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TRIVARIATE RESEARCH

ARE THERE 9 KINDS OF SEMIS? AND HOW TO PLAY THE INDUSTRY NOW GIVEN THE HUGE RALLY

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BACKGROUND AND RESEARCH SUMMARY

We have been writing for months that the S&P500 is essentially 60% an AI ETF. We know that ultimately there will be an overbuild in the datacenter, and that Semiconductors are a cyclical industry. Therefore, we get worried when we see huge moves in the stocks, chatter of structural not cyclical views, sustained shortages, hubris, and debt. We have seen all of these things before, and they don't end well. But timing it and figuring out where to stay and where not to is important. Most Semiconductor investors have been clustering Semiconductors into Analog, MPU, GPU, Memory, and other crude categories for decades. Given the huge moves in Memory, the high but improving days of inventory in industrial-exposed companies, the emergence of the obvious AI-revenue beneficiaries, and the growth in Capital Equipment names, we thought it might be interesting to use ChatGPT to more carefully segment the Semiconductor Industry and see if we could make Semiconductor overweight and underweight recommendations through a new lens. The result is nine categories, and while not perfect, we think a slight improvement for assessing the group:

- 1) **Semiconductor Equipment & Test** — Tools to manufacture and test chips (wafer-fab process equipment, inspection/metrology, probe) **Semiconductor Equipment & Test** — Tools to manufacture and test chips (wafer-fab process equipment, inspection/metrology, probing, ATE).
- 2) **Manufacturing, Packaging & Materials** — Foundries/OSAT/photomasks plus key materials, consumables, and subsystems that enable chip production.
- 3) **Connectivity & Interconnect** — Silicon/IP for moving data and connecting devices (RF front-end, networking chips, high-speed SerDes/interconnect).
- 4) **Analog & Controllers** — Analog/power/mixed-signal and embedded control chips (MCUs/FPGAs/auto controllers) used broadly across electronics.
- 5) **Interfaces, Sensors & Timing** — Edge interface components like sensors, timing, RFID/IoT edge, and human-interface ICs.
- 6) **Compute** — Digital processors and accelerators (CPU/GPU/SoCs) for compute workloads.
- 7) **Memory & Storage** — Memory silicon and storage platforms (DRAM/NAND/MRAM, memory-related IP/controllers, HDD/SSD/flash).
- 8) **Solar** — Solar modules and/or solar inverter/power electronics systems.
- 9) **Others** — Specialty/photronics/frontier names that don't fit the main semiconductor value-chain buckets.

RESEARCH SUMMARY

There's plenty to own: There are 19 mega-/large-cap. Semiconductor companies across nine categories, though many of the categories are dominated by small caps, with Manufacturing, Interfaces and Solar Semiconductor companies having no mega-/large-cap. stocks. There are 40 stocks in the top half of quality in this industry, with the lowest quality sub-industries tending to be Manufacturing, Packaging, and Materials and Solar. This sector is not just NVDA and AVGO.

Revenue projections are above trend: We compared the forecasted revenue growth for the median stock in each of the nine groups to their 10-year trailing averages. Solar and Memory & Storage are forecasted to grow the most above trend, while every other category is projected to grow above its ten-year average over the next 12-months except Connectivity & Interconnect.

Gross margins are expanding: Historically, gross margin expansion was highly correlated to multiple expansion, and the KPI for the Semiconductor Industry. The Solar industry is forecasted to see the greatest gross margin growth, though the median Solar company's gross margin is well below the Semiconductor Industry's average. **Most groups are forecasted to have gross margin expansion over the next 12 months, including Memory and Storage, where the median company is forecasted to have 64% gross margins, well above the 44% in 2025.**

Revisions trends: With high and increasing expectations for margin expansion, one question is – have estimates been surprising to the upside? For revenue, the median Semiconductor company has seen strong upward revisions relative to the average Technology company, with the strongest upside in Memory & Storage and Analog & Controllers. Only Solar, Compute, and Manufacturing & Packaging have had lower-than-average sales revisions of late. Similarly, there has been strong earnings upside for the median company in nearly every Semiconductor category as well.

INVESTMENT CONCLUSIONS

Disconnects between growth and margins: We looked at the percentiles vs history of forecasted revenue growth and forecasted gross margins for the median stock in each of the nine categories and compared it to the enterprise value-to-forecasted sales for the median stock. Most of the Semiconductor industry groups are forecasted to have high revenue growth and gross margin expansion vs. their histories and are priced for it. Semi-caps. and Connectivity & Interconnect are expensive but don't have above average gross margins.

