J.P.Morgan

Memory Market Update

In-between volatility and fundamentals: What to focus on heading into CY2Q26 earnings result season

Technology - Semiconductors

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Memory share prices have risen sharply over the past 1-3M (+44-184% vs SOX: 20-88%, as of 23 June close), while concurrently remaining volatile due to non-fundamental factors, in our view. In the upcoming earnings season, we expect investors to monitor long-term agreement (LTA) developments and memory content per rack trends, which have recently been downsized due to supply shortages. Although LTA negotiations are taking longer than expected, we expect announcements in 2H26 to pave the way for a memory valuation re-rating. We reiterate our 'higher for longer' memory upcycle view and remain constructive on the memory stocks. We remain constructive on major Asian memory names (**SEC [OW] and Kioxia [OW]** .

- **Tepid LTA announcements so far; Expectations rolled over to 2H.** Our belief in LTA paving the way for a memory valuation rerating remains unchanged, but we acknowledge the reticent memory LTA announcements since May (report). We attribute the silence to memory makers being prudent on LTA terms (price negotiations, protection measures, % of prepayment, etc.), but also highlight the ongoing corporate governance issues that may have shifted management's attention (i.e. Samsung labor strike). In the past 1M, incremental LTA announcements include Micron's strategic agreement with Anthropic to scale next-gen AI infrastructure with disclosed terms including long-term supply of AI memory (HBM, DRAM, SSDs) amid Micron investing in Anthropic's Series H funding (link). We find this contract structure akin to the LTA contract between NYT and NAND SSD makers (report). We highlight that SEC and SKH are likewise strategic equity partners of Anthropic and we expect further LTA announcements with US hyperscalers in 2H26E, which we believe will provide the foundation for a gradual multiple re-rating on a mid- to long-term horizon (report).
- **Memory content optimization is underway as shortages worsen next year.** In response to SOCAMM content cut noise (report), we identify memory supply shortages as the biggest force for the content cuts, more so than developments in cost-optimized AI models (i.e. DeepSeek or Turboquant type of event) or easing memory bottlenecks. Recent HBM4E sampling headlines centered around 12Hi instead of 16Hi are another example indicating the shift in customers' focus from high performance to budget-optimized performance. Memory shortages were triggered by the explosive need for AI factory infrastructure buildout to generate tokens, and we believe the role of memory as a strategic asset in Artificial General Intelligence (AGI) remains unchanged. With the memory shortage showing no signs of easing (we believe 2027E will be worse than 2026E), several investors have flagged developments in networking (i.e. CPO in scale-up) to ease the computation workload, thereby necessitating less memory per rack. We are uncertain about this optionality, but cautiously believe current demand projections indicate limited signs of demand destruction or memory content optimization that may ease the S-D imbalance. We would closely monitor major cloud service providers' (CSP) commentary on the next server architecture pipeline update, as well as the performance trade-off evaluation amidst memory spec adjustments.

See page 7 for analyst certification and important disclosures, including non-US analyst disclosures.

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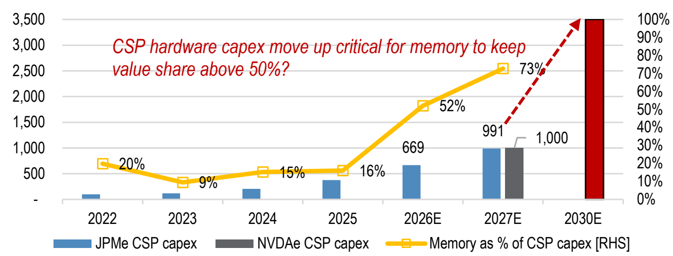
- **Memory becomes the centerpiece of the AI business model debate, all eyes on CSP hardware capex spending update.** Most investors we have spoken to agree on the fundamental S&D tightness prospects, but they have raised concerns about the elevated AI memory share within CSP capex (JPMe: 52% in 26E trending higher to above 70% next year vs <20% in the pre-AI era) and they believe more evidence (e.g. AI service breakthroughs to accelerate cloud/related AI revenue) is needed to justify memory's value share trajectory. In our view, this is more closely related to the fundamental AI business model question, and memory's relationship to system performance is greater than ever. Tracking CSP capex revisions vs CSP-grade memory value TAM forecasts over the past 12M, we note an increase in memory value within CSP capex (rising from 20% to over 50%) for 2026E. It has substantially moved up during the March-quarter when DRAM/NAND price sequential momentum more than doubled vs our initial expectations at the beginning of the year. We believe the pace of consensus forecast revisions is relatively faster in the semiconductor space vs. CSP hyperscalers and it may take additional months for the gap to narrow. Nonetheless, we would again like to point out the favorable S-D and strategic importance of memory in the AI value chain, which suggests that a higher value share vs historical cycles is warranted. Value share has had a high correlation with memory's market cap gain relative to other AI ecosystem sub-sectors and we maintain our bullish stance.

