

Global Tech Outlook 2026

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Morgan Stanley

Asia and Europe Technology Hardware

6 January 2026

Global Tech Outlook 2026

MORGAN STANLEY RESEARCH
Europe

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All information as of January 5th 2025

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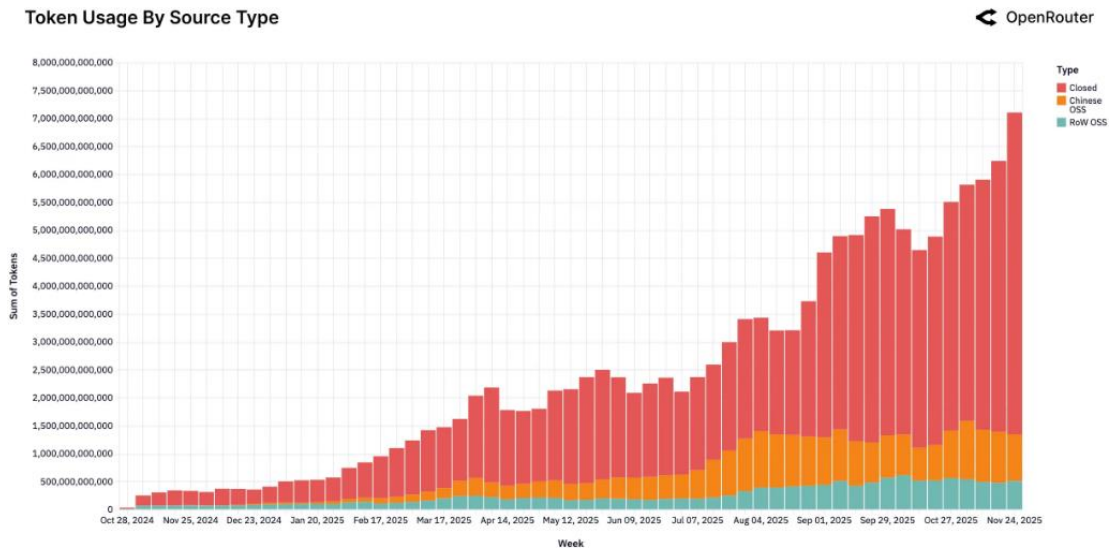
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Asia and European Technology

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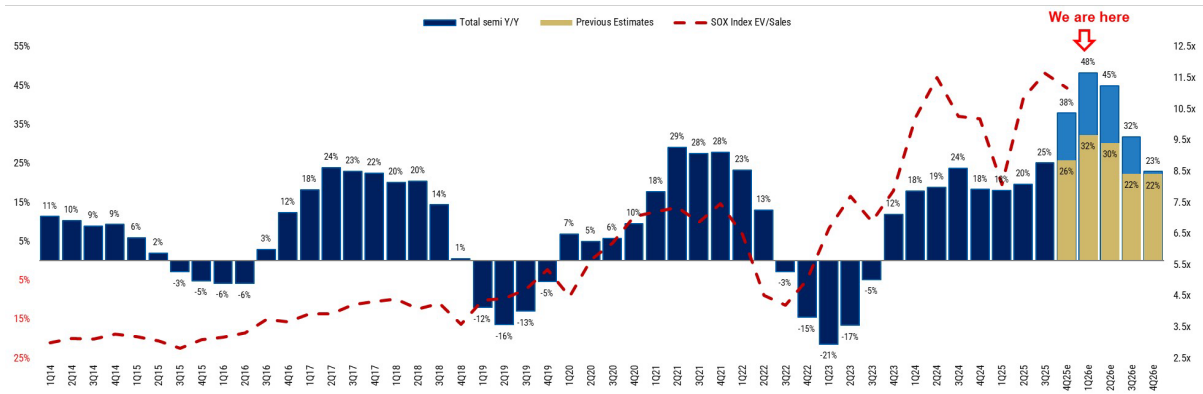
Token Demand Continues To Be Strong



Source: OpenRouter, Morgan Stanley Research

Where Are We in the Cycle?