Correlations between the nine groups: Does it make sense to think about trading these 9 Semiconductor groups differently? The answer appears to be yes. We looked at the 6-month correlations of each of the 9 groups with the other 8. Solar, unsurprisingly trades differently than the rest. But Compute, Analog & Controllers, and Memory also appear to not be trading with a particularly high correlation. Memory stocks clearly were trading very differently than Compute stocks late last year, but over the last 63-days (3 months) appear to be back trading like the Compute sector.

For a THREE MONTH VIEW, our bias is to stay Overweight Semiconductors, despite the huge rally, because so many semiconductor companies are projected to post gross margin expansion for the next few quarters. The question is, where is estimate achievability above-and-below-average in the near-term, and long-term.

Slide 12 provides long and short ideas for a 3-month horizon based on recent changes in multiples and revisions, which predict future revisions.

USING CHATGPT WE CLUSTERED SEMIS INTO 9 CATEGORIES

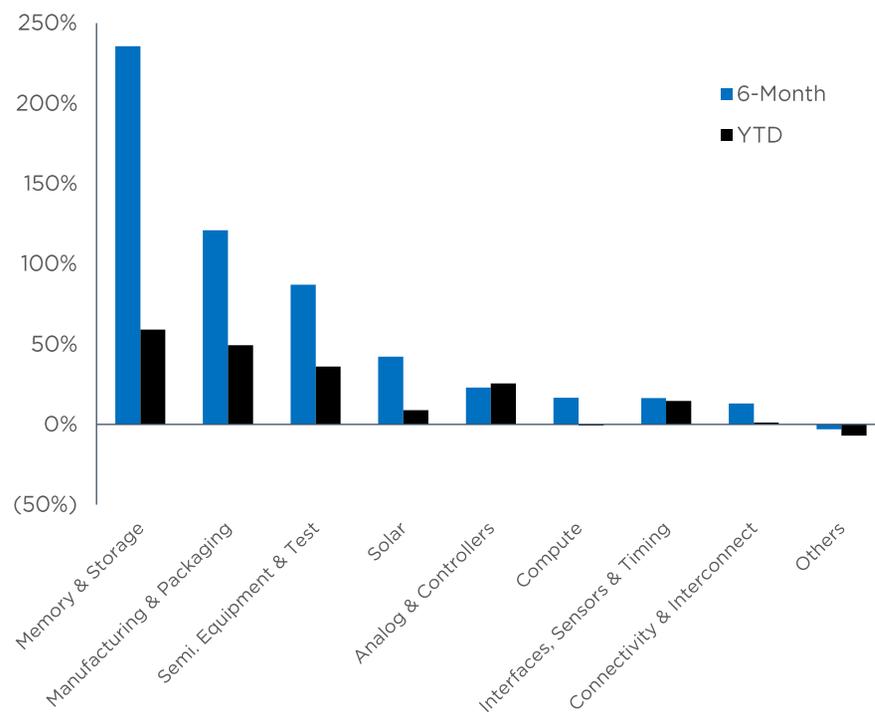
We broke the Semiconductor industry into nine different categories to see where fundamentals and price action are deviating to locate any opportunities. We used ChatGPT to cluster Semiconductor stocks into nine distinct categories (left). Each category has between 4 and 17 stocks. Over the past six months, one-third of the nine categories are up more than 50% (right). The biggest winners are Memory & Storage (MU, STX, SNDK, etc.), Manufacturing (GFS, ENTG, TSEM, etc.) and Semiconductor Capital Equipment and Testing (LRCX, AMAT, KLAC, etc.). Only the Others category was down over the last six months, though even some of those like, RGTI were up massively earlier in the year.

T3000 Semi. Stocks Categorized by Core Business/Product Type
As of February 18th, 2026

Category	Company Count	Market Cap. (\$Bn)	Sample Tickers
Semiconductor Equipment & Test	17	907.82	LRCX, AMAT, KLAC, TER, MKSI
Analog & Controllers	13	589.43	TXN, ADI, NXPI, MPWR, MCHP
Connectivity & Interconnect	10	1741.22	AVGO, MRVL, ALAB, CRDO, MTSI
Manufacturing, Packaging & Materials	10	81.93	GFS, ENTG, TSEM, AMKR, PLAB
Interfaces, Sensors & Timing	7	32.59	SITM, CRUS, SLAB, PI, SYNA
Compute	6	5277.38	NVDA, AMD, INTC, QCOM, AMBA
Memory & Storage	6	766.93	MU, STX, SNDK, WDC, RMBS
Others	6	13.01	RGTI, OLED, POET, KOPN, DVLT
Solar	4	35.08	FSLR, ENPH, SEDG, CSIQ