Figure 1: CSP capex and AI memory % share

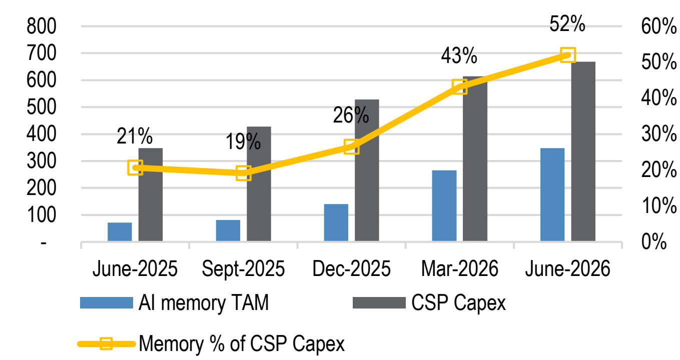
US$bn, % - RHS



Source: Company data, Bloomberg Finance L.P., J.P. Morgan estimates.

Figure 2: Relevant TAM % of CSP capex

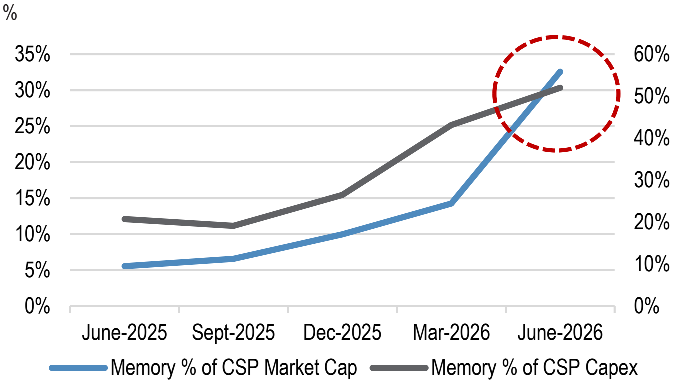
US$bn, % - RHS



Source: Company data, Bloomberg Finance L.P., J.P. Morgan estimates.

Figure 3: Memory vs CSP market cap trend

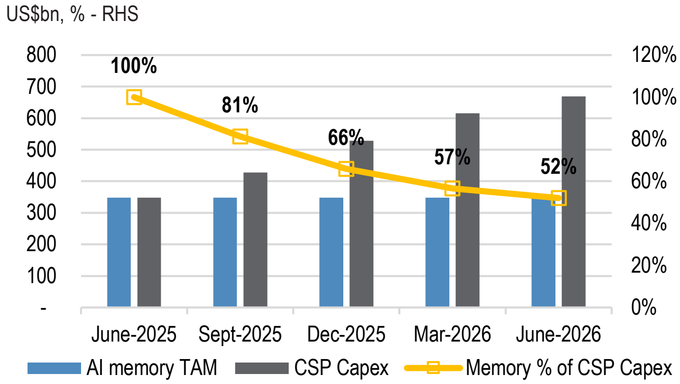
%



Source: Company data, Bloomberg Finance L.P., J.P. Morgan estimates.

Figure 4: Absolute memory TAM % of CSP capex

US$bn, % - RHS



Source: Company data, Bloomberg Finance L.P., J.P. Morgan estimates.

