Not for redistribution without written consent of Morgan Stanley

Morgan Stanley | RESEARCH

UPDATE

September 14, 2026 04:42 AM GMT

Semiconductors | North America

Weekly: Highlighting Cerebras OW; ON Analyst Day

We think that the recent selloff in Cerebras provides an attractive entry point, and we repeat our working hypothesis that both low latency inference and disaggregation are key growth drivers. We also provide context for ON's upcoming analyst day.

Why we think this is a good entry point into Cerebras. Cerebras stock has sold off by 17% in the last month, which we think sets up a good entry point given that the company's core competency is increasing in importance.

The market for fast inference continues to heat up, and while there is focus on competing products from NVIDIA/Groq as well as others, we see Cerebras with a significant early lead. The bear case continues to be that larger models will not fit into a single wafer scale structure, but the company continues to show strong results with large parameter count models - and the recent introduction of CS4 makes it very clear that they can scale beyond a single wafer.

We also see an increasing push to disaggregation of inference workloads, which will result in breaking out a separate step for prefill, which is not particularly memory bound, to optimize around DRAM constraints. This is central to the AMD and Amazon partnerships, but this is increasingly a focus of all hyperscalers looking to work around memory constrains.

The stock has traded off sharply despite these factors, despite two good quarters post IPO, and this looks to be a good entry point. Our price target of $279 is 13x '28 revenues, in line with other SMID cap AI names. We have postulated that given the top two AI processor companies with almost $7 trillion in combined market cap, that a point of market share should be worth more than $50 bn, and the current contract with a single customer takes the company into that ballpark by CY28 - with material potential for upside.

ON Investor Day (Wednesday, September 16th): ON will host its first Analyst Day since May 2023, when mgmt laid out its long-term model for 10-12% revenue CAGR through 2027, 53% GM, ~40% OPM and 25-30% FCF margins. Since then, the company has continued to reiterate its longer-term margin targets, though the original 2027 timing has become less explicit. We expect the focus to be on an updated growth model across AI data center, automotive/SiC and industrial, including how recent content/TAM expansion factors into the longer-term outlook.

On margins, key areas of focus include utilization, remaining Fab Right benefits and the contribution from higher-margin new products to the longer-term GM target. We also expect an update on capital intensity/FCF and how the pending Synaptics acquisition fits into ON's longer-term strategic and financial model.

MORGAN STANLEY & CO. LLC

Joseph Moore
Equity Analyst
Joseph.Moore@morganstanley.com +1 212 761-7516

Nicole Kozhukhov
Research Associate
Nicole.Kozhukhov@morganstanley.com +1 212 761-1636

Ella Tulchinsky
Research Associate
Ella.Tulchinsky@morganstanley.com +1 212 761-2222

Mason Wayne
Research Associate
Mason.Wayne@morganstanley.com +1 212 761-6012

Shane Brett
Equity Analyst
Shane.Brett@morganstanley.com +1 212 761-1022

Cate Folan
Research Associate
Cate.M.Folan@morganstanley.com +1 212 296-3520

SEMICONDUCTORS

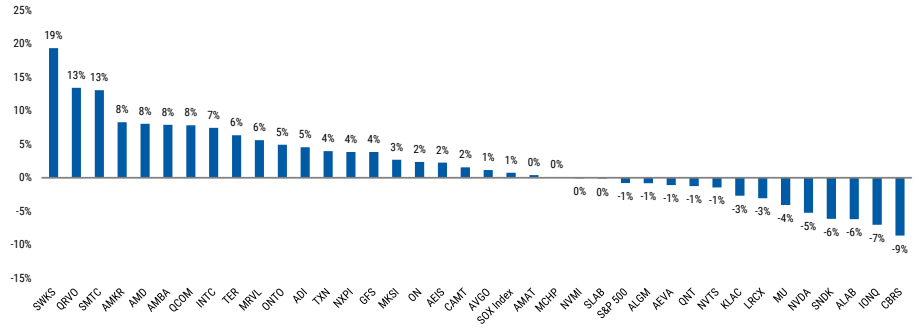
North America
Industry View **Attractive**

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

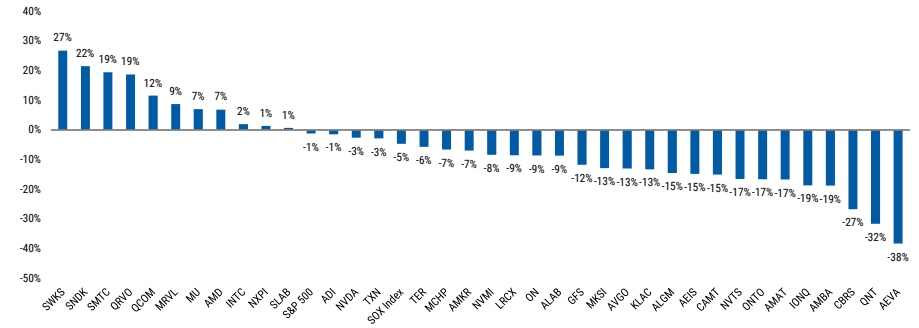
Semiconductor Coverage – Valuation / Stock Performance

