Morgan Stanley | RESEARCH

IDEA

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Semiconductors | North America

Selloff of US memory stocks creates a compelling entry point

This remains an unusual memory cycle, as data center strength is the only cause – which means that as we saw in April there are mixed signals elsewhere that may be a false flag. Memory isn't the best risk reward in our coverage – which we think is NVDA/AVGO – but it's catching up fast.

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SEMICONDUCTORS

North America	
Industry View	**Attractive**

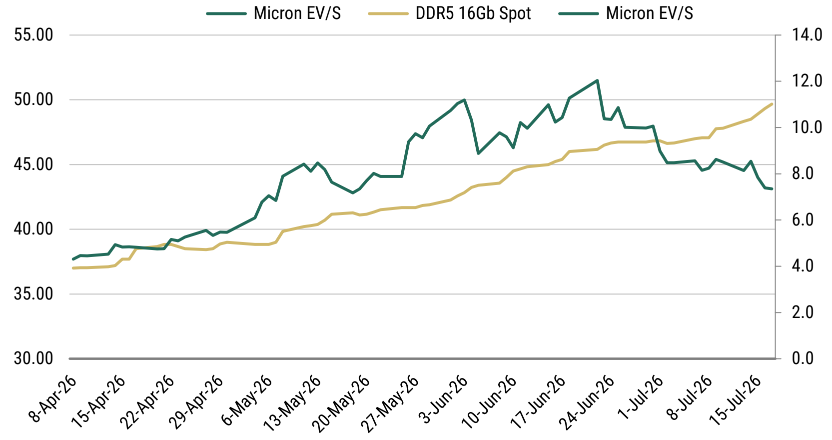
Key Takeaways

- Recent concerns – second derivative deceleration, higher capex, de-speccing – were predictable a month ago
- But this is not a normal cycle – memory is a bottleneck, increasingly THE bottleneck, to AI builds (and agentic CPU builds), which appear durable
- Result – shortages continue to intensify, with data center memory prices up 25% + in 3q
- That's deceleration on some level from higher 2q increases but that has been obvious
- LTAs and de-speccing could flatten the amplitude of the cycle vs. inflated expectations – but increase duration, which is likely better for stocks in the long run

Memory stocks are crowded, and with the unusual nature of this cycle periods of drawdowns seem inevitable – but we are buyers on that weakness. In a cycle entirely driven by data center, there are going to be mixed signals in consumer, PC, smartphone markets, which impact spot market and inventory levels at various points; we believe that some of the anecdotes dragging the stocks down in recent days have been about those parts of the market.

But we spent last week talking to several of our purchasing contacts in the data center space, and the intensity of the shortages in that part of the business show no signs of abating. We see prices up at least 25% on a like-for-like basis from 2q to 3q, above our estimates and above 3rd-party estimates. As importantly, the longer-term concerns that the memory shortage will intensify in 2027 and again in 2028 are still as strong as ever. There isn't enough memory vs. AI requirements, and we just don't see that changing.

Exhibit 1: DRAM multiples have corrected sharply, spot pricing is continuing to move higher



Source: FactSet, TrendForce, Morgan Stanley Research

But isn't that a second derivative deceleration? Yes, of course, and we have highlighted over and over that this would be inevitable. Per SIA, DRAM pricing was up 70% q/q in 1q and over 40% in 2q. There's simply no possibility of extending that momentum given that memory revenues are now over $200 bn this quarter vs. $46 bn this time last year – and if it did it would be demand destructive as DRAM revenues would catch up to cloud capex. Everyone knows this, and knew this at the share price peak a few weeks ago.

Aren't the long-term agreements capping upside? Our view is that the long-term agreements are important to the stocks, but more because they provide evidence of what our checks are showing rather than because they will be hard and fast contracts in any and all environments. That said, the structure of the agreements is to some extent aiming to provide duration but cap the amplitude of the cycle. The LTA does not ensure that the customer pays the peak price, it's somewhere in between.

That said, we believe that Micron's disclosure on its earnings call that the 2q price could be the ceiling on some of the recently closed deals is something of a conservative framing. Per our industry checks, those are likely deals that were agreed in principle some time ago, with long lead times for legal sign-off, etc., and that new deals being agreed upon now will have a higher ceiling.

It's still safe to say that an LTA meet in the middle, providing both counterparties some certainty and protection, and it may disappoint those who had very high near-term earnings expectations.