- **Memory makers' capacity expansion plans and status quo.** Against the unprecedented memory shortage, memory makers are squeezing all the available capacity to expand wafer output, with news headlines citing SKH DRAM capacity reaching as high as 630K by year-end (link) (vs JPMe: 590K wfpm) and SEC pulling forward P5-2 construction by 6M, targeting 29E ramp (link). This aggressive capacity expansion plan doesn't sound surprising given SK Group chairman's recent commentary on doubling its capacity in the next five years (link). Given memory makers' initiatives to debottleneck the supply shortage, we believe the near-term memory bit output is biased to the upside, but we still expect very limited bit growth of <low-20% given 2-2.5 years for greenfield capacity expansion and high bandwith memory (HBM) structurally restricting bit output. In the upcoming result season, we expect memory suppliers to tone up their next 12M-24M capex spending outlook, which we believe would be taken positively for the semiconductor production equipment (SPE) supply chain.
- **Imminent IPO from a Chinese competitor: Implications for the memory makers.** Based on various media sources (link, link), the Chinese DRAM maker has received approval to list on the Shanghai stock exchange and aims to raise 29.5bn Yuan (~US $4.3bn) with the listing planned as early as July. Details have not been disclosed yet, but we expect to hear more headlines on capacity expansion, processing yield, and rising competition in the conventional DRAM space. The China DRAM competitor's aggressive capacity expansion is not new (JPMe: local China DRAM producible capacity~300K wfpm by 26-end, accounting for 14% of DRAM capacity followed by ~100k annual increase through 29-end) and the key monitoring point would be its strategic focus between HBM and conventional DRAM production. We would closely follow the feasibility of HBM production (either HBM3 or HBM3E), the ability to scale down successfully to 1anm, and DDR5 mass production yield levels (especially for server grade memory). The most likely scenario, in our view, is that Chinese DRAM players prioritize addressing the local B2C market amidst gradual entry into the low-end local HBM market. We assess limited S-D impact to the international high-end HBM market as well as US hyperscalers' inference processing and general-purpose server memory markets.
- **HBM commands structurally higher demand growth over the rest of the market, pricing upside an option value.** The HBM S-D imbalance and the profitability gap between HBM and DRAM (JPMe: 20% or higher for FY26E) questions the economics of manfuacturing HBM at the expense of conventional DRAM. Based on wafer-level economics, HBM ASP should rise meaningfully (highest buyside expectation is set at 70-100% like-for-like increase). We also agree with the memory makers' anxiety to manage profitability; however, we see limited room for further increases compared to the bullish camp's expectations, as we believe memory makers consider memory operation's overall profitability while speaking to CSP customers (DRAM, NAND, and HBM holistically rather than individual product base) and carefully manage customers' memory spending appetite (a stiff increase in HBM price may hurt AI server investment appetite). We should bear in mind that HBM is a bundled product to GPU installation in AI server, and CPU-driven demand upside is a secondary order impact to better manage agentic AI. We expect a 25-30% like-for-like ASP increase to be in a more reasonable range and believe superior HBM performance could help retain a higher price premium. While we believe the trade loss ratio is set to widen structurally over the next generation, a higher focus on 12Hi solution at HBM4E could help manage cost inflation to some extent, in our view. We expect both HBM and Server DDR5/LPDDR5 S-D shortages to worsen next year, and forecast HBM capacity as a % of total capacity to continue its upward trend (from 20% in 4Q25 to over 30% throughout 2028E.

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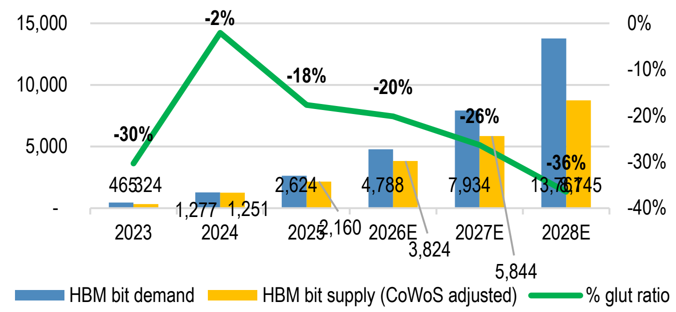
Figure 5: HBM S/D ratio (CoWoS adjusted)

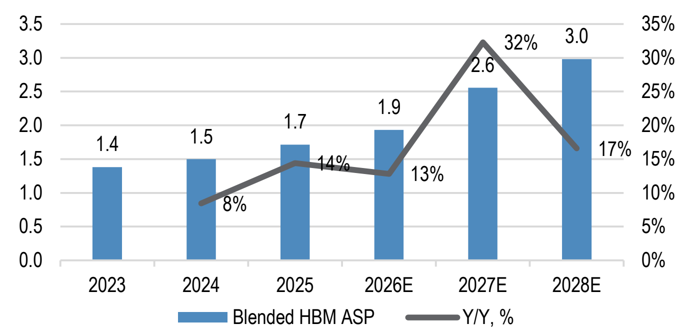
1GB equiv. Mn, % - RHS



Source: Company data, J.P. Morgan estimates.