Source: Trivariate Research

6-Month and YTD Cumulative Return by Semi Categories
As of February 18th, 2026



Source: Trivariate Research

THERE ARE 19 MEGA-/LARGE-CAPS AND 40 TOP HALF QUALITY STOCKS

There are now 19 mega-/large-cap. Semiconductor companies across the nine categories, though many of the categories are dominated by small caps, with Manufacturing, Interfaces and Solar Semiconductor companies having no mega-/large-cap. stocks (left). There are 40 stocks in the top half of quality in this industry (left), with the lowest quality sub-industries tending to be Manufacturing, Packaging, and Materials and Solar (right).

**T3000 Semi. Stocks Categorized by Core Business/Product Type
Count and Proportion by Size Bucket
As of End-January, 2026**

Category	Mega / Large Cap.	Mid Cap.	Small / Micro Cap.
Semiconductor Equipment & Test	4 (24%)	3 (18%)	10 (59%)
Analog & Controllers	5 (38%)	2 (15%)	6 (46%)
Connectivity & Interconnect	2 (20%)	6 (60%)	2 (20%)
Manufacturing, Packaging & Materials	0 (0%)	4 (40%)	6 (60%)
Interfaces, Sensors & Timing	0 (0%)	1 (14%)	6 (86%)
Compute	4 (67%)	0 (0%)	2 (33%)
Memory & Storage	4 (67%)	1 (17%)	1 (17%)
Others	0 (0%)	0 (0%)	6 (100%)
Solar	0 (0%)	1 (25%)	3 (75%)

Source: Trivariate Research

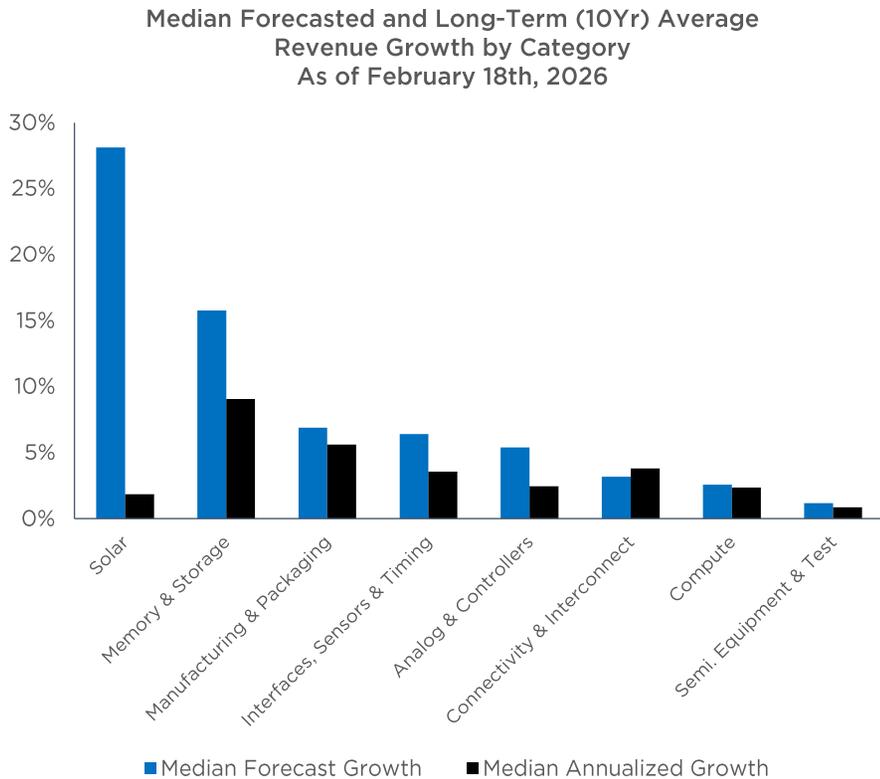
**T3000 Semi. Stocks Categorized by Core Business/Product Type
Count and Proportion by Quality Bucket
As of End-January, 2026**

Category	High Quality	Mid Quality	Low Quality	Junk Quality
Semiconductor Equipment & Test	2 (12%)	8 (47%)	5 (29%)	2 (12%)
Analog & Controllers	2 (15%)	4 (31%)	3 (23%)	4 (31%)
Connectivity & Interconnect	3 (30%)	4 (40%)	2 (20%)	1 (10%)
Manufacturing, Packaging & Materials	0 (0%)	4 (40%)	0 (0%)	6 (60%)
Interfaces, Sensors & Timing	3 (43%)	2 (29%)	1 (14%)	1 (14%)
Compute	3 (60%)	0 (0%)	2 (40%)	0 (0%)
Memory & Storage	2 (33%)	0 (0%)	4 (67%)	0 (0%)
Others	1 (17%)	1 (17%)	3 (50%)	1 (17%)
Solar	0 (0%)	1 (25%)	0 (0%)	3 (75%)