What about de-speccing? We noted recently that we believe NVIDIA has cut the main LPDDR5 memory content in the racks fairly materially. Further, NVIDIA also talked about the need to drive for more memory efficiency given token growth of 10x per year dramatically outpacing memory supply, which is more than just de-speccing. There could be a general re-engineering of compute, working, and storage designed to optimize around memory constraints.

That's a factor that could dampen pricing at the margin. If companies can't ship anything because there isn't enough DRAM, there is a quarter-end auction that has a powerful impact on price. But at the same time, our view is that it provides a very durable cycle view, as memory usage will certainly scale up with supply.

The underlying premise behind those potential actions is that we have a memory shortage that will last for several years, and rather than the AI business coming to a halt waiting for more memory, we will make do. But that longer-term shortage is the signal.

Higher DRAM capex will drive more supply, to be sure, but we aren't talking about a PC smartphone and server market growing 3-5% as the primary demand driver. AI spending growth north of 50% – perhaps well north – based on processor company commentary, matters more each year as AI is a bigger portion of the pie. HBM4 complexity will absorb capacity, with content doubling next year with Rubin Ultra – but there is also exceptional demand for low-power DDR5 for racks, and very high demand in enterprise storage.

In the case of NAND, capex has continued to be unbelievably benign; we do expect spending to climb next year, but not in a way that expands supply.

Our view continues to be that looking for sell signals from prior cycles misses the point. Memory is not just constrained by AI demand – memory is increasingly one of THE major primary constraints on AI demand, along with space and power. For three years, we heard others make that case, and we disagreed with it, as there was clearly slack in the DRAM supply, but that slack is gone. AI is consuming so much DRAM that there isn't enough left over for other sectors, and everywhere we look we see indications that it is a true bottleneck. It's holding back PC builds and smartphone builds. Cloud customers are paying premiums to the expected 2q price for 6-week expedites; do we think those customers are paying those premia to stockpile memory in a warehouse?

Duration is in many ways the most important debate here, rather than amplitude of peak earnings. Several years of earnings that are climbing from the current run rates are likely more conducive to high valuations than a single very strong year, and most of the actions here – longer-term agreements, customer engineering efforts – point to stronger duration.

As a result, we think that the selloff in the stocks has created a strong entry point. We think that the best value in the market comes from the compute names, notably NVDA and AVGO, but memory is catching up quickly given this deceleration, and we think this should provide a good entry point for the stocks.

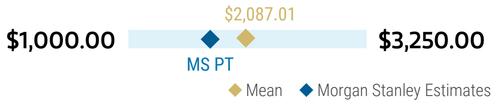
Risk Reward – SanDisk Corporation. (SNDK.O)

NAND improving quickly on the back of accelerating cloud demand

PRICE TARGET $1,750.00

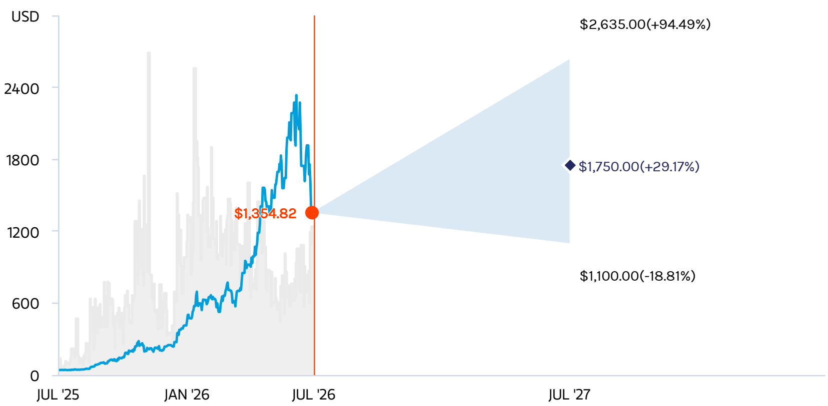
We assume 28x through-cycle EPS of $62.50 (vs. our estimate of FY21-FY29 average of $56). As improving industry dynamics as well as eSSD demand lead to sustained levels of higher profitability. 28x is a slight discount to our through-cycle multiple target for MU (28.5x) as the lower AI exposure is offset by historically higher FCF conversion