SOX Index Valuation vs. Global Semiconductor Revenue YoY %



Source: SIA, FactSet, Morgan Stanley Research estimates

Global sector picks – Semiconductors

Sector View		AI secular drivers are durable, TSMC CoWoS is still promising	
Semiconductor	Memory	We see DRAM Pricing moving past all-time highs. New pricing highs typically lead to new stock high- with plenty of earnings this time to back them up. In conservative markets, memory stocks tend to outperform - supporting a continued investment stance across the sector.	Most Preferred: Samsung, Winbond Least Preferred: PSMC
	IC Foundry - Leading Edge	AI demand still helps TSMC to maintain 20% revenue CAGR in the following 5 years, while Taiwan matured foundry received some rush orders ahead of tariffs in 2Q25. China AI GPU foundry opportunity will be an incremental upside to TSMC forecasts.	Most Preferred: TSMC
	SPE	SPE upside broadens in 2H26. While back-end strength tied to AI remains intact, front-end equipment should re-accelerate on advanced logic and DRAM demand. We favour DRAM-exposed leaders, China-local beneficiaries, and names most levered to TSMC's advanced-node expansion.	Most Preferred: Rezonac, Adventest, ASML, AMAT, NAURA, AMEC, SCREEN, ASMI Least Preferred:
	Discrete/Analog (Japan)	IGBT pricing pressure continues due to oversupply despite recovering demand; there is limited room for further pricing decline. MOSFET is on a slow recovery trend, and we prefer companies with increasing auto contribution.	Most Preferred: StarPower, Yangjie Least Preferred: Silan Micro, CR Micro
	Logic/IC Design (China)	China MCU inventory returns to normal, global peers still digesting. We will closely monitor the impact from government stimulus and expect stable pricing and gradual demand recovery from here.	Most Preferred: Espressif, Gigadevice Least Preferred: Sino Wealth, Unigroup Guoxin
	IC Design	IC designer should be impacted by rising cost, including foundry, OSAT, and memory. We expect the demand for consumer devices is likely going down in 2026, which also pressures IC designer margin. We prefer IOS and content gainers in PC semis. However, for those IC design houses that have high exposure to AI/Datacenter, the demand is still very strong.	Most Preferred: Aspeed, GUC, MediaTek Least Preferred: Novatek, Nuvoton, WPG, Parade, Realtek, Elan
	IC Foundry - Legacy	Still impacted by seasonality as well as consumer demand cannibalization from AI. But the whole industry is recovering.	Most Preferred: UMC Least Preferred: AWSC, WIN Semi
	OSAT	Strong AI demand has further constrained chip packaging and testing capacity for Taiwan's backend foundry vendors, such as ASE and KYEC.	Most Preferred: KYEC Least Preferred: JCET

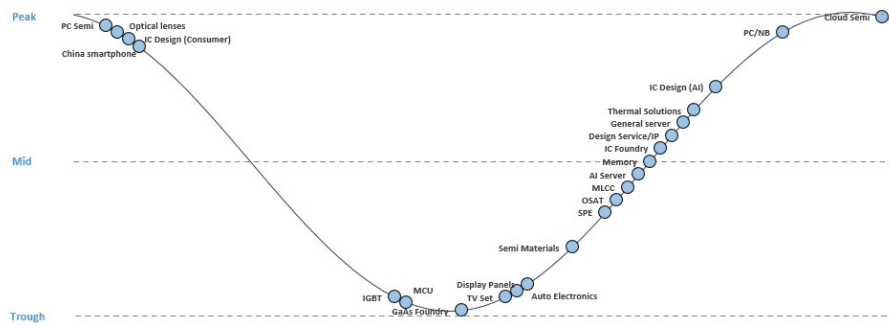
Source: Morgan Stanley Research estimates