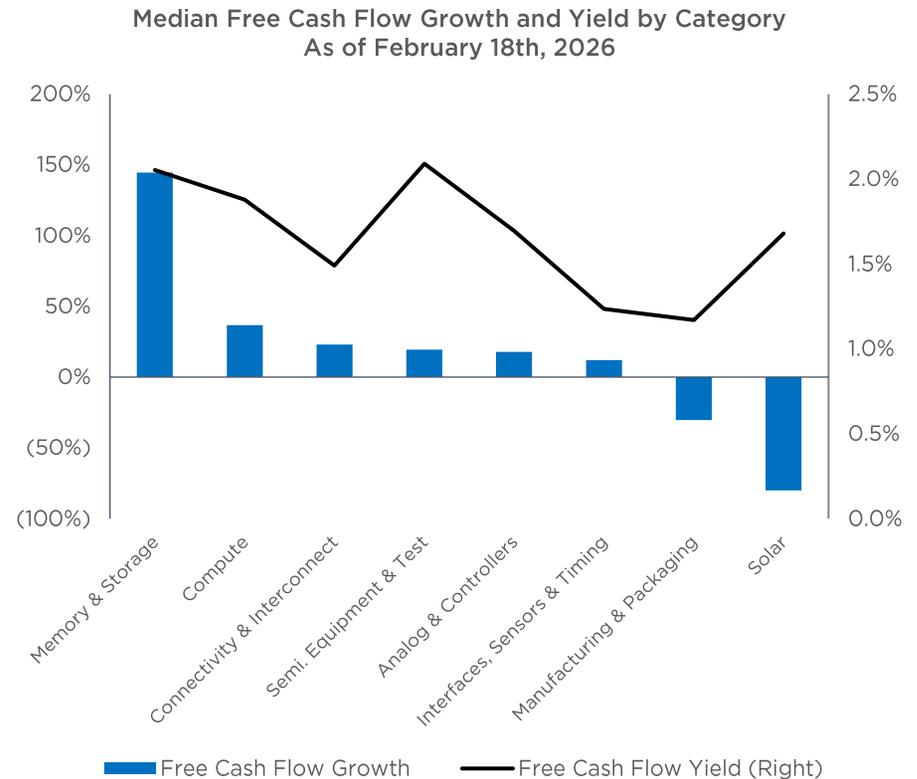
Source: Trivariate Research

REVENUE FORECASTS ARE GENERALLY ABOVE TREND

We compared the 12-month forward forecasted revenue growth for the median stock in each of the 9 groups to their 10-year trailing averages (left). Solar and Memory & Storage are forecasted to grow the most above trend, while every other category is projected to grow above its ten-year average over the next 12-months except Connectivity & Interconnect. The median stock in only two categories (Memory & Storage and Semi. Equipment & Test) has above a 2% FCF yield (right). Memory & Storage are forecasted to have strong FCF growth, whereas the median stock in both Solar and Manufacturing & Packaging is projected to have declining FCF on a year-over-year basis.