Exhibit 1: Weekly stock performance



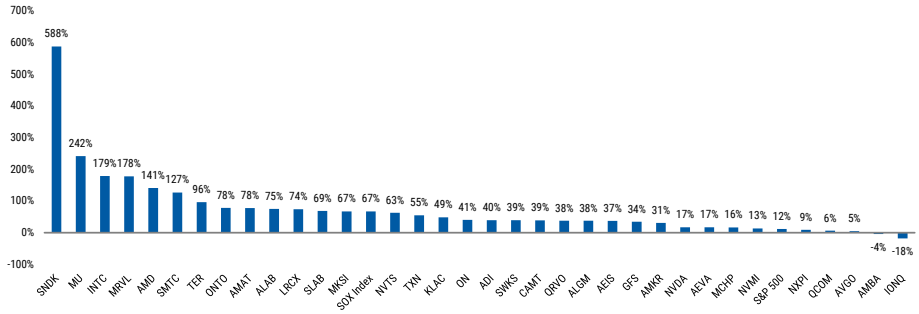
Source: FactSet, Morgan Stanley Research

Exhibit 2: Monthly stock performance



Source: FactSet, Morgan Stanley Research

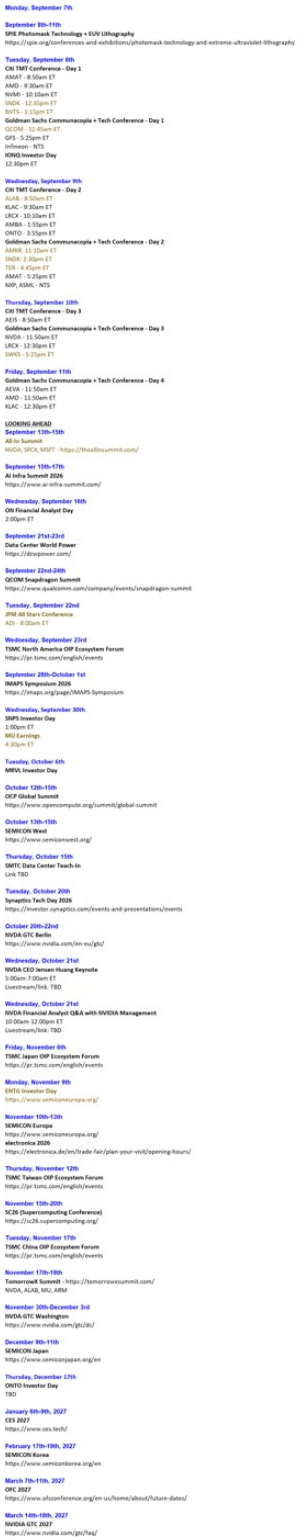
Exhibit 3: YTD stock performance



Source: FactSet, Morgan Stanley Research

Semis Week Ahead

Exhibit 4: September 14th - September 18th, 2026



Monday, September 7th

September 8th-11th
SPIE Photomask Technology + EUV Lithography
https://spie.org/conferences-and-exhibitions/photomask-technology-and-extreme-ultraviolet-lithography

Tuesday, September 8th
Citi TMT Conference - Day 1
AMAT - 8:50am ET
AMD - 9:30am ET
NVMI - 10:10am ET
SNDK - 12:35pm ET
NVTS - 1:15pm ET
Goldman Sachs Communacopia + Tech Conference - Day 1
QCOM - 11:45am ET
GFS - 5:25pm ET
Infineon - NTS
IONQ Investor Day
12:30pm ET

Wednesday, September 9th
Citi TMT Conference - Day 2
ALAB - 8:50am ET
KLAC - 9:30am ET
LRCX - 10:10am ET
AMBA - 1:55pm ET
ONTO - 3:55pm ET
Goldman Sachs Communacopia + Tech Conference - Day 2
ANET - 11:10am ET
SNDK - 2:30pm ET
TER - 4:45pm ET
AMAT - 5:25pm ET
NXP, ASML - NTS

Thursday, September 10th
Citi TMT Conference - Day 3
AEIS - 8:50am ET
Goldman Sachs Communacopia + Tech Conference - Day 3
NVDA - 11:50am ET
LRCX - 12:30pm ET
SWKS - 5:25pm ET

Friday, September 11th
Goldman Sachs Communacopia + Tech Conference - Day 4
AEVA - 11:50am ET
AMD - 11:50am ET
KLAC - 12:30pm ET

LOOKING AHEAD
September 13th-15th
All-In Summit
NVDA, SPCX, MSFT - https://theallinsummit.com/

September 15th-17th
AI Infra Summit 2026
https://www.ai-infra-summit.com/

Wednesday, September 16th
ON Financial Analyst Day
2:00pm ET

September 21st-23rd
Data Center World Power
https://dcwpower.com/

September 22nd-24th
QCOM Snapdragon Summit
https://www.qualcomm.com/company/events/snapdragon-summit

Tuesday, September 22nd
JPM All Stars Conference
ADI - 8:00am ET

Wednesday, September 23rd
TSMC North America OIP Ecosystem Forum
https://jpr.tsmc.com/english/events

September 28th-October 1st
IMAPS Symposium 2026
https://imaps.org/page/IMAPS-Symposium

Wednesday, September 30th
SNPS Investor Day
1:00pm ET
MU Earnings
4:30pm ET

Tuesday, October 6th
MRVL Investor Day

October 12th-15th
OCP Global Summit
https://www.opencompute.org/summit/global-summit