Global sector picks – Hardware

Sector View		AI Server demand to remain strong through 2026.	
Hardware	AI Hardware	We expect total Nvidia GPU server rack shipments to double y/y in 2026, from ~28k in 2025, outgrowing ASIC market sequentially and on a YoY basis. Data center-related revenue is expected to be ~40% of overall 2025 revenue and at least 50% in 2026. The offerings are margin-accretive at the operating level.	Most Preferred: Wiyynn, Accton, Kingslide, BizLink, Delta, Wistron Least Preferred: Giga-Byte
	Substrates	ABF substrate demand has bottomed, with AI GPU/Accelerators as the key growth driver going forward. BT substrate has benefitted from the memory super-cycle and raw material price increases, which drive upward revisions to both demand volumes and ASPs.	Most Preferred: Unimicron, SEMCO Least Preferred: NYPCB
	MLCC	MLCC inventory level is lean, and AI server will serve as a key demand driver in 2026	Most Preferred: SEMCO Least Preferred:
	iPhone Supply Chain	Apple has recently added roughly 60K N3P wafers at TSMC, implying up to 24M incremental iPhone processors if all were for A19 production - an upside that would materially raise our FY26 iPhone outlook. But we believe part of the increase likely supports M5 ultra chips for Apple's Private Cloud Compute ahead of the Spring 2026 Apple Intelligence/Siri relaunch.	Most Preferred: Hon Hai Least Preferred:
	Thermal Solutions	We are encouraged to see ramping liquid cooling component shipments in November and expect the strength to carry into 1Q26. However, the growth magnitude showed a diverse trend from our expectations.	Most Preferred: AVC Least Preferred: Sunnonwealth
	China Smartphone	We expect smartphone industry to suffer from component cost increase in 2026. As a result, the smartphone margin is likely to face downward pressure in the coming quarters. For Optical lenses, due to memory cost increase, spec upgrade is likely to face BOM pressure. We expect mid-to-low-end products to face headwinds while high-end products to be better positioned.	Most Preferred: Xiaomi Least Preferred:
	Display/TV	TV panel prices appear to be bottoming earlier than expected, improving near-term sentiment, but investors should watch for rising memory costs that may pressure NB panel pricing, as well as the timing and sustainability of any TV panel price increases and the front-loaded shipment profile expected for 2026.	Most Preferred: BOE Least Preferred: Sanan
	PC OEMs/ODMs	We expect PC OEMs/ODMs to see margin headwinds from memory price increases in 2026, which will likely lead to multiple quarters of margin compression.	Most Preferred: Lenovo Least Preferred: Acer

Source: Morgan Stanley Research estimates

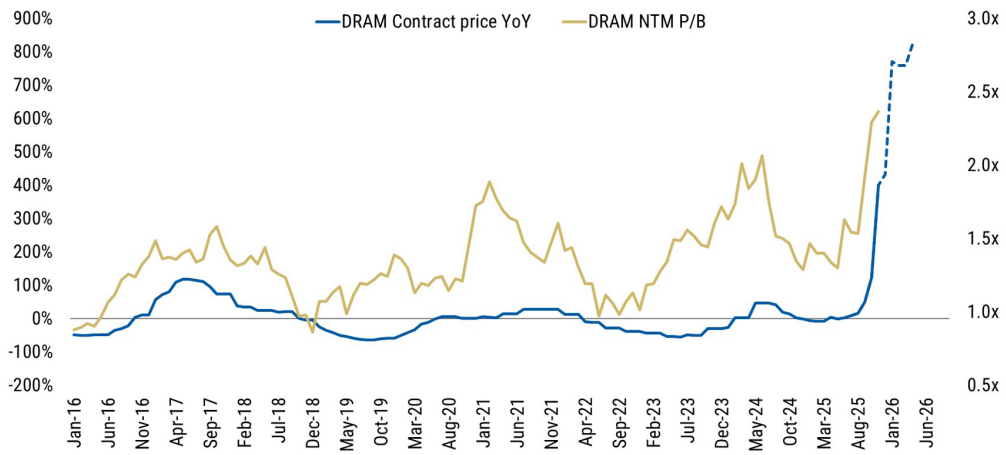
Sequencing the Cycle – First in, First Out



Semiconductors	Neutral			Hardware	Neutral		
	-		+		-		+
Memory				AI Server			
AI semis				Substrates			
IC Foundry				General Server			
Cloud Semis				Networking Equipment			
Testing & Packaging				MLCC			
Front-End SPE				iPhone Supply Chain			
Semi Materials				TFELCD			
Auto Semis				LED Optical			
Smartphone Semis				Chinese Smartphone Supply Chain			
PC Semis				PC/NB Hardware			