Figure 6: HBM ASP and Y/Y% trend

US$/Gb, % - RHS

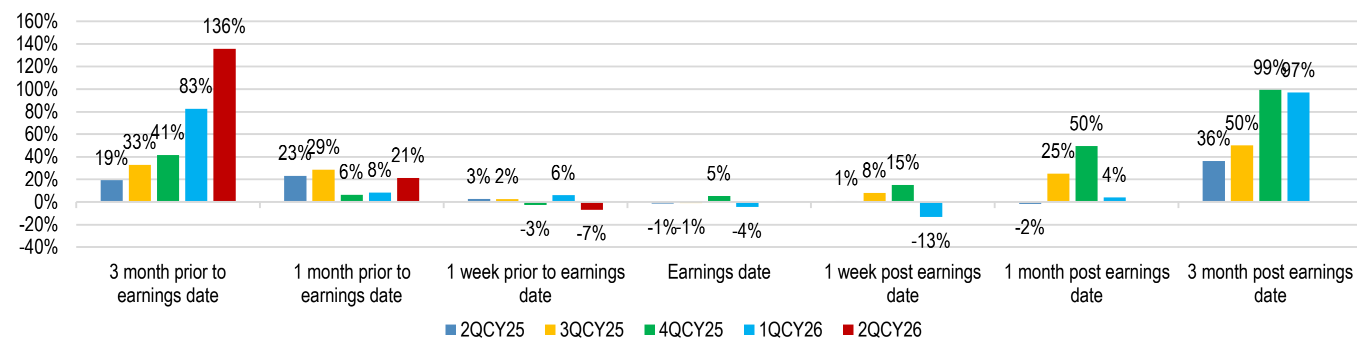


Source: Company data, J.P. Morgan estimates.

- **MU earnings around the corner – thoughts on share price volatiliy.** MU (OW, covered by Harlan Sur) is expected to release its FY3Q26 (May-Qtr) earnings on 25 June Asia morning, and we expect MU's guidance and potential LTA datapoint to act as important catalysts for Asian memory shares. Tracking the share price performance for memory makers (SEC and Micron) prior to and post MU earnings date since 2QCY25, we note limited share price volatility +/- 1 weeks from the earnings date, but much higher volatility expanding the time scope to +/- 3 months. In relation to the EPS revision cycle, we believe the share price appreciation lagged consensus EPS upward revisions in 4QCY25/1QCY26 and moved ahead QTD, on average, following the EPS revision cycle. While the recent memory share price rally and volatility is a concern, we expect memory share prices to ultimately follow the EPS revision cycle with LTA acting as a re-rating catalyst.

Figure 7: Average memory share price performance around MU earnings date

%



Source: Bloomberg Finance L.P.; Note: Average of SEC, and MU share price performance. *note: CY2Q26 performance as of June 23, 2026 close.

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Table 1: Average share price performance minus % of EPS revisions

%

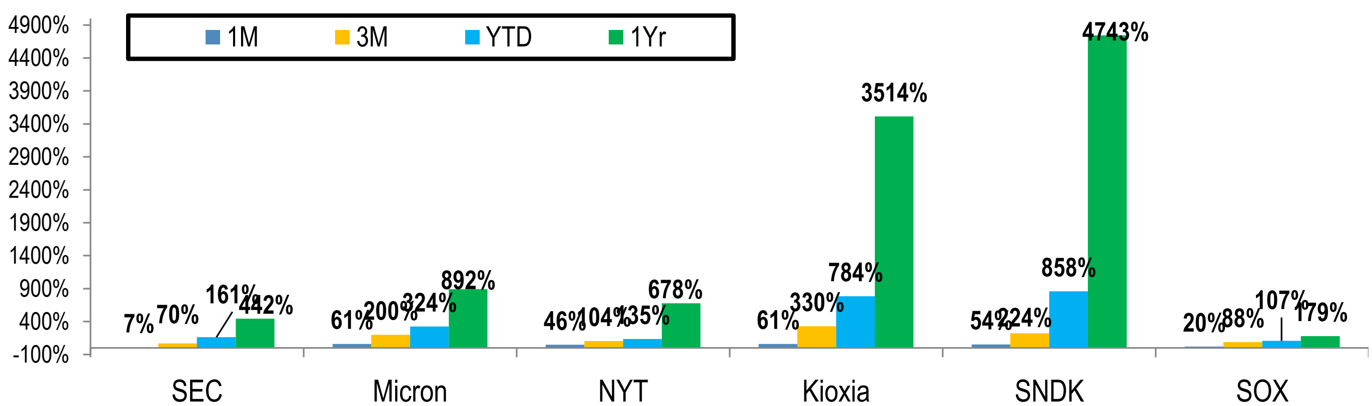
Shr px - EPS revision %	2QCY25	3QCY25	4QCY25	1QCY26	2QCY26	Average
3 month prior to earnings date	6%	4%	-83%	-50%	67%	-11%
1 month prior to earnings date	17%	10%	-44%	-51%	9%	-12%
1 week prior to earnings date	-3%	-11%	-35%	-34%	-8%	-18%
Earnings date	**-4%**	**-2%**	**-5%**	**-13%**		**-6%**
1 week post earnings date	-2%	5%	2%	-22%		-4%
1 month post earnings date	-7%	9%	15%	-30%		-3%
3 month post earnings date	10%	-56%	-8%	21%		-8%

