
- Elevated yields keep the sector's equity risk premium low while raising the discount rate (WACC), reducing justified multiples.
- Regional diversification pressure: U.S. export controls and China localisation may force duplicative CapEx and raise costs.
- Analog chips are more commoditised than cutting-edge logic / AI chips meaning less pricing power, which increases the risk that margins will be undercut by new entrants or cost pressures.

# Thesis

## EV Market at Cyclical Peak + EV Sales Growth Slowdown = Valuation Collapse

- Global EV sales growth slowing to 25% YoY (2025) from 60% (2022), US sales growth down 10.7% YoY



Allegro MicroSystems derives 71% of its revenue from the automotive sector, with more than half of that tied to e-mobility and EV applications, making it one of the most concentrated pure-play exposures to electric vehicle demand in the semiconductor space. While this positioning gave way to strong growth during the 2021 - 2023 EV boom, it now creates vulnerability. A slowdown in global EV sales growth from 60% in 2022 to 25% in 2025, driven by subsidy cuts/reductions, consumer range anxiety, infrastructure gaps, and OEM profitability crises Allegro's core revenue source is threatened. With limited exposure to other industries (29%), any sustained deceleration in EV production triggers a chain reaction, inventory destocking, pricing pressure, and margin compression. Currently valued at an unsustainable 112.8x EV/EBITDA on peak-cycle earnings, a normalisation to comparable multiples (20-30x) amid flat or declining growth would precipitate a valuation collapse, erasing 70%+ of market value as the market reprices Allegro down to its fair value.

- EV subsidies across the EU being cut, reducing the sales growth of EVs
  - Germany fully cuts EV subsidies leading to drop in EV sales
  - France reduces EV subsidy budget from €1.5 billion to \$1.0 billion, leaving subsidies at between \$2,000 to \$4,000. Along with a reduction of the leasing program for low-income households

European Union (27)

Our thesis bets against the consensus, with 11 out of 12 analyst rating the stock a strong buy with an estimated average of \$36.75 (20% upside). This herd mentality optimism overlooks the wider global factors such as, subsidy cuts/reductions and OEM profitability crisis. This is already causing firms such as Tesla and Ford to reduce EV production targets for 2026. Consensus sees Allegro's products having secular growth, but we see derived demand for Allegro's products. This prepares the groundwork for a sharp earning miss and reductions in guidance. Overall, driven by the decreased subsidies provided, along with the market trough continuing, caused by the lasting decrease in demand within the Electric Vehicles industry, furthered by our insight into a DCF being a more accurate way to come to a valuation conclusion than Comparables, our thesis will beat out fellow analyst recommendations of a BUY for Allegro Microsystems.

# Valuation

## Scenario analysis

### Bull

- Earnings call above target in terms of Revenue and EBIT, with macroeconomic growth above target, leading to decreased perpetuity and Rf.