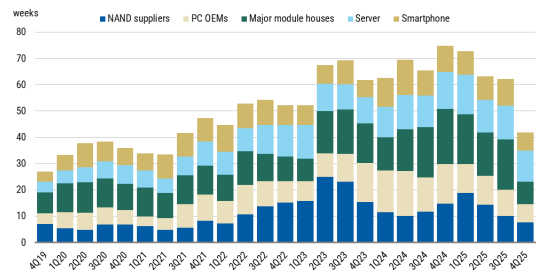
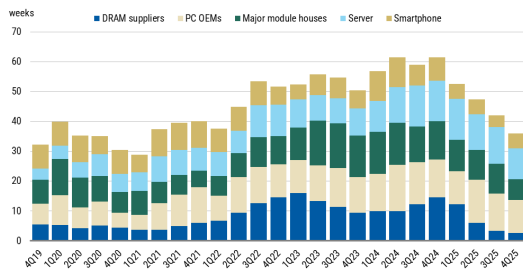
Source: Morgan Stanley Research

DRAM pricing YoY moving higher into 1H26



Source: Company data, Morgan Stanley Research

Memory Inventory Normalizing



Source: Company data, Morgan Stanley Research

Morgan Stanley

HBM TAM

Sufficiency estimates	2023	2024	2025	2026e
HBM TSV Capacity (K wpm)				
Samsung	45	130	150	220
SK Hynix	45	120	150	200
Micron	3	20	60	90
Total	93	270	360	510
Yield rate assumptions				
Samsung		50%	60%	60%
SK Hynix		60%	75%	70%
Micron		50%	70%	70%
UTR assumptions				
Samsung		80%	60%	70%
SK Hynix		100%	100%	100%
Micron		100%	100%	100%
Implied HBM production (mn Gb)				
Samsung	1,500	4,435	6,387	9,560
SK Hynix	1,500	6,273	12,830	15,072
Micron	150	729	3,548	6,459
Total	3,150	11,436	22,765	31,091
Sufficiency Ratio				
HBM Demand (mn Gb)	1,866	9,059	19,161	30,565
HBM sufficiency	69%	26%	19%	2%
Commodity DRAM market demand (mn Gb)	209,527	243,423	291,615	363,968
Total HBM+DRAM demand (mn Gb)	211,393	252,481	310,776	394,533
Commodity DRAM market supply (mn Gb)	200,214	228,086	280,614	332,745
Total HBM+DRAM supply (mn Gb)	203,364	239,523	303,379	363,835
Total DRAM sufficiency	-4%	-5%	-2%	-8%

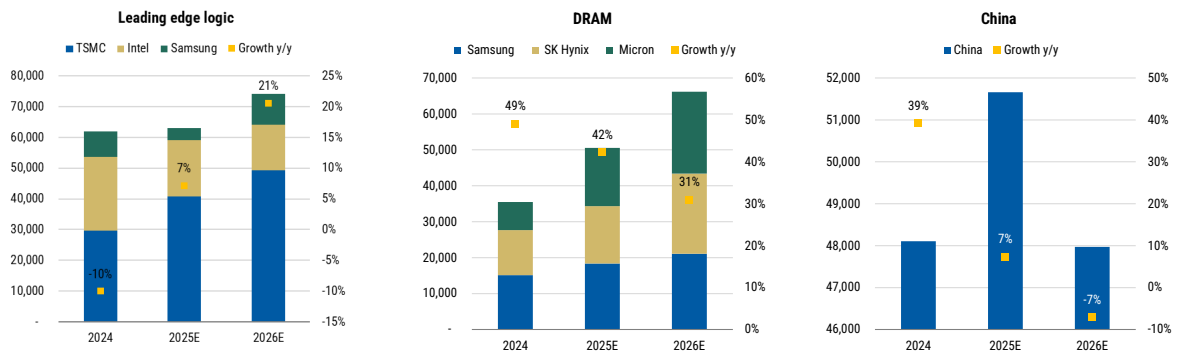
Source: Company data, Morgan Stanley Research estimates (e)

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European Technology

Lee Simpson and Nigel van Putten

Strong WFE growth driven by leading edge logic/foundry while China remains robust



Source: Company data, Morgan Stanley Research estimates (E)