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



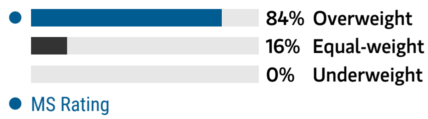
Key: Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

AI demand is in the process of transforming the NAND market, and driving peak cycle EPS to multiples of what we have seen in the past. With still minimal new investment in capacity and evolving AI demand drivers we see a long runway for upward revisions.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

New Data Era:	*Positive*
Secular Growth:	*Positive*

View descriptions of Risk Rewards Themes here

BULL CASE $2,635.00

31x through-cycle EPS of $85

Our bull case of $2,635 per share represents 31x a higher through-cycle EPS of $85.00. Here future peak earnings look similar to the current environment, with AI demand supporting through cycle EPS about 40% of current cycle peak. As well as with more mild downturns, higher levels of profitability supporting a higher multiple.

BASE CASE $1,750.00

28x through-cycle EPS of $62.50

Improving industry dynamics as well as eSSD demand lead to higher levels of profitability than we have seen over the last few years, 28x is a discount to our through-cycle multiple target for MU (28.5x) as the lack of direct AI is offset by historically higher FCF conversion.

BEAR CASE $1,100.00

25x through-cycle EPS of $44

We think Sandisk can avoid much of the pain of the last downturn ($13 per share loss), and with a better upcycle, with the multiple towards the average of the semiconductor group.

Risk Reward – SanDisk Corporation. (SNDK.O)

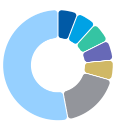
KEY EARNINGS INPUTS

Drivers	Jun 2025	Jun 2026e	Jun 2027e	Jun 2028e
GAAP Revenue ($, mm)	7,355	19,480	48,826	43,405
Non-GAAP Gross Margin (%)	30.3	69.2	86.7	84.4
Non-GAAP EPS ($)	2.74	65.03	214.73	179.97
Inventory ($, mm)	2,079	2,107	2,451	2,412
DOI	145.5	126.2	135.1	128.0

INVESTMENT DRIVERS

- Improved pricing and demand strength drive earnings growth
- Position in DC SSD market improves

GLOBAL REVENUE EXPOSURE



0-10%	APAC, ex Japan, Mainland China and India
0-10%	Japan
0-10%	Latin America
0-10%	Mainland China
0-10%	UK
10-20%	Europe ex UK
40-50%	North America

Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

MS ALPHA MODELS

5/5 **BEST**	24 Month Horizon	4/5 **MOST**	3 Month Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Quicker eSSD penetration in the datacenter
- Higher NAND content growth from edge AI applications
- Sandisk's investments in advanced memory technologies such as HBF (high Bandwidth Flash) pay dividends

RISKS TO DOWNSIDE

- NAND industry growth disappoints
- Capex growth returns as industry participants invest to gain share
- Sandisk loses market share as they fail to gain traction in datacenter
- China continues to gain share

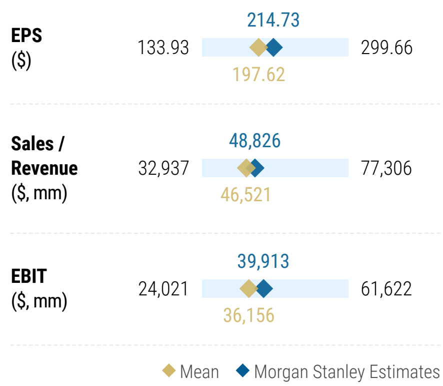
OWNERSHIP POSITIONING

Inst. Owners, % Active	48.6%
HF Sector Long/Short Ratio	2.1x
HF Sector Net Exposure	29.5%

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure – Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Jun 2027e



Source: Refinitiv, Morgan Stanley Research

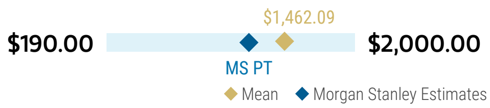
Risk Reward – Micron Technology Inc. (MU.O)