October 13th-15th
SEMICON West
https://www.semiconwest.org/

Thursday, October 15th
SMTC Data Center Teach-In
Link TBD

Tuesday, October 20th
Synaptics Tech Day 2026
https://investor.synaptics.com/events-and-presentations/events

October 20th-22nd
NVDA GTC Berlin
https://www.nvidia.com/en-eu/gtc/

Wednesday, October 21st
NVDA CEO Jensen Huang Keynote
5:00am-7:00am ET
Livestream/link: TBD

Wednesday, October 21st
NVDA Financial Analyst Q&A with NVIDIA Management
10:00am-12:00pm ET
Livestream/link: TBD

Friday, November 6th
TSMC Japan OIP Ecosystem Forum
https://jpr.tsmc.com/english/events

Monday, November 9th
ENTG Investor Day
https://www.semiconeuropa.org/

November 10th-13th
SEMICON Europa
https://www.semiconeuropa.org/
electronica 2026
https://electronica.de/en/trade-fair/plan-your-visit/opening-hours/

Thursday, November 12th
TSMC Taiwan OIP Ecosystem Forum
https://jpr.tsmc.com/english/events

November 15th-20th
SC26 (Supercomputing Conference)
https://sc26.supercomputing.org/

Tuesday, November 17th
TSMC China OIP Ecosystem Forum
https://jpr.tsmc.com/english/events

November 17th-19th
TomorrowX Summit - https://tomorrowxsummit.com/
NVDA, ALAB, MU, ARM

November 30th-December 3rd
NVDA GTC Washington
https://www.nvidia.com/gtc/dc/

December 9th-11th
SEMICON Japan
https://www.semiconjapan.org/en

Thursday, December 17th
ONTO Investor Day
TBD

January 6th-9th, 2027
CES 2027
https://www.ces.tech/

February 17th-19th, 2027
SEMICON Korea
https://www.semiconkorea.org/en

March 7th-11th, 2027
OFC 2027
https://www.ofcconference.org/en-us/home/about/future-dates/

March 14th-18th, 2027
NVIDIA GTC 2027
https://www.nvidia.com/gtc/faq/

Source: Bloomberg, Refinitiv, Morgan Stanley Research

Semiconductor Coverage

Exhibit 5: Semiconductors – Risk Reward

Ticker	Rating	Price	Risk-Reward Bear	Risk-Reward Base	Risk-Reward Bull	% Upside / Downside Base
Computing						
AMD	EW	$516.1	$290	$465	$700	-10%
CBRS	OW	$191.9	$90	$279	$400	45%
INTC	EW	$102.9	$50	$84	$137	-18%
NVDA	OW	$218.3	$160	$300	$350	37%
Memory						
MU	OW	$975.3	$675	$1,200	$1,650	23%
SNDK	OW	$1,633.4	$1,100	$1,750	$2,635	7%
Capital Equipment						
AEIS	OW	$287.3	$255	$439	$634	53%
AMAT	EW	$456.5	$413	$642	$893	41%
CAMT	EW	$148.0	$115	$165	$223	12%
KLAC	OW	$180.6	$165	$253	$325	40%
LRCX	OW	$298.2	$236	$367	$481	23%
MKSI	OW	$267.3	$278	$439	$595	64%
NVMI	EW	$371.8	$307	$461	$639	24%
ONTO	OW	$281.3	$244	$360	$486	28%
TER	EW	$379.7	$273	$397	$535	5%
Comm-IC / Multi-Market						
ALAB	OW	$291.2	$208	$382	$490	31%
AMBA	OW	$67.9	$34	$96	$136	41%
AVGO	OW	$362.0	$300	$505	$640	40%
MRVL	EW	$236.1	$143	$246	$376	4%
QCOM	EW	$182.0	$104	$220	$298	21%
QRVO	EW	$116.7	$40	$84	$110	-28%
SMTC	EW	$167.2	$108	$195	$294	17%
SWKS	EW	$88.4	$43	$72	$105	-19%
Analog / MCUs						
ADI	OW	$378.8	$370	$458	$548	21%
ALGM	OW	$36.3	$44	$52	$72	43%
MCHP	EW	$74.2	$75	$103	$129	39%
NVTS	UW	$11.6	$6.3	$12.6	$20.9	8%
NXPI	OW	$236.6	$270	$338	$404	43%
ON	NC	$76.1	++	++	++	-
SLAB	EW	$220.3	$83	$231	$265	5%
TXN	UW	$268.7	$213	$255	$302	-5%
Components						
AEVA	EW	$15.5	$5.0	$27.0	$73.0	74%
Foundry						
AMKR	EW	$51.7	$49	$70	$89	35%
GFS	EW	$47.0	$34	$60	$86	28%
Quantum Computing						
IONQ	EW	$36.8	$6	$49.0	$110	33%
QNT	EW	$49.0	$12	$78.0	$160	59%