ASML – Positive momentum for lithography demand

Top Pick

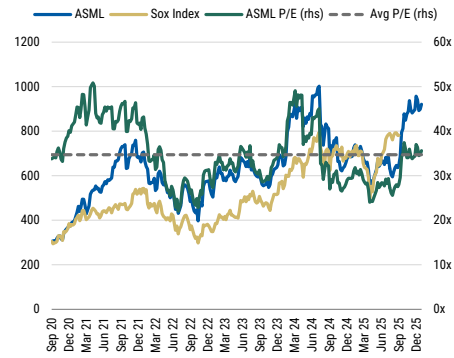
Reuters ticker: ASML.AS Semiconductor Equipment	Analyst: Lee Simpson Overweight: PT €1,000 Close as of 05/01/26: €1053
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Thesis. ASML is a dominant supplier of critical toolsets for the semi manufacturing process. As we exit 2025, we see positive momentum for lithography demand at ASML over FY26/27. DRAM spend is strong, as is the speed in advanced logic. DUV is slowing, including with China, but margins may still be fine in FY26. We recently raised our PT to €1,000, moving ASML to a Top Pick in our European Semi coverage.

EUV Order Intake (FY24-27e)

Fiscal Year	Total
FY24	38
FY25e	41
FY26e	64
FY27e	73

Source: Company data, Morgan Stanley Research estimates (e)



Valuation

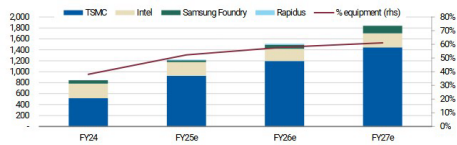
- Base case: €1,000 - 29x FY27 EPS of €34
- Bull case: €1,400 - 35x FY26 EPS of €40
- Bear case: €400 - 20x FY26 EPS of €20

ASM – Highest exposure to advanced logic/foundry

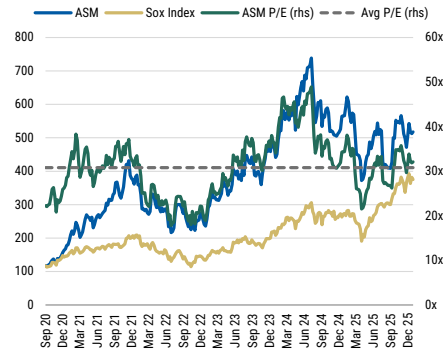
Top Pick

Reuters ticker: <i>ASMI.AS</i> Semiconductor Equipment	Analyst: <i>Nigel van Putten</i> Overweight; PT €625 Close as of 05/01/26: €577
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Thesis. ASMI lagged for much of the last year but as we observe positive developments in leading edge logic we expect the market to start to appreciate stocks with higher exposure, which is why ASMI is a Top Pick in our coverage. Our base case is built on the view that headwinds into 2026 are understood and growth will accelerate into FY27 driven by leading edge logic/foundry and advanced DRAM to support the AI infrastructure roll-out.



Source: Company data, Morgan Stanley Research estimates (e)



Source: FactSet

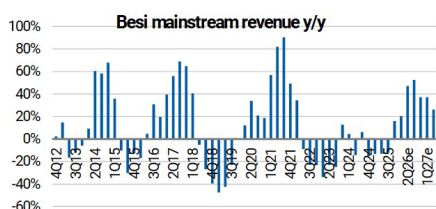
Valuation

- Base case: €625 - 30x FY27 EPS
- Bull case: €800 - 34x FY27 on 12% higher EPS
- Bear case: €350 - 22x FY27 on 20% lower EPS

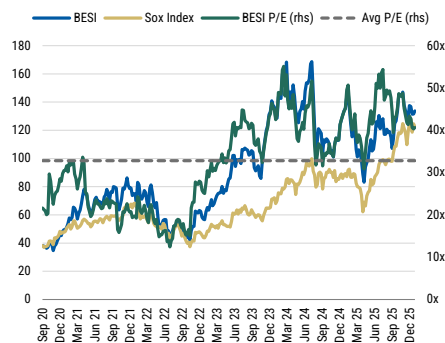
Besi – Strong growth across the board

Reuters ticker: <i>BESI.AS</i> Semiconductor Equipment	Analyst: <i>Nigel van Putten</i> Overweight; PT €160 Close as of 05/01/26: €154
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Thesis. Investors are taking note of Besi and not just because of hybrid bonding. Although we expect progress in the next year on this side, the earnings growth is likely to come from the rest of the portfolio. In 2025 AI emerged as a broad-based driver for Besi, and was able to offset weakness elsewhere. We expect strength to continue but this recovery to broaden out resulting in strong growth across the board.