See multiple quarters of upward revisions, with AI driving a higher multiple

PRICE TARGET $1,200.00

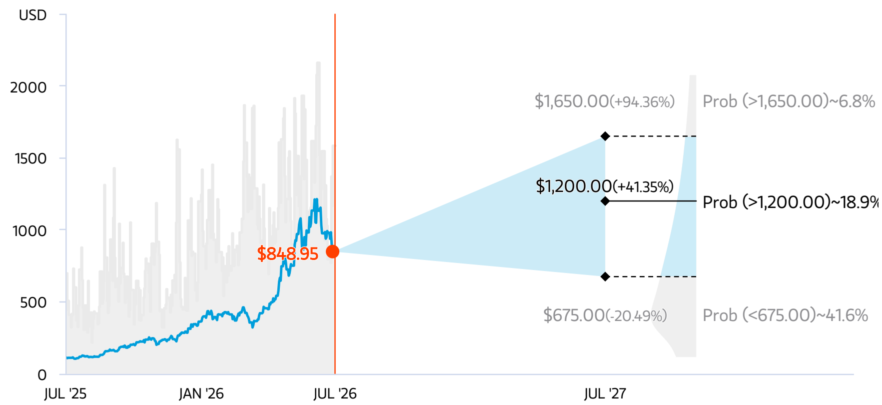
30x through-cycle earnings of US $40.00, a premium to history reflecting new opportunities in AI, in-line with broader semis.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



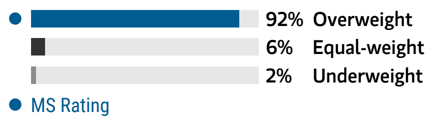
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 17 Jul 2026. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology here

OVERWEIGHT THESIS

- DRAM fundamentals are in uncharted territory, and should continue to improve as datacenter/AI markets continue their upward trajectory
- Execution on AI is underappreciated, and we expect Micron to maintain HBM share in CY26 vs the competition, supporting margins and driving a higher multiple than prior cycles
- Cycle longevity will be key, and S/D may stay tight for 2-3 more years

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

New Data Era:	*Positive*
Secular Growth:	*Positive*

View descriptions of Risk Rewards Themes here

BULL CASE $1,650.00

33x through-cycle earnings of US$50

Gross margin improvement continues, driven by scale, AI mix, and cost improvements in new products. Pricing pressure alleviates as demand sustainably moves above supply driven by HBM's wafer intensity, a product category where MU cements performance leadership on future products.

BASE CASE $1,200.00

30x through-cycle earnings of US$40

Our through-cycle earnings estimate of US$40.00 is a small premium to our new FY18-FY28 average ($38) as we continue to assume peaks and valleys in earnings over time. Our 30x multiple reflects the market's enthusiasm for the AI opportunity, and is at the midpoint of the semis group

BEAR CASE $675.00

27x through-cycle earnings of US$25.00

Memory begins to enter a downturn in early 2027, as the strength attributed to demand in the early part of the year ended up being inventory build at customers. Multiple compresses severely after an underwhelming peak

Risk Reward – Micron Technology Inc. (MU.O)

KEY EARNINGS INPUTS

Drivers	Oct 2025	Oct 2026e	Oct 2027e	Oct 2028e
GAAP Revenue ($, mm)	37,378	128,983	266,867	248,665
Non Gaap Gross Margin (%)	40.9	80.7	89.3	85.6
Non-GAAP EPS ($)	8.29	73.30	168.52	148.85
Inventory ($, mm)	8,355	9,058	10,030	12,795
DOI	133.7	128.1	123.5	126.8

CATALYST CALENDAR

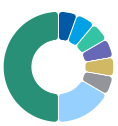
Date	Event
15 Jan 2027 - 19 Jan 2027	Micron Technology Inc Annual Shareholders Meeting

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Improved pricing and demand strength drive earnings growth

GLOBAL REVENUE EXPOSURE



- 0-10% APAC, ex Japan, Mainland China and India
- 0-10% India
- 0-10% Japan
- 0-10% MEA
- 0-10% Mainland China
- 0-10% UK
- 10-20% Europe ex UK
- 40-50% North America

Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

MS ALPHA MODELS

5/5 BEST	24 Month Horizon	4/5 MOST	3 Month Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Customers continue to demonstrate an appetite to take on inventory around macroeconomic uncertainty
- Additional wafer intensity of HBM further improves overall supply and demand
- MIcron's HBM share surpasses expectations

RISKS TO DOWNSIDE

- Pricing can turn quickly; a falter in end demand with inventories elevated could lead to a swift price reduction
- HBM demand falters and competition intensifies, pressuring pricing

OWNERSHIP POSITIONING

Inst. Owners, % Active	46.5%
HF Sector Long/Short Ratio	2.1x
HF Sector Net Exposure	29.5%

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure – Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Oct 2026e

	Low	Morgan Stanley Estimates	Mean	High
Sales / Revenue ($, mm)	113,900	128,983	129,134	138,764
EBITDA ($, mm)	93,101	106,861	107,485	117,558
Net income ($, mm)	69,975	84,207	83,889	90,585
EPS ($)	60.90	73.30	73.18	80.16

◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Valuation Methodology and Risks

Broadcom Inc. (AVGO.O)

We value AVGO at 28X CY2027e ModelWare EPS of $17.92. This is roughly 26x non-GAAP EPS of $19.59, which is broadly in-line or below their AI peer group.

