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Asia Technology | Asia Pacific

Memory – A Small Wrinkle

The sharpest correction in the memory industry to date appears to have ended, shifting focus to buybacks as the next catalyst. We view this as a small wrinkle – a natural part of any aging cycle. Valuations offer attractive tactical re-entry points.

Memory wrinkles. In early July, we first laid out our case for why the momentum trade and memory stocks in particular could face a temporary correction (*Tech Bytes: Memory – Changing Tides (6 Jul 2026)*) ahead of a second derivative peak for DRAM pricing and increasingly concentrated/levered positioning. Since then, we have remained bullish on AI capex and capital returns, while staying mindful of softening signals in the memory cycle – price increases moderating from 4Q26, inventories inflecting higher, and supply growth creeping in – limiting the potential for further upside earnings surprises. We view valuations as compelling following the pullback, with capital returns potentially accelerating in the near term.

A strong AI cycle and a cyclical downturn can coexist. Since we published our three-pronged framework for memory – (1) AI spending, (2) LTA re-rating, and (3) the memory cycle – in our 6 July report, we have observed that investors generally remain bullish on AI demand (intelligence = memory) and expect LTAs to drive imminent capital returns, while becoming incrementally less optimistic on memory consumer end markets. However, we generally find less conviction across the board on earnings as a stock catalyst, namely what drives EPS higher in 2028.

Earnings estimate changes. With few surprises in recent earnings, our price targets for Samsung and SK hynix remain unchanged. We raise SK hynix 2026e EPS 13% to incorporate gains from asset disposal in 2Q. We reduce Samsung 2026e EPS 10%,, reflecting softer consumer business. Our 2027-28 estimate changes are insignificant.

Bottom line. We remain bullish over the longer term based on AI spending, the ramp of Agentic AI (*Rise of the AI Agent – Global Implications*), Samsung and Hynix's earnings growth of 25-50% in 2027e, and 60%+ PT-implied upside vs. current share prices. In the near term, the chase is back on following July's rapid unwind and is likely to continue. Our stock preferences remain focused on where spending is occurring and where bottlenecks are greatest, favoring DRAM and legacy memory (DDR4, NAND SLC) over memory module makers.

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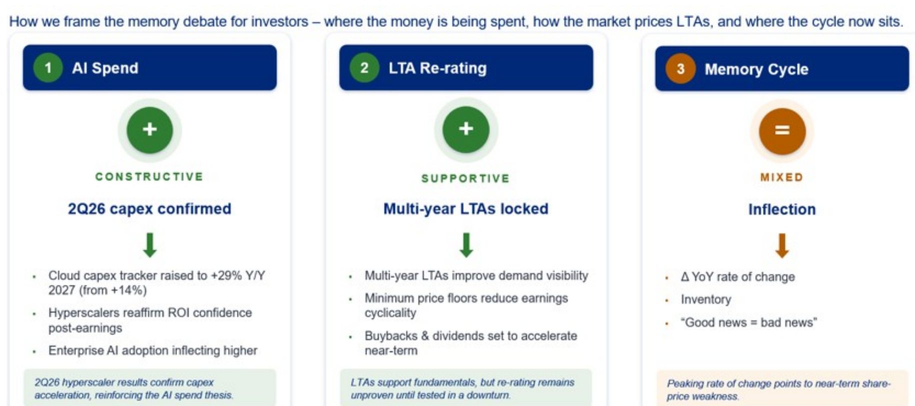
What's Changed

The memory cycle is transitioning into late cycle by 4Q26... As discussed last month, this is typically the period when cyclically driven operating leverage no longer outpaces price moderation. The next step for companies is to place greater emphasis on capital returns, earnings stability through LTAs, sustainable margins, and free cash flow generation. The peak rate of change in memory earnings estimate revision breadth coincided with the recent sell-off (Exhibit 3) and has decelerated from extreme levels since late June.

...but moving past the worst... We think it is reasonable for memory stocks to continue rallying from their recent lows. With cyclical tailwinds diminishing, however, generating further earnings estimate surprises may become more challenging as the cycle shifts into its later stages. We expect companies to communicate their capital return plans more proactively and demonstrate greater discipline in monetizing significant capex investments to support a market re-rating.

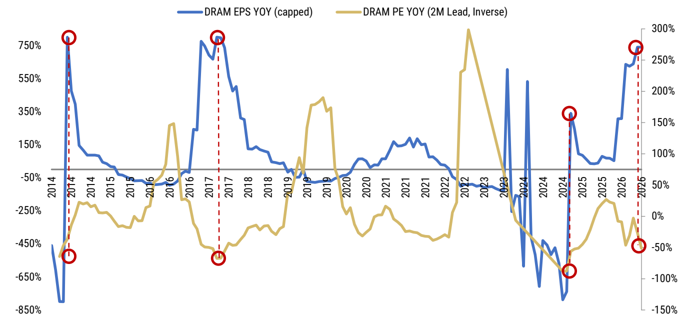
...with compelling value from here. The de-rating is already well advanced, with P/E multiples effectively pricing in a sharp decline in NTM EPS growth over the next 12 months. Historically, memory earnings have been highly cyclical, requiring investors to value stocks on a normalized earnings basis. In our view, that framework may no longer fully apply because AI-driven demand may represent a secular rather than cyclical shift. Capital returns may also be the catalyst the market needs to unlock this structural change in demand.