### Base

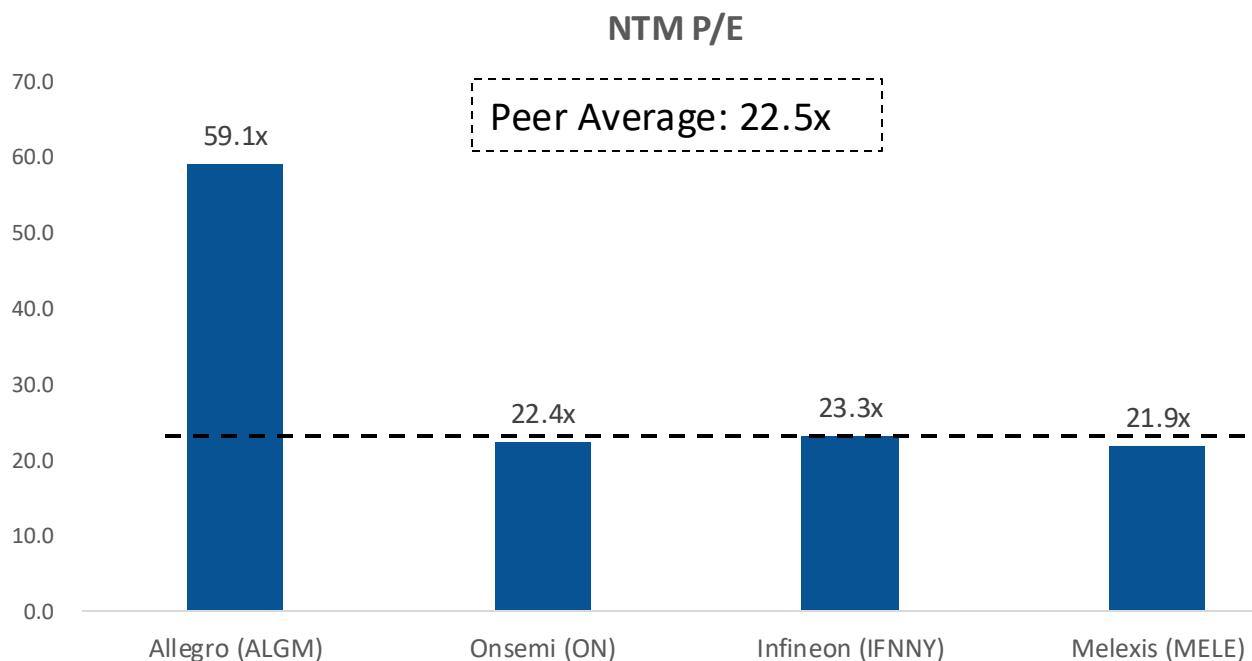
- Market Growth, EBIT forecasts and Revenue growth from the Earnings reports for FY26 are as expected.

### Bear

- Earnings call above target in terms of Revenue and EBIT, with macroeconomic growth above target, leading to increased perpetuity and ERP.

## Model Assumptions

	Bull	Base	Bear
Revenue Growth	\$6.52	\$8.31	\$10.45
Rf	3.50%	3.89%	4.50%
Tax Rate	24%	21%	18%
Perpetual Growth Rate	2.5%	3%	3.5%
Probability	20%	55%	25%
Weighted Returns	78.79%	72.97%	66.01%



## Sensitivity Analysis (WACC vs Perpetual Growth)

	Perpetual Growth Rate (0.25% steps)					
	\$8.31	2.50%	2.75%	3.00%	3.25%	3.50%
WACC	12.70%	8.09	8.27	8.47	8.67	8.89
(0.25% steps)	12.95%	7.97	8.14	8.33	8.52	8.72
	13.20%	7.86	8.03	8.31	8.51	8.71
	13.45%	7.75	7.91	8.09	8.28	8.47
	13.70%	7.63	7.79	7.96	8.15	8.34

## Risks and Catalysts

Catalyst/Drivers	Risk	Commentary
Slowing Growth of EV Sales	New Management	<ul style="list-style-type: none"><li>- The appointment of Mike Doogue as CEO in February 2025 and Troy Coleman as SVP of Products in October 2025</li></ul>
High Exposure to the Chinese Market	Recovery of Automotive Production	<ul style="list-style-type: none"><li>- Recovery of production after chip shortages could cause revenue growth for Allegro If the capitalise on the growth</li></ul>
Varying Global Regulatory Standard	Launch of new products	<ul style="list-style-type: none"><li>- Innovations like the 10 MHz TMR current sensor (October 2025) and XtremeSense TMR sensors (April 2025)</li></ul>
US Tax Credits Reduction	M&A deal	<ul style="list-style-type: none"><li>- Rejecting onsemi's \$6.9B bid at \$35.10/share in April 2025 signals strong standalone value, while potential future acquisitions could add synergies and scale</li></ul>
Backlash against automation technology reducing the primary sector workforce		