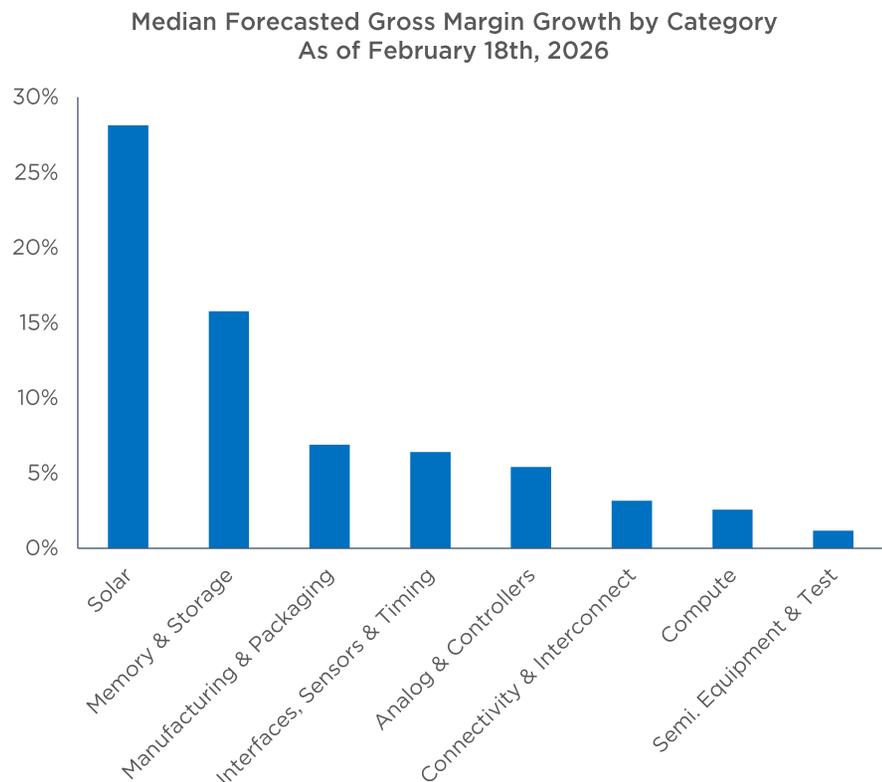
Source: Trivariate Research



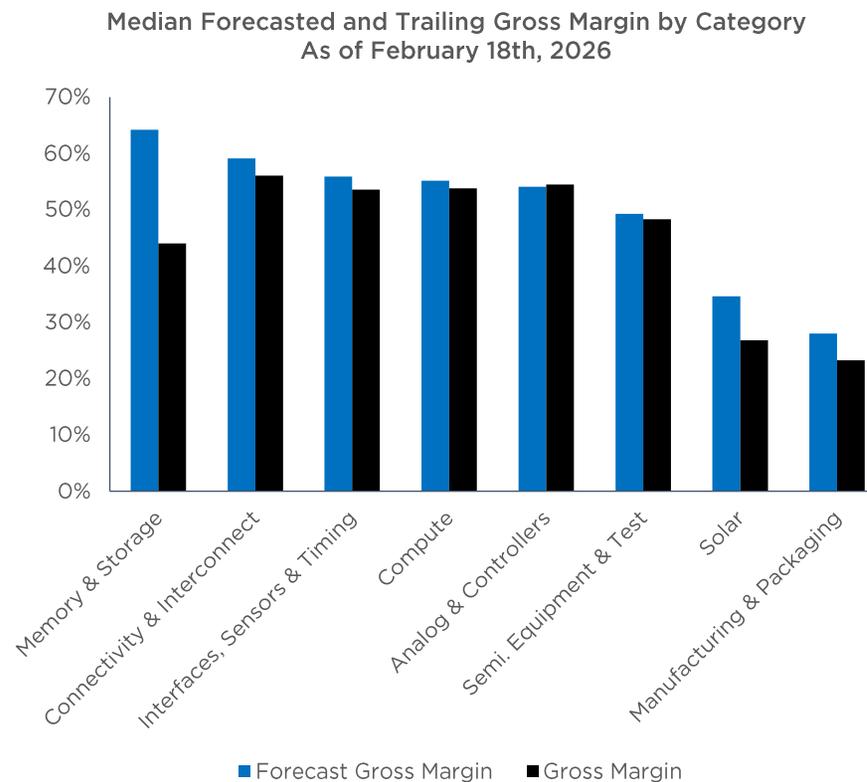
Source: Trivariate Research

64% FORECASTED GROSS MARGINS FOR MEMORY AND STORAGE!

Historically, gross margin expansion was highly correlated to multiple expansion, and the KPI for the Semiconductor Industry. The Solar industry is forecasted to see the greatest gross margin growth (left), though the median Solar company's gross margin is well below the Semiconductor Industry's average (right). Most groups are forecasted to have gross margin expansion over the next 12 months, including Memory and Storage, where the median company is forecasted to have 64% gross margins, well above the 44% in 2025.