Exhibit 1: Memory – Changing Tides: Three Debates Framing the Cycle



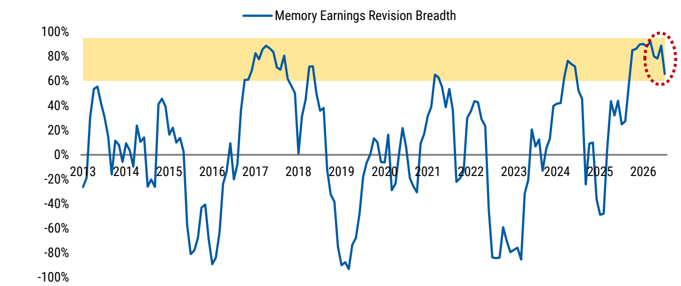
Source: Morgan Stanley Research.

Exhibit 2: DRAM NTM P/E leads NTM EPS by about two months; stocks have already de-rated significantly...



Source: FactSet

Exhibit 3: ...as earnings estimate revision breadth begins to decelerate from extreme levels



Source: FactSet

Where we could be wrong: The market is forward-looking, and several upside and downside risk factors could cause outcomes to diverge from our current outlook for the industry and stocks:

- **Chinese competition.** CXMT and YMTC pose long-term risks to the wider memory industry as potential supply additions could hamper the sustainability of returns seen thus far. Memory shortages are prompting more non-Chinese consumer electronics companies to consider CXMT and YMTC as additional suppliers. CXMT's customers include Chinese smartphone, PC, and server manufacturers. The company has secured multiple five-year LTAs with Chinese CSPs, and its strategic roadmap includes supplying HBM within China starting in 2027.
- **Supply growth could outpace current forecasts.** Beyond China, the DRAM and NAND industries are racing to build large-scale fabs to produce leading-edge memory. When this capacity comes online from late 2027 through 2028, many of the current supply bottlenecks could ease.
- **Sustainable returns may mean-revert.** Current margins are exceptional from a historical perspective at nearly 90% gross margin for DRAM. Sustaining these margins may prove challenging. The industry could either (1) attract capital for more aggressive capacity expansion and/or new entrants that compete away those margins, and/or (2) customers could look for lower-cost alternatives and improve memory efficiency.
- **AI data-center build-out may not last forever.** The AI infrastructure build-out is unprecedented and is likely to continue in the near term, but it should eventually moderate. By 2028, hyperscalers could slow the initial phase of exponential capacity expansion, driven by funding constraints and/or a transition to a more gradual upgrade cycle.
- **Rising interest rates, driven by Fed monetary policy adjustments, could add to market pressure.** The US 10-year Treasury yield has recently climbed to a multi-year high of 4.7%. High-growth memory stocks are particularly sensitive to macroeconomic conditions, which can increase market volatility and raise borrowing costs.

AI Capex (+)

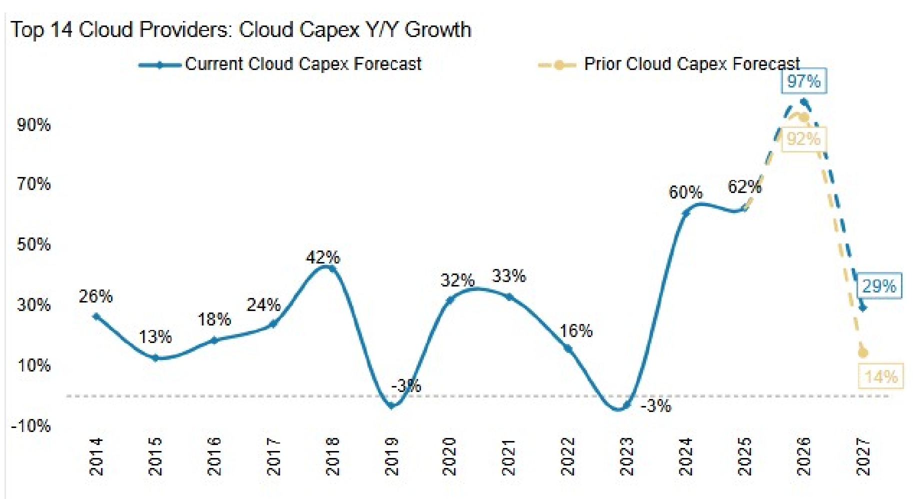
The hyperscalers have turned the tide. Most notably, strong revenue growth among AI model companies has reassured investors that the AI revenue opportunity is large enough to justify current spending levels. We now see a combination of renewed focus on the ROIC opportunity for hyperscalers, as discussed by our Internet analyst Brian Nowak (see *The Paths to 25-50% GenAI ROIC*), and a clear inflection in enterprise AI adoption. Computing demand remains stronger than available supply, with all four US hyperscalers highlighting ongoing capacity constraints:

- GOOGL noted that demand continues to exceed internal supply.
- MSFT reiterated that Azure demand remains above available capacity.
- AMZN stated that 2026 capacity will remain insufficient to meet demand and that much of its 2027 capacity is already reserved.
- META expects industry-wide compute availability to remain tight for the foreseeable future.