# Appendix

Year count	1.0	2.0	3.0	4.0	5.0	EBIT Margin	17.00%
EBIT	141,738,673.0	162,999,474.0	187,449,395.0	215,566,804.3	247,901,824.9	Revenue Growth	15.00%
Tax on EBIT	(34,017,281.5)	(39,119,873.7)	(44,987,854.8)	(51,736,033.0)	(59,496,438.0)	D&A as a % of Revenue	7.75%
+ Depreciation and amortization	64,616,159.8	74,308,583.7	85,454,871.3	98,273,102.0	113,014,067.3	CAPEX as a % of Revenue	6.50%
- Capital expenditure	(54,194,198.5)	(62,323,328.3)	(71,671,827.5)	(82,422,601.6)	(94,785,991.9)	Net Operating Working Capital	2.46%
Change in operating working capital	(20,510,419.7)	(23,586,982.7)	(27,125,030.1)	(31,193,784.6)	(35,872,852.3)	V	5,911,513,631.9
<b>Free cash flow</b>	<b>97,632,933.0</b>	<b>112,277,872.9</b>	<b>129,119,553.9</b>	<b>148,487,487.0</b>	<b>170,760,610.0</b>	E	5,688,144,631.86
<b>Terminal value</b>					<b>1,715,976,718.2</b>	D	223,369,000.0
Discount factor	88.7%	78.7%	69.9%	62.0%	55.0%	E/V	96.2%
<b>Present value of free cash flows</b>	<b>86,630,819.0</b>	<b>88,398,794.9</b>	<b>90,202,851.9</b>	<b>92,043,726.4</b>	<b>93,922,169.8</b>	re	0.13
Sum of present value of free cash flows	451,198,362.1	+ Cash	121,000,000.0	Market capitalization	5,688,144,631.9	D/V	3.8%
Present value of terminal value	943,825,726.3	- Debt	(310,000,000.0)	Intrinsic value premium to market capitalization	(4,482,120,543.5)	rd	0.03
<b>Enterprise value</b>	<b>1,395,024,088.4</b>	<b>Implied equity value (intrinsic value)</b>	<b>1,206,024,088.4</b>			T	0.24
		<b>Implied equity value per share (intrinsic value)</b>	<b>6.52</b>			WACC	12.7%

Allegro Microsystems Key percentages (ALGM)							Tax rate	24.0%
Year	2025	2026	2027	2028	2029	2030	LT growth rate	2.5%
Revenue	725,006,000.00	833,756,900.00	958,820,435.00	1,102,643,500.25	1,268,040,025.29	1,458,246,029.08	WACC	12.7%
EBIT	- 19,800,000.00	141,738,673.00	162,999,473.95	187,449,395.04	215,566,804.30	247,901,824.94	Share price	30.74
D&A	64,502,000.0	64,616,159.8	74,308,583.7	85,454,871.3	98,273,102.0	113,014,067.3	Shares outstanding	185,040,489.00
CAPEX	39,960,000.0	54,194,198.5	62,323,328.3	71,671,827.5	82,422,601.6	94,785,991.9		
Net Operating Working Capital	(11,930,000.0)	20,510,419.7	23,586,982.7	27,125,030.1	31,193,784.6	35,872,852.3		

# Appendix

Onsemi Semiconductors (ON)						
year	Units	2021	2022	2023	2024	2025E
Revenue	\$	6,739,800,000.00	8,326,200,000.00	8,253,000,000.00	7,082,300,000.00	5,828,000,000.0
Revenue Growth		28.25%	23.54%	-0.88%	-14.19%	-17.71%
Operating Expenses	\$	1,426,700,000.00	1,717,200,000.00	1,344,800,000.00	1,448,400,000.00	-
Operating expenses as a % of revenue		21.17%	20.62%	16.29%	20.45%	-
EBIT	\$	1,157,800,000.00	2,362,200,000.00	2,525,800,000.00	1,837,400,000.00	1,020,000,000.0
EBIT as a% of revenue		17.18%	28.37%	30.60%	25.94%	17.50%
D&A	\$	596,700,000.00	551,800,000.00	609,500,000.00	642,900,000.00	620,900,000.0
D&A as a % of revenue		8.85%	6.63%	7.39%	9.08%	10.65%
EBITDA	\$	1,754,500,000.00	2,914,000,000.00	3,135,300,000.00	2,480,300,000.00	1,640,900,000.0
EBITDA Margin		26.03%	35.00%	37.99%	35.02%	28.16%