Source: FactSet, Morgan Stanley Research estimates

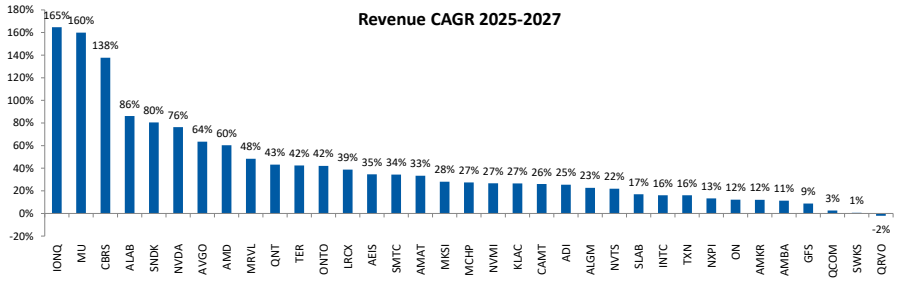
Exhibit 6: MS vs. Street

		CY2027e EPS				CY2027e Revenue			
		MS	Consensus	% Diff		MS	Consensus	% Diff
OW	ADI	$16.94	$17.15	(1%)	ADI	$18,513	$18,793	(1%)
	AEIS	$16.91	$15.19	11%	AEIS	$3,261	$3,009	8%
	ALAB	$5.83	$6.49	(10%)	ALAB	$2,953	$3,079	(4%)
	ALGM	$1.48	$1.38	8%	ALGM	$1,264	$1,238	2%
	AMBA	$0.82	$1.03	(21%)	AMBA	$485	$490	(1%)
	AVGO	$19.63	$21.07	(7%)	AVGO	$182,575	$191,819	(5%)
	CBRS	$1.03	$1.30	(21%)	CBRS	$2,883	$2,954	(2%)
	KLAC	$6.23	$6.09	2%	KLAC	$20,430	$19,899	3%
	LRCX	$11.26	$10.66	6%	LRCX	$39,626	$38,209	4%
	MKSI	$19.03	$17.50	9%	MKSI	$6,443	$6,113	5%
	MU	$180.48	$160.61	12%	MU	$285,950	$260,374	10%
	NVDA	$9.21	$15.15	(39%)	NVDA	$405,968	$663,431	(39%)
	NXPI	$18.76	$18.18	3%	NXPI	$15,767	$15,932	(1%)
	ONTO	$12.89	$11.76	10%	ONTO	$2,028	$1,881	8%
	SNDK	$211.96	$236.04	(10%)	SNDK	$48,964	$53,453	(8%)
EW	AEVA	-$1.85	-$1.59	17%	AEVA	$74	$70	5%
	AMAT	$20.45	$19.63	4%	AMAT	$50,160	$48,417	4%
	AMD	$15.54	$15.84	(2%)	AMD	$88,987	$88,953	0%
	AMKR	$2.32	$2.75	(15%)	AMKR	$8,421	$8,623	(2%)
	CAMT	$5.01	$4.89	2%	CAMT	$788	$755	4%
	GFS	$2.44	$2.53	(4%)	GFS	$8,038	$8,206	(2%)
	INTC	$2.00	$2.08	(4%)	INTC	$71,264	$72,287	(1%)
	IONQ	-$0.64	-$1.50	(57%)	IONQ	$911	$774	18%
	MCHP	$4.10	$4.33	(5%)	MCHP	$7,095	$7,174	(1%)
	MRVL	$6.68	$6.55	2%	MRVL	$18,033	$17,678	2%
	NVMI	$14.13	$13.66	3%	NVMI	$1,414	$1,360	4%
	QCOM	$10.89	$10.90	(0%)	QCOM	$47,259	$46,835	1%
	QNT	-$1.55	-$1.64	(6%)	QNT	$63	$61	4%
	QRVO	$8.04	$7.92	2%	QRVO	$3,586	$3,631	(1%)
	SLAB	$4.14	$4.51	(8%)	SLAB	$1,073	$1,081	(1%)
	SMTC	$5.65	$5.64	0%	SMTC	$1,895	$1,906	(1%)
	SWKS	$5.31	$5.17	3%	SWKS	$4,101	$4,104	(0%)
	TER	$11.91	$11.75	1%	TER	$6,476	$6,241	4%
UW	NVTS	-$0.10	-$0.12	(16%)	NVTS	$68	$73	(6%)
	TXN	$9.80	$10.27	(5%)	TXN	$23,832	$24,977	(5%)
++	ON	$4.42	$4.50	(2%)	ON	$7,551	$7,395	2%