Risks to Upside

- Stronger AI revenues
- Faster recovery in core semis businesses
- Realized VMware synergies

Risks to Downside

- Lose networking share to Nvidia (Mellanox)
- ASIC chips are uncompetitive; lose customers to competitors
- Execution on VMware acquisition

NVIDIA Corp. (NVDA.O)

~22 our MW CY27 EPS estimate of $13.08, in-line with the broader market and a discount to compute semis peers (AMD/AVGO/INTC) as high marketshare and gross margins leave limited levers for multiple expansion in the near term.

Risks to Upside

- Growth in training and inference propel data center revenue
- Gaming sales accelerate as GPU based AI PCs gain traction
- Nvidia can recapture lost revenue in China

Risks to Downside

- AI end markets don't materialize as expected, customers sharply reduce GPU purchases
- AMD reemerges as a viable GPU competitor
- Cloud customers outside of Google are able to develop competitive custom hardware

Risk Reward Reference links

1. View explanation of Options Probabilities methodology - Options_Probabilities_Exhibit_Link.pdf

2. View descriptions of Risk Rewards Themes - RR_Themes_Exhibit_Link.pdf

3. View explanation of regional hierarchies - GEG_Exhibit_Link.pdf

4. View explanation of Theme/Exposure methodology - ESG_Sustainable_Solutions_External_Link.pdf

5. View explanation of HERS methodology - ESG_HERS_External_Link.pdf

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(as of June 30, 2026)

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	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1544	42%	453	49%	29%	757	44%
Equal-weight/Hold	1577	43%	390	42%	25%	769	44%
Not-Rated/Hold	3	0%	1	0%	33%	1	0%
Underweight/Sell	544	15%	89	10%	16%	204	12%
Total	3,668		933			1731	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

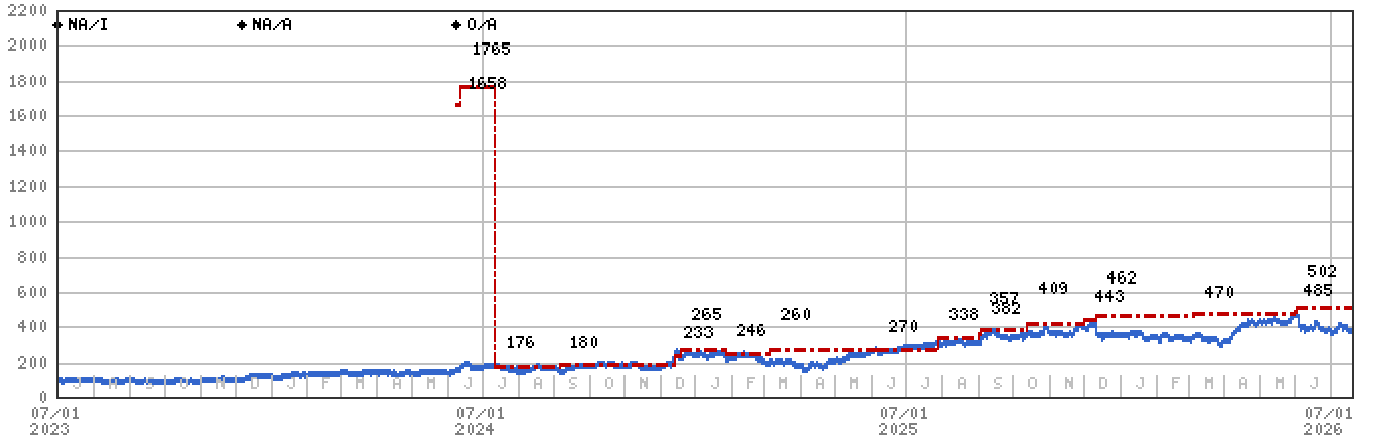
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Stock Price, Price Target and Rating History (See Rating Definitions)