Infineon Technologies (IFNNY)						
Year	Units	2021	2022	2023	2024	2025E
Revenue	€	11,060,000,000.00	14,218,000,000.00	16,309,000,000.00	14,955,000,000.00	14,600,000,000.0
Revenue Growth		29.10%	28.55%	14.71%	-8.30%	-2.37%
Operating Expenses	€	2,790,000,000.00	3,286,000,000.00	3,465,000,000.00	3,879,000,000.00	-
Operating expenses as a % of revenue		25.23%	23.11%	21.25%	25.94%	-
EBIT	€	1,469,000,000.00	2,854,000,000.00	4,019,000,000.00	2,232,000,000.00	2,661,684,168.52
EBIT as a % of Revenue		13.28%	20.07%	24.64%	14.92%	18.23%
D&A	€	1,513,000,000.00	1,664,000,000.00	1,754,000,000.00	1,865,000,000.00	1,900,000,000.0
D&A as a % of revenue		13.68%	11.70%	10.75%	12.47%	13.01%
EBITDA	€	2,982,000,000.00	4,518,000,000.00	5,773,000,000.00	4,097,000,000.00	4,561,684,168.52
EBITDA Margin		26.96%	31.78%	35.40%	27.40%	31.24%

Melexis (MELE)						
Year	Units	2021	2022	2023	2024	2025E
Revenue	€	643,786,021.00	836,147,480.00	964,297,902.00	932,808,067.00	896,800,000.0
Revenue Growth		26.85%	29.88%	15.33%	-3.27%	-3.86%
Operating Expenses	€	125,152,116.00	148,150,434.00	178,970,235.00	181,461,818.00	-
Operating expenses as a % of revenue		19.44%	17.72%	18.56%	19.45%	-
EBIT	€	148,448,410.00	226,528,067.00	261,250,178.00	219,889,102.00	198,192,800.0
EBIT as a% of revenue		23.06%	27.09%	27.09%	23.57%	22.10%
D&A	€	42,996,800.00	43,323,642.00	43,442,043.00	45,639,113.00	62,000,000.0
D&A as a % of revenue		6.68%	5.18%	4.51%	4.89%	6.91%
EBITDA	€	191,445,210.00	269,851,709.00	304,692,221.00	265,528,215.00	260,192,800.0
EBITDA Margin		29.74%	32.27%	31.60%	28.47%	29.01%

Revenue Growth Comparable						
Year	2021	2022	2023	2024	2025E	
Onsemi Semiconductors (ON)	28.25%	23.54%	-0.88%	-14.19%	-17.71%	
Infineon technologies (IFNNY)	29.10%	28.55%	14.71%	-8.30%	-2.37%	
Melexis (MELE)	26.85%	29.88%	15.33%	-3.27%	-3.86%	
Average	28.07%	27.32%	9.72%	-8.59%	-7.98%	

EBIT as a % of Revenue						
Year	2021	2022	2023	2024	2025E	
Onsemi Semiconductors (ON)	17.18%	28.37%	30.60%	25.94%	17.50%	
Infineon technologies (IFNNY)	13.28%	20.07%	24.64%	14.92%	18.23%	
Melexis (MELE)	23.06%	27.09%	27.09%	23.57%	22.10%	
Average	17.84%	25.18%	27.44%	21.48%	19.28%	