Source: FactSet, Morgan Stanley Research estimates

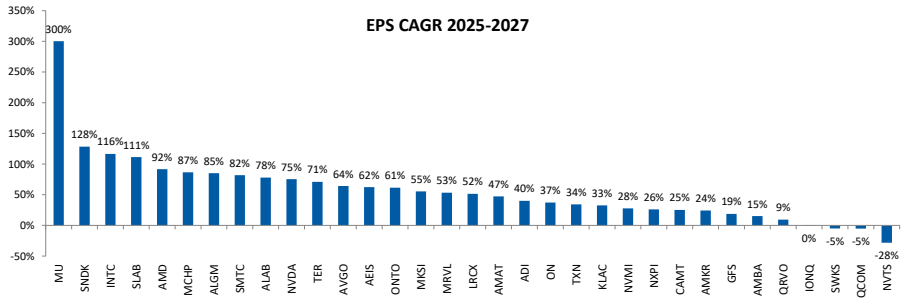
Revenue and EPS Growth

Exhibit 7: 2025-27e Revenue CAGR



Source: FactSet, Morgan Stanley estimates

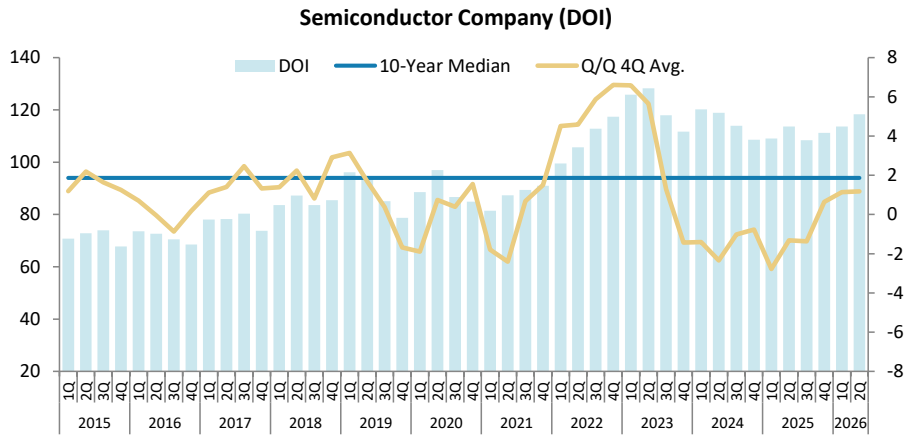
Exhibit 8: 2025-27e EPS CAGR



Source: FactSet, Morgan Stanley estimates

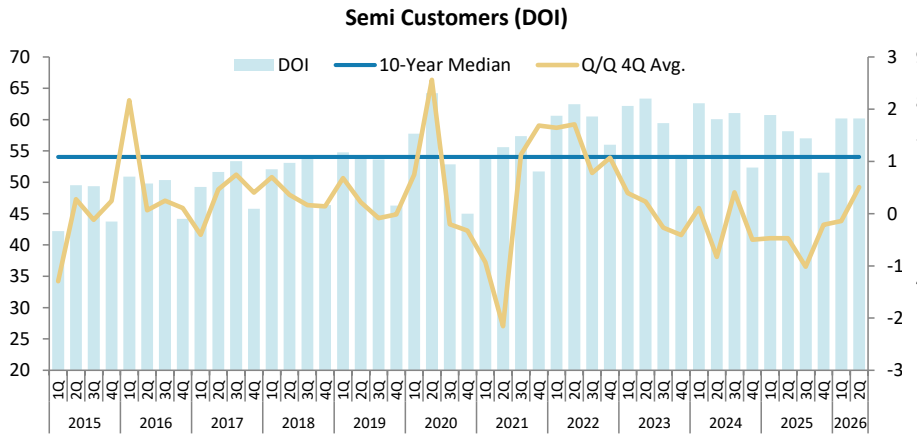
Inventory

Exhibit 9: Semiconductor Company inventory is at 118 days, up 5 days q/q, which is 1 day behind of the seasonal increase of 4 days. DOI is 24 days above the historical median and trailing 4-quarters slightly increased...



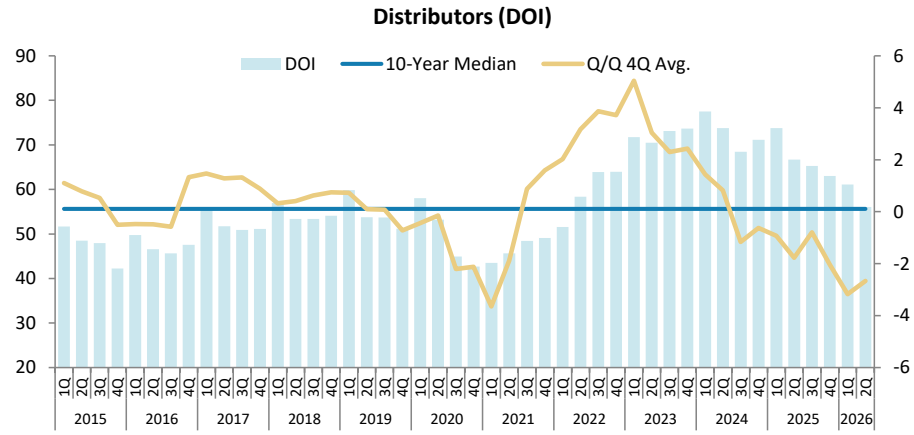
Source: FactSet, Morgan Stanley Research

Exhibit 10: Semi Customer DOI remained flat sequentially to 60 days vs a seasonal decrease of 0 days. DOI is above the historical median and trailing 4 quarters increased from last quarter.



Source: FactSet, Morgan Stanley Research

Exhibit 11: Distributor inventory is at 56 days, down 5 days q/q, above seasonal decrease of 1 day. DOI is in-line with the historical median while trailing 4-quarters increased sequentially.