Source: Company data, Morgan Stanley Research estimates (€)



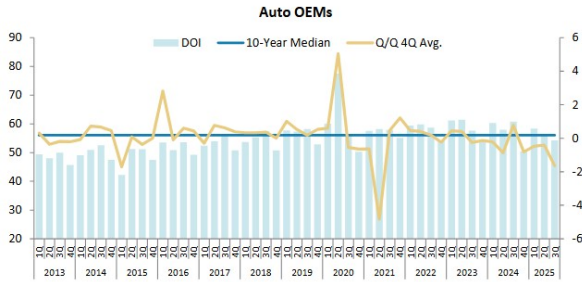
Source: FactSet

Valuation

- Base case: €160 - 32x FY27 EPS
- Bull case: €235 - 40x FY27 EPS
- Bear case: €85 - 25x FY27 on EPS 30% below

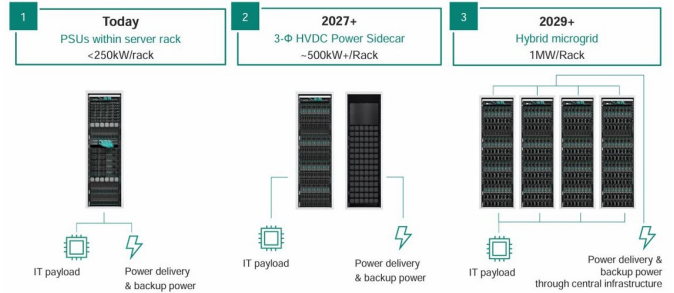
Analog Semis – Weak Autos But Bright Spots In Data Centres

Autos: 3Q25 largest QQ DOI% decline in 5 years – potential for FY26 channel replenishment.



Source: FactSet, Morgan Stanley Research

Data Centres: Market intrigue on the power semi content in a power 'sidecar'.

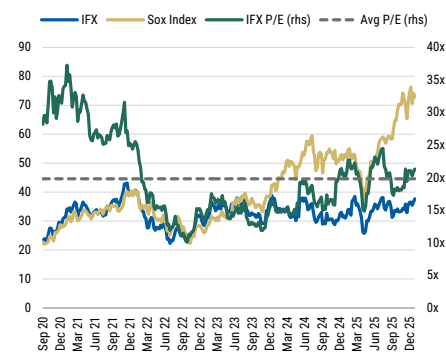


Source: Infineon 3Q25 Investor Presentation

Infineon – Near term de-stocking price difficulties but longer-term data centre tailwinds

Reuters ticker: IFXGn.DE Semiconductor Equipment	Analyst: Lee Simpson Overweight; PT €40 Close as of 05/01/26: €40
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Thesis. An automotive semis cycle blighted by rolling de-stocking price difficulties and skittish end demand is causing concern for the Infineon narrative. And yet much of this is known. The company has already suggested that light vehicle production (LVP) estimates of c.91m (source: S&P) may be too optimistic, especially into 1H26, and a number closer to c.88m is more appropriate - we agree. Longer term, however, there are clear tailwinds in AI data centre spend as well as in grid optimisation. We expect sentiment to 'see-saw' between these cyclical and secular drivers this year but ultimately expect the cycle to turn (modest recovery) and clarity to emerge that IFX is strategic in power semis spend in data centres.



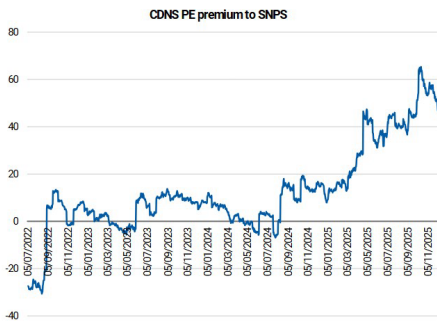
Source: FactSet

Valuation

- Base case: €40 - 22x FY26 EPS of €1.80
- Bull case: €75 - 25x FY26 EPS of €3.00
- Bear case: €18 - 12x FY26 EPS of €1.50

Design & IP – Integration and Chiplets in focus

Market sees CDNS as the EDA winner



Source: FactSet, Morgan Stanley Research

Arm's venture into chip design in focus – Arm Total Design Partners for the Chiplet Ecosystem...