Broadcom Inc. (AVGO.O) - As of 07/20/26 GMT in USD
Industry : Semiconductors



Stock Rating History: 7/1/21 : O/I; 5/26/22 : NA/I; 10/10/22 : NA/I; 11/7/22 : NA/I; 12/7/23 : NA/A; 6/9/24 : O/A

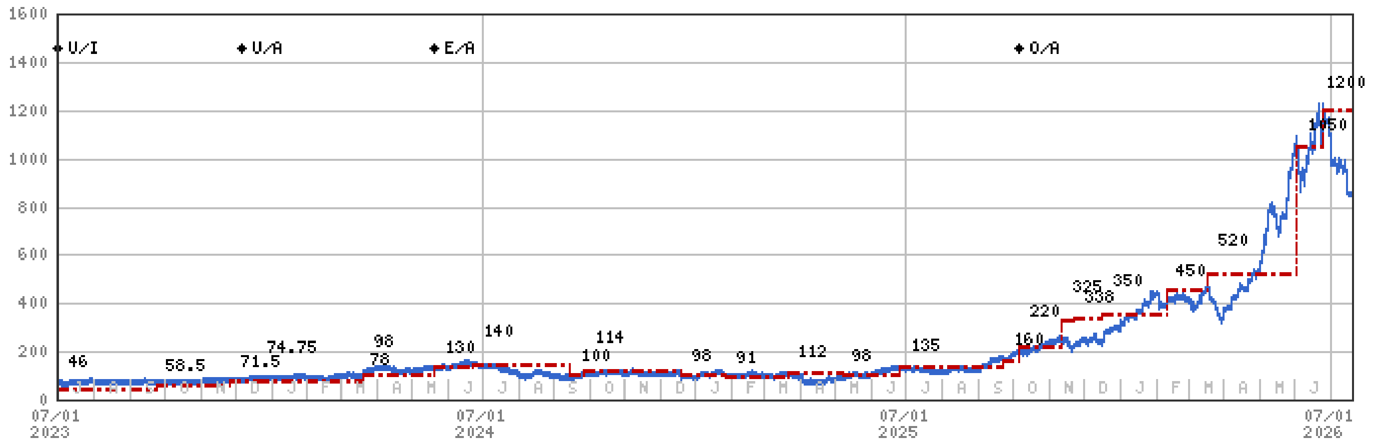
Price Target History: 6/4/21 : 555; 9/2/21 : 572; 12/10/21 : 723; 3/3/22 : 703; 5/26/22 : NA; 10/10/22 : NA; 11/7/22 : NA; 6/9/24 : 1658; 6/12/24 : 1765; 7/12/24 : 176; 9/5/24 : 180; 12/13/24 : 233; 12/19/24 : 265; 1/27/25 : 246; 3/6/25 : 260; 6/6/25 : 270; 7/29/25 : 338; 9/1/25 : 357; 9/4/25 : 382; 10/13/25 : 409; 12/1/25 : 443; 12/12/25 : 462; 3/5/26 : 470; 5/31/26 : 485; 6/3/26 : 502

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Micron Technology Inc. (MU.O) - As of 07/20/26 GMT in USD
Industry : Semiconductors



Stock Rating History: 7/1/21 : O/I; 8/12/21 : E/I; 7/21/22 : U/I; 12/7/23 : U/A; 5/20/24 : E/A; 10/6/25 : O/A