D&A as a % of Revenue Comparable						
Year	2021	2022	2023	2024	2025E	
Onsemi Semiconductors (ON)	8.85%	6.63%	7.39%	9.08%	10.65%	
Infineon technologies (IFNNY)	13.68%	11.70%	10.75%	12.47%	13.01%	
Melexis (MELE)	6.68%	5.18%	4.51%	4.89%	6.91%	
Average	9.74%	7.84%	7.55%	8.81%	10.19%	

EBITDA Margin comparable						
Year	2021	2022	2023	2024	2025E	
Onsemi Semiconductors (ON)	26.03%	35.00%	37.99%	35.02%	28.16%	
Infineon technologies (IFNNY)	26.96%	31.78%	35.40%	27.40%	31.24%	
Melexis (MELE)	29.74%	32.27%	31.60%	28.47%	29.01%	
Average	27.58%	33.02%	35.00%	30.30%	29.47%	

EBIT growth Comparable						
Year	2021	2022	2023	2024	2025E	
Onsemi Semiconductors (ON)	- 104.02%	6.93%	-27.25%	-44.49%		
Infineon technologies (IFNNY)	- 94.28%	40.82%	-44.46%	19.25%		
Melexis (MELE)	- 52.60%	15.33%	-15.83%	-9.87%		
Average	- 83.63%	21.02%	-29.18%	-11.70%		



# Appendix

Allegro Microsystems (ALGM)						
Year	Units	2021	2022	2023	2024	2025
Revenue	\$	591,200,000.00	768,700,000.00	812,890,000.00	1,043,206,000.00	725,006,000.00
Revenue Growth		-9.08%	30.02%	5.75%	28.33%	-30.50%
Operating Expenses	\$	262,100,000.00	270,800,000.00	342,772,000.0	378,285,000.0	341,329,000.00
Operating expenses as a % of revenue		44.33%	35.23%	42.17%	36.26%	47.08%
EBIT	\$	16,800,000.00	136,600,000.00	203,300,000.00	196,200,000.00	-19,800,000.00
EBIT as a% of revenue		2.84%	17.77%	25.01%	18.81%	-2.73%
D&A	\$	48,300,000.00	48,500,000.00	50,808,000.00	71,382,000.00	64,502,000.00
D&A as a % of revenue		8.17%	6.31%	6.25%	6.84%	8.90%
EBITDA	\$	65,100,000.00	185,100,000.00	254,108,000.00	267,582,000.00	44,702,000.00
EBITDA Margin		11.01%	24.08%	31.26%	25.65%	6.17%
CAPEX	\$	40,670,000.00	69,940,000.00	79,780,000.00	124,770,000.00	39,960,000.00
CAPEX as a % of Revenue		6.88%	9.10%	9.81%	11.96%	5.51%
Change in Net Operating Working Capital	\$	5,790,000.0	(12,720,000.0)	88,240,000.0	39,470,000.0	(11,930,000.0)
Net Operating Working Capital		0.98%	-1.65%	10.86%	3.78%	-1.65%

5 Year CAGR (Revenue)	
Allegro	5.23%
Onsemi Semiconductors (ON)	-3.50%
Infineon technologies (IFNNY)	7.10%
Melexis (MELE)	8.70%
Average	4.10%

Company	NTM P/E
Allegro (ALGM)	59.1
Onsemi (ON)	22.4
Infineon (IFNNY)	23.3
Melexis (MELE)	21.9

Enterprise Value	5,911,513,631.9
EBITDA	52,400,000.0
EV/EBITDA	112.8x

Allegro Microsystems Key percentages (ALGM)					
Year	2021	2022	2023	2024	2025
Revenue Growth	-9.08%	30.02%	5.75%	28.33%	-30.50%
Operating expenses as a % of revenue	44.33%	35.23%	42.17%	36.26%	47.08%
EBIT as a% of revenue	2.84%	17.77%	25.01%	18.81%	-2.73%
D&A as a % of revenue	8.17%	6.31%	6.25%	6.84%	8.90%
EBITDA Margin	11.01%	24.08%	31.26%	25.65%	6.17%

# Disclaimer

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