Source: Arm OCP presentation slide

Price Table

Company name	Ticker	Share Price (Local Cur)
Most Favored		
Samsung Electronics	005930.KS	138,100.00
TPHC	2384.TW	1,870.00
Resonac Holdings	6004.T	6,751.00
Advantest	6857.T	21,179.00
ADML Holding NV	ADML.AS	1,053.20
Applied Materials Inc.	AMAT.O	264.32
NAURA Technology Group Co Ltd	002371.SZ	474.51
Advanced Micro-Fabrication Equipment Inc	688022.SS	211.33
SCREEN Holdings	7735.T	16,000.00
ASM International NV	ASML.AS	976.60
BE Semiconductor Industries NV	BEIS.AS	133.75
Infinion Technologies AG	IFXGN.DE	39.91
StarPower Semiconductor Ltd	603290.SS	99.02
Yangjie Technology	300373.SZ	69.60
Espressof Systems	688018.SS	178.30
GigaDevice Semiconductor Beijing Inc	603986.SS	235.68
Aspeed Technology	3274.TWD	7,156.00
Global Unichip Corp	3443.TW	2,300.00
MediaTek	2454.TW	1,225.00
King Yuan Electronics Co Ltd	2449.TW	261.00
Winyan Corp	6669.TW	4,540.00
Accron Technology Corporation	2349.TW	1,168.00
KingSlide Works Co. Ltd.	7039.TW	3,205.00
Biotek	3665.TW	1,575.00
Umicore	3037.TW	230.00
Samsung Electro-Mechanics	009150.KS	270,000.00
Hon Hai Precision	2317.TW	234.50
Asia Mail Components Co. Ltd.	3017.TW	1,450.00
Xiaomi Corp	1810.HK	39.34
BOE Technology	000725.SZ	4.23
UPMC	2393.TW	49.30
Lenovo	0992.HK	9.55
Least Favored		
Powerchip Semiconductor Manufacturing Co	6770.TW	43.45
Hangzhou Silan Microelectronics Co. Ltd.	600460.SS	28.72
China Resources Microelectronics Limited	688396.SS	53.89
Sino Wealth Electronic	300327.SZ	29.01
Unigroup Guoshin Microelectronics Co Ltd	002049.SZ	78.81
Novatek	3034.TW	363.00
Navidem Technology Corporation	6919.TW	50.80
WPG Holdings	3702.TW	59.50
Advanced Wireless Semiconductor Co	8096.TWD	104.00
Parade Technologies Ltd	6966.TWD	966.00
Realtek Semiconductor	2379.TW	493.50
Etan Microelectronics Corp	2456.TW	116.30
WIN Semiconductors Corp	3105.TWD	163.00
JCEI Group Co Ltd	600884.SS	38.36
Qiga-Byte Technology Co. Ltd.	2276.TW	248.00
Nan Ya PCB	6948.TW	241.50
Sunonwealth Electric Machine Industry Co	2421.TW	157.00
Sarnan Optoelectronics	600703.SS	14.38
Acer Inc.	2353.TW	26.60

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	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MISC
Overweight/Buy	1519	41%	415	48%	27%	674	42%
Equal-weight/Hold	1583	43%	362	42%	23%	720	45%
Not-Rated/Hold	4	0%	1	0%	25%	1	0%
Underweight/Sell	564	15%	87	10%	15%	216	13%
TOTAL	3,670		865			1611	

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.

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(as of December 31, 2025)

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Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
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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.