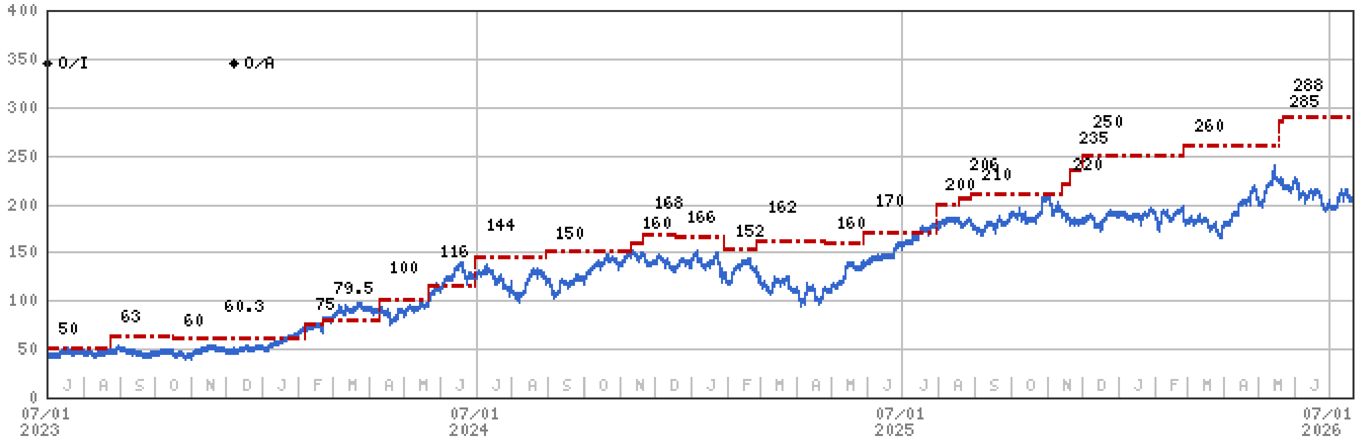
Price Target History: 3/1/21 : 105; 8/12/21 : 75; 12/20/21 : 77; 3/29/22 : 83; 6/21/22 : 56; 9/30/22 : 49; 12/21/22 : 46; 9/24/23 : 58.5; 11/27/23 : 71.5; 12/20/23 : 74.75; 3/18/24 : 78; 3/21/24 : 98; 5/20/24 : 130; 6/23/24 : 140; 9/15/24 : 100; 9/26/24 : 114; 12/19/24 : 98; 1/27/25 : 91; 3/21/25 : 112; 5/7/25 : 98; 6/26/25 : 135; 9/22/25 : 160; 10/6/25 : 220; 11/12/25 : 325; 11/23/25 : 338; 12/17/25 : 350; 2/10/26 : 450; 3/18/26 : 520; 6/2/26 : 1050; 6/25/26 : 1200

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

NVIDIA Corp. (NVDA.O) - As of 07/20/26 GMT in USD
Industry : Semiconductors



Stock Rating History: 7/1/21 : NA/I; 5/3/22 : E/I; 3/16/23 : O/I; 12/7/23 : O/A

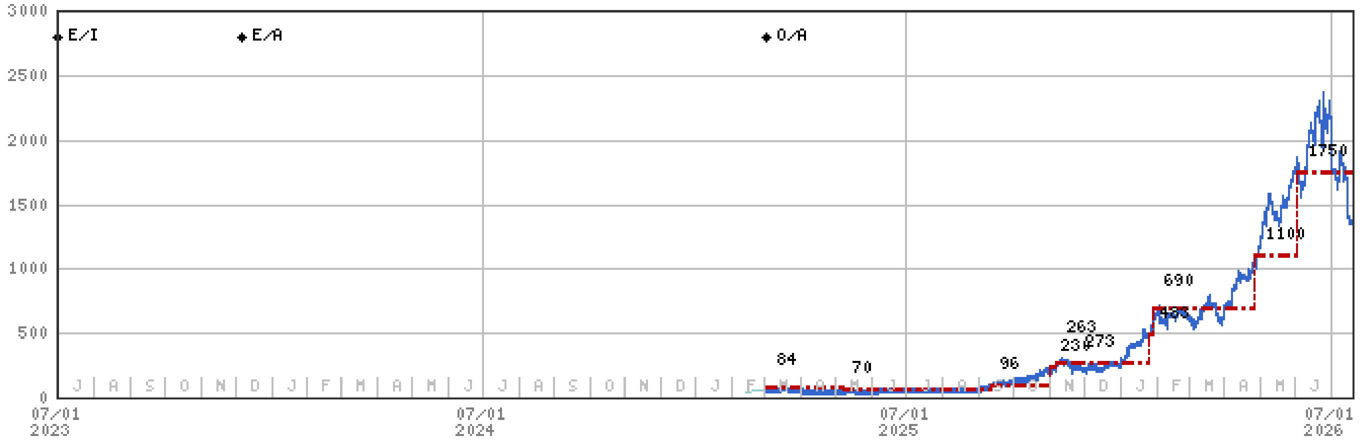
Price Target History: 9/13/20 : NA; 5/3/22 : 21.7; 5/25/22 : 18.2; 11/17/22 : 17.5; 2/21/23 : 24.6; 2/22/23 : 25.5; 3/16/23 : 30.4; 5/24/23 : 45; 6/15/23 : 50; 8/24/23 : 63; 10/17/23 : 60; 11/21/23 : 60.3; 2/6/24 : 75; 2/21/24 : 79.5; 4/9/24 : 100; 5/22/24 : 116; 6/30/24 : 144; 8/29/24 : 150; 11/10/24 : 160; 11/21/24 : 168; 12/19/24 : 166; 1/29/25 : 152; 2/26/25 : 162; 4/25/25 : 160; 5/29/25 : 170; 7/29/25 : 200; 8/18/25 : 206; 8/28/25 : 210; 11/14/25 : 220; 11/20/25 : 235; 12/1/25 : 250; 2/26/26 : 260; 5/18/26 : 285; 5/21/26 : 288