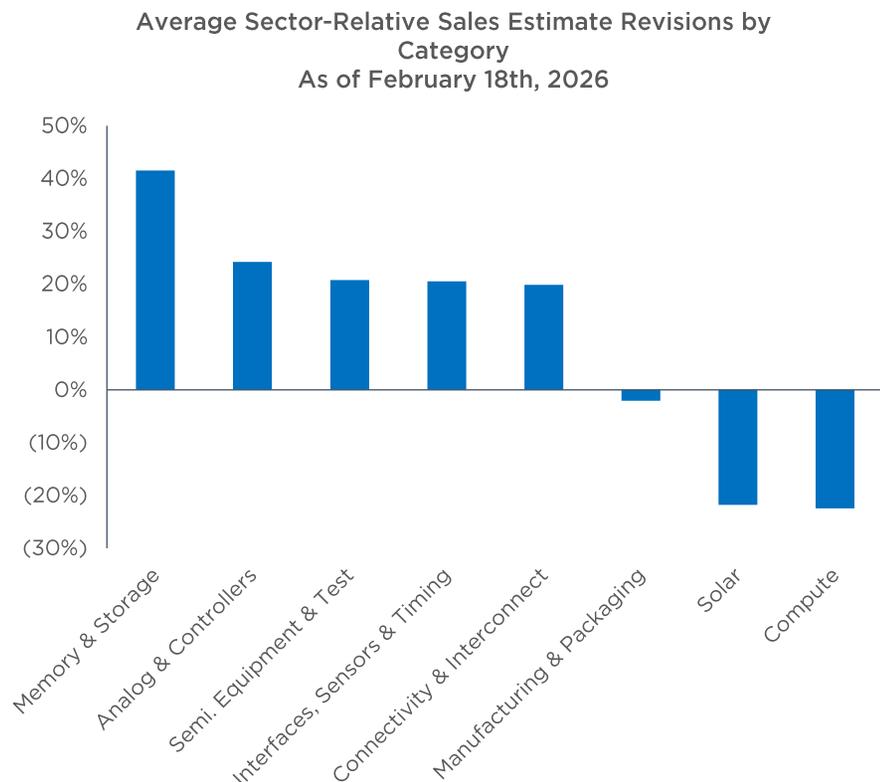
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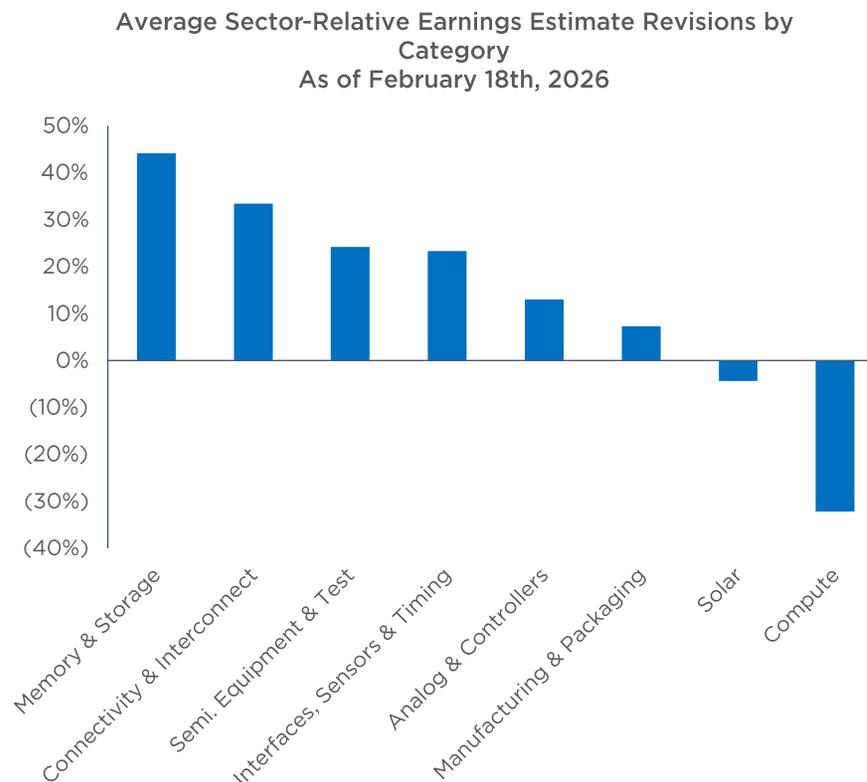
Source: Trivariate Research

SEMIS HAVE HAD STRONGER REVISIONS THAN THE AVG. TECH CO.

With high expectations for margin expansion, one question is – have estimates been surprising to the upside? For revenue (left), the median Semiconductor company has seen strong upward revisions relative to the average Technology company, with the strongest upside in Memory & Storage and Analog & Controllers. Only Solar, Compute, and Manufacturing & Packaging have had lower-than-Technology average sales revisions of late. Similarly, there has been strong earnings upside for the median company in nearly every Semiconductor category as well (right).