Source: FactSet, Morgan Stanley Research

Short Interest

Exhibit 12: Short Interest as % of Float

	11/Sep/25	12/Jun/26	12/Jul/26	12/Aug/26	11/Sep/26
ADI	1.5%	2.0%	2.5%	2.0%	1.8%
AEIS	6.6%	5.7%	3.7%	4.7%	4.3%
AEVA	11.8%	10.4%	6.7%	7.9%	8.7%
ALAB	5.3%	6.9%	7.3%	5.3%	5.2%
ALGM	4.7%	6.4%	8.3%	5.9%	6.9%
AMAT	2.8%	2.5%	2.5%	1.8%	2.0%
AMBA	4.7%	5.0%	7.5%	11.7%	9.9%
AMD	2.4%	2.7%	2.5%	2.3%	2.6%
AMKR	2.3%	3.4%	3.6%	3.6%	3.8%
AVGO	0.8%	1.2%	1.5%	1.3%	1.1%
CAMT	8.0%	6.5%	5.8%	5.7%	7.7%
CBRS		2.5%	5.7%	5.4%	5.6%
GFS	2.2%	1.4%	1.3%	1.2%	1.2%
INTC	2.0%	2.6%	2.4%	2.4%	2.9%
IONQ	10.9%	14.3%	10.9%	12.4%	10.1%
KLAC	2.6%	26.9%	2.6%	0.2%	2.3%
LRCX	2.5%	2.6%	2.3%	2.2%	2.2%
MCHP	3.9%	6.0%	7.2%	6.7%	6.0%
MKSI	6.1%	6.5%	7.3%	8.5%	9.2%
MRVL	3.5%	4.0%	3.9%	4.1%	4.4%
MU	2.9%	3.3%	2.8%	2.6%	2.6%
NVDA	0.8%	1.2%	1.3%	1.2%	1.2%
NVMI	6.0%	5.6%	4.6%	4.6%	6.6%
NVTS	16.3%	13.8%	13.2%	15.1%	15.3%
NXPI	2.8%	3.3%	3.5%	3.5%	3.4%
ON	9.5%	8.0%	7.6%	7.9%	7.8%
ONTO	4.2%	4.0%	5.4%	5.4%	5.0%
QCOM	1.7%	4.3%	3.8%	3.3%	3.2%
QNT			12.7%	7.4%	7.8%
QRVO	3.3%	7.9%	7.7%	7.4%	5.6%
SLAB	4.3%	7.1%	6.9%	8.6%	8.3%
SMTC	8.8%	6.8%	6.0%	7.8%	8.1%
SNDK	5.9%	6.3%	4.9%	4.7%	4.1%
SWKS	8.7%	18.7%	19.2%	20.8%	23.0%
TER	4.5%	4.4%	5.8%	5.1%	4.5%
TXN	1.8%	2.1%	1.8%	1.8%	2.3%
AVERAGE	5.0%	6.3%	5.5%	5.6%	5.8%
MEDIAN	4.1%	5.6%	4.9%	4.7%	4.5%

Source: FactSet, Morgan Stanley Research

Morgan Stanley is acting as financial advisor to onsemi in connection with its definitive agreement to acquire Synaptics Incorporated ("Synaptics"), as announced on June 25, 2026. The proposed transaction is subject to approval by Synaptics' shareholders, receipt of required regulatory approval and other customary closing conditions. This report and the information provided herein is not intended to (i) provide voting advice, (ii) serve as an endorsement of the proposed transaction, or (iii) result in the procurement, withholding or revocation of a proxy or any other action by a security holder. Onsemi has agreed to pay fees to Morgan Stanley for its financial services. Please refer to the notes at the end of the report.

Valuation Methodology and Risks

Cerebras Systems (CBRS.O)

13x multiple on our 2028 adjusted revenue of $6.3bn. We comp Cerebras to AI semis cohort and 13x is in-line with with smid cap AI names with near 100% AI exposure that are outgrowing the overall market.

Risks to Upside

- Contract Extension
- Additional customer
- Capacity deployment

Risks to Downside

- Capacity deployment/infrastructure risk
- Customer concentration risk
- Competitive risk



Disclosure Section

The information and opinions in Morgan Stanley Research were prepared by Morgan Stanley & Co. LLC, and/or Morgan Stanley C.T.V.M. S.A., and/or Morgan Stanley Mexico, Casa de Bolsa, S.A. de C.V.. As used in this disclosure section, "Morgan Stanley" includes Morgan Stanley & Co. LLC, Morgan Stanley C.T.V.M. S.A., Morgan Stanley Mexico, Casa de Bolsa, S.A. de C.V. and their affiliates as necessary.

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/eqr/disclosures/webapp/generalresearch, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Shane Brett; Nicole Kozhukhov; Joseph Moore; Ella Tulchinsky; Mason Wayne.

.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important Regulatory Disclosures on Subject Companies

As of August 31, 2026, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: Advanced Micro Devices, Aeva Technologies Inc, Ambarella Inc, Amkor Technology Inc, Analog Devices Inc., Arm Holdings plc, Astera Labs Inc, Broadcom Inc., Cadence Design Systems Inc, Cerebras Systems, Intel Corporation, IonQ Inc, Marvell Technology Group Ltd, Microchip Technology Inc., Micron Technology Inc., NVIDIA Corp., NXP Semiconductor NV, ON Semiconductor Corp., PDF Solutions Inc, Qorvo Inc, Qualcomm Inc., SanDisk Corporation., Semtech Corp., Silicon Laboratories Inc., Skyworks Solutions Inc, Synopsys Inc., Texas Instruments, Wolfspeed, INC.

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of Advanced Micro Devices, Aeva Technologies Inc, Broadcom Inc., Cerebras Systems, GlobalFoundries Inc, Intel Corporation, NVIDIA Corp., ON Semiconductor Corp., PDF Solutions Inc, Quantinuum, Semtech Corp..

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from Advanced Micro Devices, Aeva Technologies Inc, Allegro Microsystems Inc, Amkor Technology Inc, Analog Devices Inc., Broadcom Inc., Cerebras Systems, Intel Corporation, IonQ Inc, Micron Technology Inc., Navitas Semiconductor Corp, NVIDIA Corp., NXP Semiconductor NV, ON Semiconductor Corp., PDF Solutions Inc, Quantinuum, Semtech Corp., Texas Instruments.