Source: Morgan Stanley Research   Date Format : MM/DD/YY   Price Target --   No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) --   Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

SanDisk Corporation. (SNDK.O) - As of 07/20/26 GMT in USD
Industry : Semiconductors



Stock Rating History: 7/1/21 : E/I; 12/7/23 : E/A; 3/3/25 : O/A

Price Target History: 3/3/25 : 84; 5/7/25 : 70; 9/11/25 : 96; 11/2/25 : 230; 11/7/25 : 263; 11/23/25 : 273; 1/26/26 : 483; 1/29/26 : 690; 4/27/26 : 1100; 6/2/26 : 1750

Source: Morgan Stanley Research   Date Format : MM/DD/YY   Price Target --   No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) --   Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

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INDUSTRY COVERAGE: Semiconductors

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/17/2026)
Joseph Moore		
Advanced Micro Devices (AMD.O)	E (06/09/2024)	$495.76

Aeva Technologies Inc (AEVA.O)	E (07/19/2021)	$16.71
Allegro Microsystems Inc (ALGM.O)	O (02/13/2026)	$46.48
Ambarella Inc (AMBA.O)	O (03/29/2016)	$61.84
Amkor Technology Inc (AMKR.O)	E (11/08/2023)	$62.94
Analog Devices Inc. (ADI.O)	O (11/16/2023)	$375.36
Astera Labs Inc (ALAB.O)	O (05/11/2025)	$303.62
Broadcom Inc. (AVGO.O)	O (06/09/2024)	$370.83
Cerebras Systems (CBRS.O)	O (06/08/2026)	$172.86
GlobalFoundries Inc (GFS.O)	E (10/28/2024)	$57.48
Intel Corporation (INTC.O)	E (02/22/2023)	$95.04
IonQ Inc (IONQ.N)	E (04/25/2023)	$34.78
Marvell Technology Group Ltd (MRVL.O)	E (09/14/2015)	$188.68
Microchip Technology Inc. (MCHP.O)	E (07/10/2024)	$80.96
Micron Technology Inc. (MU.O)	O (10/06/2025)	$848.95
Navitas Semiconductor Corp (NVTS.O)	U (04/06/2025)	$11.46
NVIDIA Corp. (NVDA.O)	O (03/16/2023)	$202.81
NXP Semiconductor NV (NXPI.O)	O (02/11/2025)	$266.53
ON Semiconductor Corp. (ON.O)	++	$87.37
Qorvo Inc (QRVO.O)	E (10/28/2025)	$85.50
Qualcomm Inc. (QCOM.O)	E (06/24/2026)	$171.78
Quantinuum (QNT.O)	E (06/29/2026)	$56.07
SanDisk Corporation. (SNDK.O)	O (03/03/2025)	$1,354.82
Semtech Corp. (SMTC.O)	E (04/06/2025)	$124.96
Silicon Laboratories Inc. (SLAB.O)	E (01/19/2021)	$217.47
Skyworks Solutions Inc (SWKS.O)	E (11/28/2018)	$59.35
Texas Instruments (TXN.O)	U (04/13/2020)	$284.02
Wolfspeed, INC (WOLF.N)	NR (04/06/2025)	$29.89
Lee Simpson		
Arm Holdings plc (ARM.O)	E (04/07/2026)	$267.19
Cadence Design Systems Inc (CDNS.O)	O (02/14/2024)	$330.11
Synopsys Inc. (SNPS.O)	E (02/27/2026)	$384.28

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.