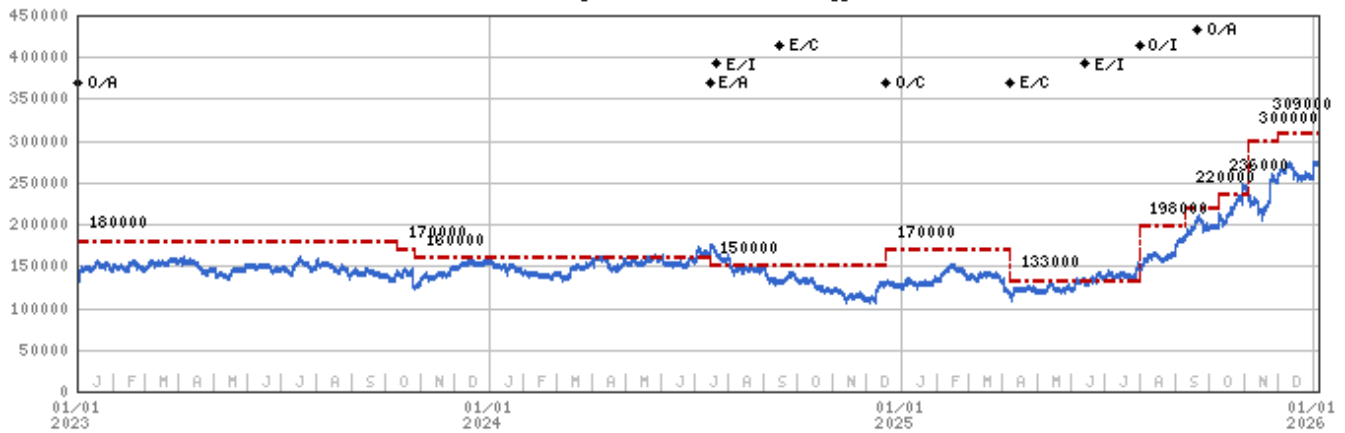
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

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)

Samsung Electro-Mechanics (009150.KS) - As of 01/06/26 GMT in KRW
 Industry : S. Korea Technology



Stock Rating History: 1/1/21 : O/A; 5/12/21 : E/A; 7/19/21 : E/I; 8/12/21 : E/C; 6/1/22 : U/C; 10/4/22 : U/A; 11/9/22 : O/A; 7/15/24 : E/A; 7/21/24 : E/I; 9/15/24 : E/C; 12/18/24 : O/C; 4/7/25 : E/C; 6/13/25 : E/I; 7/31/25 : O/I; 9/21/25 : O/A

Price Target History: 12/1/20 : 180000; 1/19/21 : 240000; 3/1/21 : 250000; 5/12/21 : 180000; 10/19/21 : 170000; 10/27/21 : 160000; 1/24/22 : 180000; 3/18/22 : 170000; 6/1/22 : 140000; 11/9/22 : 180000; 10/11/23 : 170000; 10/27/23 : 160000; 7/15/24 : 150000; 12/18/24 : 170000; 4/7/25 : 133000; 7/31/25 : 198000; 9/10/25 : 220000; 10/10/25 : 236000; 11/5/25 : 300000; 12/1/25 : 309000

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.

Samsung Electronics (005930.KS) - As of 01/06/26 GMT in KRW
 Industry : S. Korea Technology



Stock Rating History: 1/1/21 : O/A; 7/19/21 : O/I; 8/12/21 : O/C; 10/4/22 : O/A; 7/21/24 : O/I; 9/15/24 : O/C; 6/13/25 : O/I; 9/21/25 : O/A

Price Target History: 11/27/20 : 88000; 1/12/21 : 110000; 2/25/21 : 115000; 5/18/21 : 93000; 6/8/21 : 98000; 8/12/21 : 89000; 9/15/21 : 95000; 12/3/21 : 97000; 3/18/22 : 95000; 4/28/22 : 85000; 6/10/22 : 80000; 7/5/22 : 75000; 7/22/22 : 70000; 9/17/22 : 68000; 3/21/23 : 70000; 5/30/23 : 90000; 7/7/23 : 95000; 3/22/24 : 97000; 4/16/24 : 101000; 6/6/24 : 105000; 9/15/24 : 76000; 12/18/24 : 65000; 3/19/25 : 70000; 8/1/25 : 86000; 9/21/25 : 97000; 10/8/25 : 111000; 10/23/25 : 120000; 10/30/25 : 139000; 11/5/25 : 144000

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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