Source: Bloomberg Finance L.P. *note: EPS and share performance is average between SEC and Micron as of June 23, 2026 close.

- **Next catalysts after memory shares have rallied +44% in the past 1M (SOX: +20%).** Memory shares have rallied sharply in the past 1-3 months as the bottleneck in memory shows limited signs of easing (actually tightening) with LTA expectations acting as a re-rating factor, in our view. Near-term catalysts include: 1) MU earnings on 25 June with consensus EPS estimate revisions / LTA datapoints acting as an important catalyst for Asian memory shares; 2) CSP capex guidance during the June-quarter result season (especially top-three US hyperscalers); 3) LTA datapoints or announcements from Asian memory makers prior to CY2Q26 earnings in Jul-26; 4) Chinese DRAM maker IPO event; and 5) shareholder return policy updates from Asian memory makers.

Figure 8: Global memory makers' share price performance including SOX (Philadelphia Semiconductor index)

%



Source: Bloomberg Finance L.P. *note: performance as of June 23, 2026 close.

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Table 2: Historical share performance

US$bn, %

US$bn	Top 4 CSP	AI semi	Foundry	Memory	AI ecosystem mkt cap.	SOX	NASDAQ index	DOW Jones index
1Q24	8,122	3,226	632	595	12,575	5,795	39,807	5,254
2Q24	8,871	4,109	772	623	14,376	6,991	39,119	5,460
3Q24	8,652	4,113	784	491	14,039	6,900	42,330	5,762
4Q24	9,243	4,667	850	395	15,156	7,306	42,544	5,882
1Q25	8,162	3,651	711	423	12,947	6,040	42,002	5,612
2Q25	10,027	5,448	940	557	16,972	8,481	44,095	6,205
3Q25	10,979	6,427	1,111	721	19,238	10,022	46,398	6,688
4Q25	11,508	6,594	1,280	1,145	20,526	10,608	48,063	6,846
1Q26	9,907	6,122	1,424	1,411	18,863	10,738	46,342	6,529
2Q26YTD	10,937	7,741	2,041	3,563	24,283	16,338	51,667	7,365
% chagnes								
2Q24	9%	27%	22%	5%	14%	21%	-2%	4%
3Q24	-2%	0%	1%	-21%	-2%	-1%	8%	6%
4Q24	7%	13%	8%	-19%	8%	6%	1%	2%
1Q25	-12%	-22%	-16%	7%	-15%	-17%	-1%	-5%
2Q25	23%	49%	32%	31%	31%	40%	5%	11%
3Q25	9%	18%	18%	30%	13%	18%	5%	8%
4Q25	5%	3%	15%	59%	7%	6%	4%	2%
1Q26	-14%	-7%	11%	23%	-8%	1%	-4%	-5%
2Q26YTD	10%	26%	43%	153%	29%	52%	11%	13%
mkt cap. mix within the AI ecosystem								
1Q24	65%	26%	5%	5%	100%			
2Q24	62%	29%	5%	4%	100%			
3Q24	62%	29%	6%	3%	100%			
4Q24	61%	31%	6%	3%	100%			
1Q25	63%	28%	5%	3%	100%			
2Q25	59%	32%	6%	3%	100%			
3Q25	57%	33%	6%	4%	100%			
4Q25	56%	32%	6%	6%	100%			
1Q26	53%	32%	8%	7%	100%			
2Q26YTD	45%	32%	8%	15%	100%			

Source: Company data, Bloomberg Finance L.P., J.P. Morgan estimates.