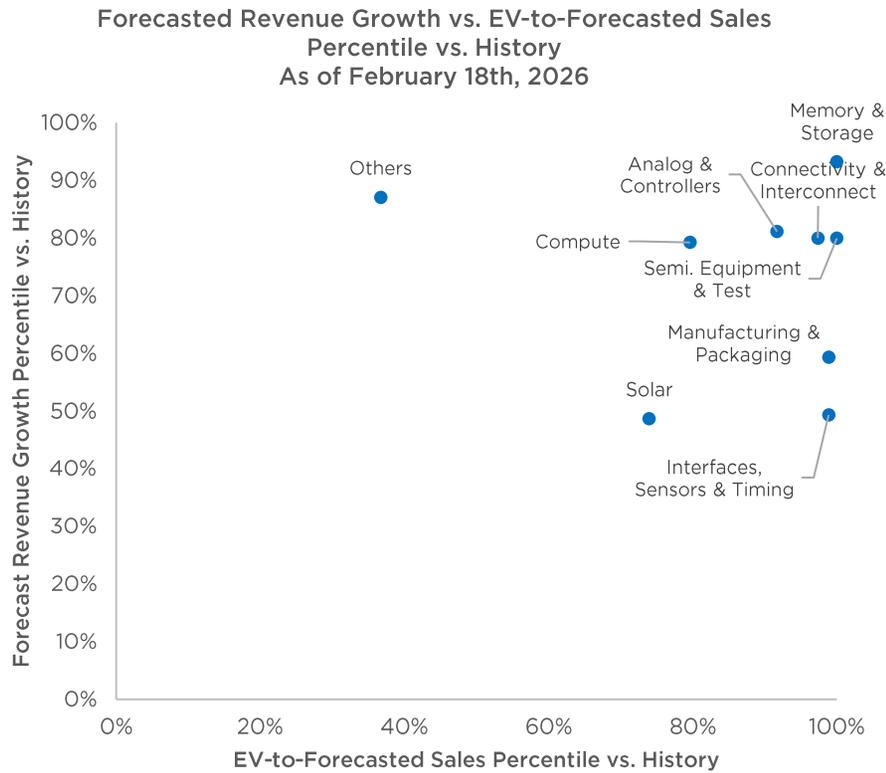
Source: Trivariate Research



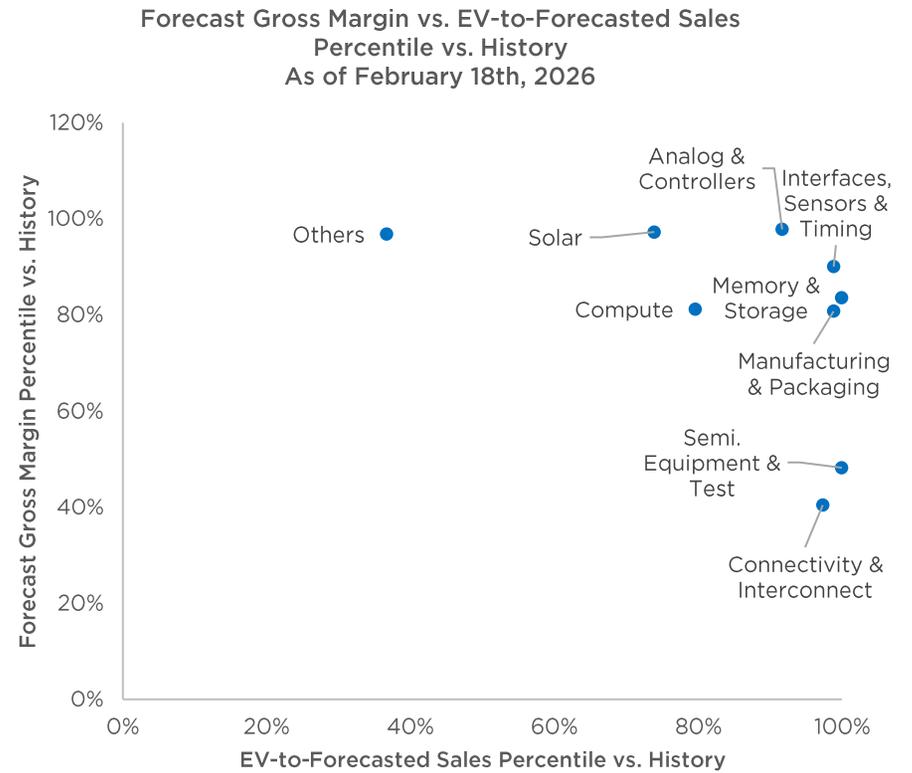
Source: Trivariate Research

MOST GROUPS ARE GROWING ABOVE TREND BUT EXPENSIVE

We looked at the percentiles vs history of forecasted revenue growth (left) and forecasted gross margin (right) for the median stock in each of the nine categories and compared it to the enterprise value-to-forecasted sales for the median stock. The cluster of both exhibits to the upper right of the scatter plots show that most of the Semiconductor industry groups are forecasted to have high revenue growth and gross margin expansion vs. their histories and are priced for it. Semi-caps. and Connectivity & Interconnect are expensive but don't have above average gross margins.