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from Advanced Micro Devices, Aeva Technologies Inc, Allegro Microsystems Inc, Ambarella Inc, Amkor Technology Inc, Analog Devices Inc., Arm Holdings plc, Astera Labs Inc, Broadcom Inc., Cadence Design Systems Inc, Cerebras Systems, GlobalFoundries Inc, Intel Corporation, IonQ Inc, Marvell Technology Group Ltd, Microchip Technology Inc., Micron Technology Inc., Navitas Semiconductor Corp, NVIDIA Corp., NXP Semiconductor NV, ON Semiconductor Corp., PDF Solutions Inc, Qualcomm Inc., Quantinuum, SanDisk Corporation., Semtech Corp., Silicon Laboratories Inc., Skyworks Solutions Inc, Synopsys Inc., Texas Instruments, Wolfspeed, INC.

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from Advanced Micro Devices, Allegro Microsystems Inc, Ambarella Inc, Amkor Technology Inc, Analog Devices Inc., Broadcom Inc., Cadence Design Systems Inc, Cerebras Systems, GlobalFoundries Inc, Intel Corporation, Marvell Technology Group Ltd, Microchip Technology Inc., Micron Technology Inc., NVIDIA Corp., NXP Semiconductor NV, ON Semiconductor Corp., Qorvo Inc, Qualcomm Inc., Semtech Corp., Silicon Laboratories Inc., Synopsys Inc., Texas Instruments.

Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: Advanced Micro Devices, Aeva Technologies Inc, Allegro Microsystems Inc, Ambarella Inc, Amkor Technology Inc, Analog Devices Inc., Arm Holdings plc, Astera Labs Inc, Broadcom Inc., Cadence Design Systems Inc, Cerebras Systems, GlobalFoundries Inc, Intel Corporation, IonQ Inc, Marvell Technology Group Ltd, Microchip Technology Inc., Micron Technology Inc., Navitas Semiconductor Corp, NVIDIA Corp., NXP Semiconductor NV, ON Semiconductor Corp., PDF Solutions Inc, Qualcomm Inc., Quantinuum, SanDisk Corporation., Semtech Corp., Silicon Laboratories Inc., Skyworks Solutions Inc, Synopsys Inc., Texas Instruments, Wolfspeed, INC.

Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: Advanced Micro Devices, Allegro Microsystems Inc, Ambarella Inc, Amkor Technology Inc, Analog Devices Inc., Broadcom Inc., Cadence Design Systems Inc, Cerebras Systems, GlobalFoundries Inc, Intel Corporation, IonQ Inc, Marvell Technology Group Ltd, Microchip Technology Inc., Micron Technology Inc., NVIDIA Corp., NXP Semiconductor NV, ON Semiconductor Corp., Qorvo Inc, Qualcomm Inc., SanDisk Corporation., Semtech Corp., Silicon Laboratories Inc., Synopsys Inc., Texas Instruments, Wolfspeed, INC.

Morgan Stanley & Co. LLC makes a market in the securities of Aeva Technologies Inc, Ambarella Inc.

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all

ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of August 31, 2026)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

	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	1555	42%	450	48%	29%	767	44%
Equal-weight/Hold	1577	43%	395	42%	25%	770	44%
Not-Rated/Hold	3	0%	1	0%	33%	1	0%
Underweight/Sell	559	15%	93	10%	17%	216	12%
Total	3,694		939			1754	

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

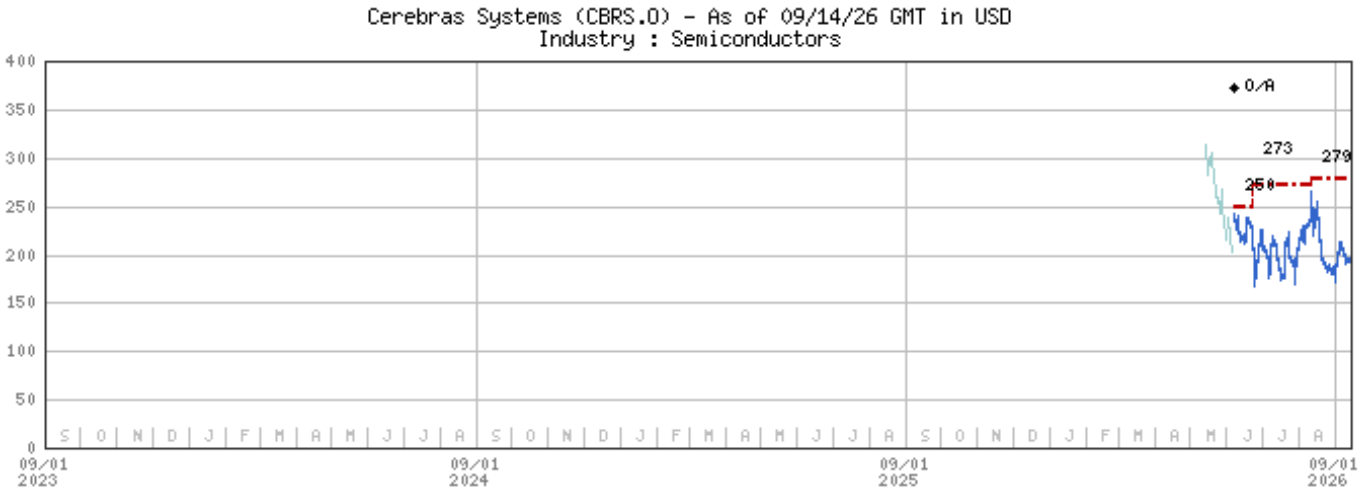
Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

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)



Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding any material conflict of interest that can reasonably be expected to have influenced Morgan Stanley Smith Barney LLC's choice of a third-party research provider or the subject company of a third-party research report, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to https://www.morganstanley.com/eqr/disclosures/webapp/generalresearch.

Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

A member of Research who had or could have had access to the research prior to completion owns securities (or related derivatives) in the Analog Devices Inc., Broadcom Inc., Microchip Technology Inc., NVIDIA Corp., Qualcomm Inc.. This person is not a research analyst or a member of research analyst's household.

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (http://www.morganstanley.com/terms.html). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (http://www.morganstanley.com/terms.html). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html). Please use the provided link to review the Terms and Conditions and Most Important Terms and Conditions for Morgan Stanley India Company Private Limited (https://www.morganstanley.com/assets/pdfs/about-us-global-offices/india/Terms_and_conditions.pdf) and the following link to review the audit report (https://ny.matrix.ms.com/eqr/research/webapp/researchdocs/MSICPL_Morgan_Stanley_Research_Audit_Report.pdf).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research. Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those

who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V which is regulated by Comision Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118J); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India; Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com. Morgan Stanley India Company Private Limited (MSICPL) may use AI tools in providing research services. All recommendations contained herein are made by the duly qualified research analysts; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 149169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are high net worth entities falling within Article 49(2)(a) to (d) of the Order; or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended) may otherwise lawfully be communicated or caused to be communicated. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. Morgan Stanley Research is disseminated in Canada by Morgan Stanley Canada Limited and Morgan Stanley Wealth Management Canada Inc., members of the Canadian Investment Regulatory Organization (CIRO). The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA) or by Morgan Stanley & Co. International plc (ADGM Branch), regulated by the Financial Services Regulatory Authority Abu Dhabi (the FSRA), and is directed at Professional Clients only, as defined by the DFSA or the FSRA, respectively. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria of a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The issuers and/or fixed income products recommended or discussed in certain fixed income research reports may not be continuously followed. Accordingly, investors should regard those fixed income research reports as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or individual fixed income products.

Morgan Stanley may hold, from time to time, material financial and commercial interests regarding the company subject to the Research report.

Registration granted by SEBI and certification from the National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

INDUSTRY COVERAGE: Semiconductors

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/11/2026)
Joseph Moore		
Advanced Micro Devices (AMD.O)	E (06/09/2024)	$516.13
Aeva Technologies Inc (AEVA.O)	E (07/19/2021)	$15.52
Allegro Microsystems Inc (ALGM.O)	O (02/13/2026)	$36.31
Ambarella Inc (AMBA.O)	O (03/29/2016)	$67.86
Amkor Technology Inc (AMKR.O)	E (11/08/2023)	$51.73
Analog Devices Inc. (ADI.O)	O (11/16/2023)	$378.78
Astera Labs Inc (ALAB.O)	O (05/11/2025)	$291.22
Broadcom Inc. (AVGO.O)	O (06/09/2024)	$361.99
Cerebras Systems (CBRS.O)	O (06/08/2026)	$191.93
GlobalFoundries Inc (GFS.O)	E (10/28/2024)	$46.95
Intel Corporation (INTC.O)	E (02/22/2023)	$102.94
IonQ Inc (IONQ.N)	E (04/25/2023)	$36.75
Marvell Technology Group Ltd (MRVL.O)	E (09/14/2015)	$236.10
Microchip Technology Inc. (MCHP.O)	E (07/10/2024)	$74.20
Micron Technology Inc. (MU.O)	O (10/06/2025)	$975.26
Navitas Semiconductor Corp (NVTS.O)	U (04/06/2025)	$11.63
NVIDIA Corp. (NVDA.O)	O (03/16/2023)	$218.29
NXP Semiconductor NV (NXPI.O)	O (02/11/2025)	$236.62
ON Semiconductor Corp. (ON.O)	++	$76.14
Qorvo Inc (QRVO.O)	E (10/28/2025)	$116.65
Qualcomm Inc. (QCOM.O)	E (06/24/2026)	$181.97
Quantinuum (QNT.O)	E (06/29/2026)	$49.03
SanDisk Corporation. (SNDK.O)	O (03/03/2025)	$1,633.35
Semtech Corp. (SMTC.O)	E (04/06/2025)	$167.24
Silicon Laboratories Inc. (SLAB.O)	E (01/19/2021)	$220.33
Skyworks Solutions Inc (SWKS.O)	E (11/28/2018)	$88.35
Texas Instruments (TXN.O)	U (04/13/2020)	$268.70
Wolfspeed, INC (WOLF.N)	NR (04/06/2025)	$25.92

Lee Simpson

Arm Holdings plc (ARM.O)	E (04/07/2026)	$264.79
Cadence Design Systems Inc (CDNS.O)	O (02/14/2024)	$289.37
PDF Solutions Inc (PDFS.O)	O (09/08/2026)	$47.77
Synopsys Inc. (SNPS.O)	O (09/08/2026)	$397.38

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

© 2026 Morgan Stanley