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Companies Discussed in This Report (all prices in this report as of market close on 24 June 2026, unless otherwise indicated)
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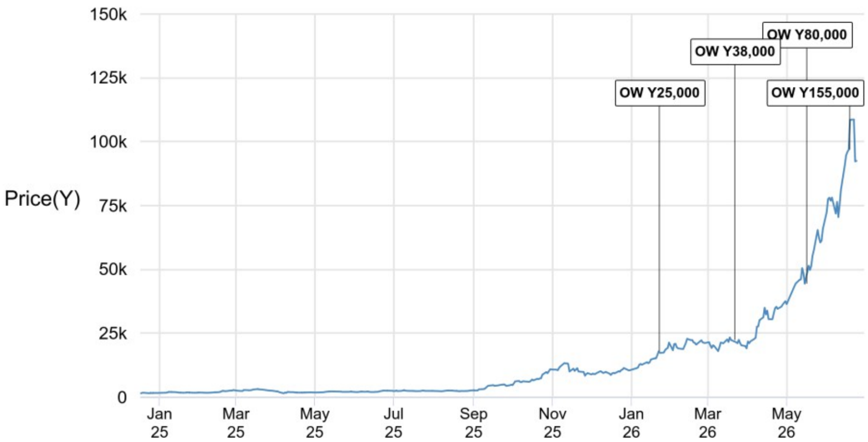
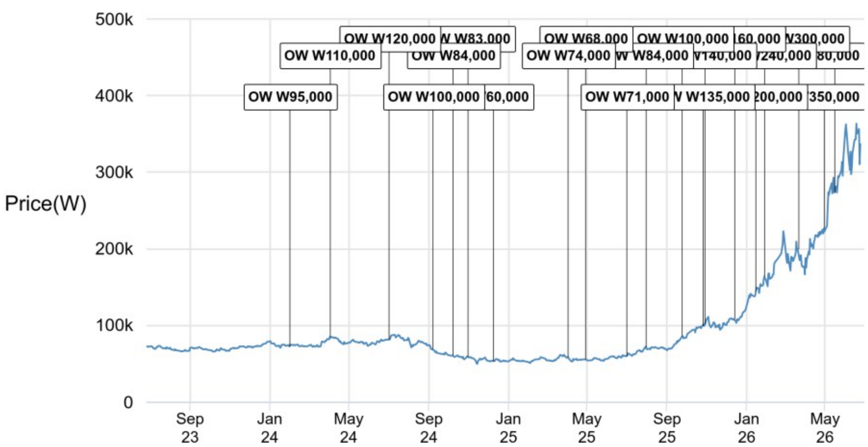
KIOXIA Holdings (285A) (285A.T, 285A JP) Price Chart



Source: Bloomberg Finance L.P. and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage Jan 23, 2026. All share prices are as of market close on the previous business day.

Date	Rating	Price (Y)	Price Target (Y)
23-Jan-26	OW	17910	25,000
22-Mar-26	OW	22360	38,000
17-May-26	OW	44450	80,000
19-Jun-26	OW	96900	155,000

Samsung Electronics (005930.KS, 005930 KS) Price Chart



Source: Bloomberg Finance L.P. and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage Oct 09, 2011. All share prices are as of market close on the previous business day.

Date	Rating	Price (W)	Price Target (W)
01-Feb-24	OW	72700	95,000
03-Apr-24	OW	85000	110,000
03-Jul-24	OW	81800	120,000
08-Sep-24	OW	68900	100,000
08-Oct-24	OW	61000	84,000
31-Oct-24	OW	59100	83,000
10-Dec-24	N	53400	60,000
03-Apr-25	OW	58800	74,000
30-Apr-25	OW	55800	68,000
02-Jul-25	OW	60200	71,000
01-Aug-25	OW	71400	84,000
25-Sep-25	OW	85400	100,000
27-Oct-25	OW	98900	135,000
30-Oct-25	OW	101700	140,000
14-Dec-25	OW	108500	160,000
16-Jan-26	OW	145000	200,000
29-Jan-26	OW	164300	240,000
22-Mar-26	OW	199800	300,000
30-Apr-26	OW	226500	350,000
17-May-26	OW	273500	480,000

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Completed 24 Jun 2026 05:43 PM HKT

Disseminated 24 Jun 2026 06:27 PM HKT