Source: Trivariate Research



Source: Trivariate Research

MEMORY STOCKS ARE NOW CORRELATED TO COMPUTE AGAIN

Does it make sense to think about trading these 9 Semiconductor groups differently? The answer appears to be yes. We looked at the 6-month correlations of each of the 9 groups with the other 8. Solar, unsurprisingly trades differently than the rest (left). But Compute, Analog & Controllers, and Memory also appear to not be trading with a particularly high correlation. Memory stocks clearly were trading very differently than Compute stocks last year but over the last 63-days (3 months) appear to be back trading like the Compute sector (right).

Trailing 6-Month Pairwise Correlation between 9 Semi Basket for Daily Return
As of February 18th, 2026

	Analog & Controllers	Compute	Connectivity & Interconnect	Interfaces, Sensors & Timing	Manufacturing & Packaging	Memory & Storage	Others	Semi. Equipment & Test	Solar
Analog & Controllers	100.0%	67.4%	64.2%	77.5%	76.3%	55.7%	57.3%	74.4%	40.4%
Compute	67.4%	100.0%	72.7%	56.3%	73.9%	65.5%	48.2%	71.2%	41.4%
Connectivity & Interconnect	64.2%	72.7%	100.0%	63.5%	76.5%	64.3%	50.0%	76.2%	42.4%
Interfaces, Sensors & Timing	77.5%	56.3%	63.5%	100.0%	65.0%	50.7%	44.9%	62.9%	43.3%
Manufacturing & Packaging	76.3%	73.9%	76.5%	65.0%	100.0%	69.8%	51.3%	86.4%	43.4%
Memory & Storage	55.7%	65.5%	64.3%	50.7%	69.8%	100.0%	31.6%	72.4%	37.1%
Others	57.3%	48.2%	50.0%	44.9%	51.3%	31.6%	100.0%	51.2%	31.7%
Semi. Equipment & Test	74.4%	71.2%	76.2%	62.9%	86.4%	72.4%	51.2%	100.0%	35.5%
Solar	40.4%	41.4%	42.4%	43.3%	43.4%	37.1%	31.7%	35.5%	100.0%

Source: Trivariate Research

Compute vs. Memory & Storage
63-Day Rolling Correlation of Returns
Through February 18th, 2026



Source: Trivariate Research

IDEAS BASED ON CHANGES IN MULTIPLES AND REVISIONS

Long ideas (left) are in Memory and Analog & Controllers, where multiples have recently expanded and in groups where there have been recent upward revisions. This group is most likely to have near-term upside to estimates. Short ideas (right) have had relative downward revisions in groups with relatively weaker revisions, indicating the potential for more downside to estimates is above average.

Long Ideas
Memory / Analog & Controller Semi. Stocks
With Multiple Expansion and Highest Upward Revision
As of February 18th, 2026

Ticker	Company	Market Cap. (\$Bn)	Category
TXN	Texas Instruments Incorporated	202.67	Analog & Controllers
WDC	Western Digital Corporation	100.55	Memory & Storage
STX	Seagate Technology Holdings plc	92.49	Memory & Storage
MPWR	Monolithic Power Systems, Inc.	57.88	Analog & Controllers
MCHP	Microchip Technology Incorporated	42.81	Analog & Controllers
LSCC	Lattice Semiconductor Corporation	13.30	Analog & Controllers
ALGM	Allegro MicroSystems, Inc.	7.15	Analog & Controllers
DIOD	Diodes Incorporated	3.11	Analog & Controllers
AOSL	Alpha and Omega Semiconductor Limited	0.67	Analog & Controllers

Source: Trivariate Research

Short Ideas
Compute, Solar and Manufacturing Semi. Stocks
With Downward Revision
As of February 18th, 2026

Ticker	Company	Market Cap. (\$Bn)	Category
INTC	Intel Corporation	227.08	Compute
QCOM	QUALCOMM Incorporated	152.84	Compute
TSEM	Tower Semiconductor Ltd.	14.44	Manufacturing, Packaging & Materials
SEDG	SolarEdge Technologies, Inc.	2.12	Solar
CSIQ	Canadian Solar Inc.	1.33	Solar
AXTI	AXT, Inc.	1.26	Manufacturing, Packaging & Materials

Source: Trivariate Research

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