Importantly, demand is coming from both external cloud customers and internal AI workloads, suggesting few signs of moderation despite the unprecedented pace of infrastructure deployment.

Spending acceleration continues. Cloud capex continues to move higher (+29% Y/Y in 2027 vs. +14% previously) as demand remains ahead of supply. Strong operating cash flow, equity and debt financing, leasing strategies, and infrastructure efficiencies are helping fund capex while easing FCF pressure. With cloud growth accelerating, AI monetization improving, and hyperscalers expressing greater confidence in ROIC, our US team believes consensus capex estimates remain too conservative and are skewed higher.

Exhibit 4: Following US hyperscaler C2Q26 earnings, our cloud capex tracker is now pointing to 29% Y/Y in 2027, up 15 points from the prior forecast of +14% Y/Y about a month ago



Source: Morgan Stanley Research.

LTA (+)

Capital returns are coming. Customer long-term agreements have not delivered the broad re-rating we had expected, at least so far. If the market fully valued LTAs, memory stocks would likely trade at higher multiples. In our view, investors remain reluctant to assign meaningful value until these agreements demonstrate resilience through a downturn. Since our May note (LTAs – How They Are Affecting Memory), the story has evolved from intent to concrete disclosure. Every major supplier has now quantified how much output or revenue it intends to place under contract, and several have disclosed deposits, guarantees, and, in Micron's case, a formal backlog metric. The key differentiator is the pricing mechanism and the proportion of the capacity base each company is willing to contract.

Samsung Electronics: Samsung's first concrete disclosure came during its 2Q26 earnings call (30 July): a target of placing 60–70% of capacity under contract, finalized agreements with its top five global data center customers, and five additional customers in final-stage negotiations. These agreements follow a rolling five-year structure (a five-year base term plus a one-year extension negotiated annually). Customers must make advance payments under the contracts, with roughly 25% of the expected balance already received and more to come. Samsung has also established minimum price floors for mainstream products to limit volatility risk.

SK hynix: During its 2Q26 earnings call (28 July), SK hynix disclosed that it had concluded LTA negotiations with approximately 10 customers, while discussions with others continue. Previous LTAs were relatively flexible on volume commitments, but the new agreements include stronger mutual commitments given the scale of investment required. Terms typically extend for around five years, although they vary by customer and product. Pricing structures are tailored rather than standardized and are designed to absorb volatility, while deposits support fulfillment and improve demand visibility. LTAs will cover only an "appropriate level" of sales, supporting downside resilience while preserving capacity for incremental demand. The company did not disclose a target allocation percentage.

Micron (covered by Joseph Moore): During its FQ3 FY26 earnings call (24 June), Micron reported 16 completed SCAs covering approximately 20% of DRAM volume and one-third of NAND volume over a five-year period (including three automotive agreements), spanning CY2026–2030. These contracts are take-or-pay and non-cancelable outside the automotive segment, with a pricing structure that includes a current-quarter price ceiling and a contract-term price floor. Fourteen of the 16 agreements represent approximately $100bn of minimum-price revenue. Micron projects $22bn of deposits and commitments, including approximately $18bn in cash. The company has also begun disclosing RPO, which stands at roughly $100bn including post-quarter agreements, and expects SCAs to account for at least half of future revenue. Named counterparties are all automotive customers, including Qualcomm, Visteon, HARMAN, JOYNEXT, DENSO, Astemo, Hyundai MOBIS, Ford, and GM.

SanDisk (covered by Joseph Moore): SanDisk refers to its LTAs as "New Business Models" (NBMs). As of FQ4 FY26 (reported 5 August for the quarter ended 3 July), the company had signed 10 NBMs, comprising the five agreements disclosed in April and five additional agreements (three with new customers and two expansions of existing arrangements). Three of the five additional agreements closed before quarter-end, with the remaining two completed afterward. These agreements span eight data center and edge customers. The contracts represent $93.9bn of minimum contracted revenue at floor pricing, while RPO stood at $59.8bn at quarter-end, rising to $91.1bn including the two post-quarter agreements. Financial guarantees total $16.5bn through cash deposits and financial instruments, most of which are held through third parties. Contract terms extend up to five years, with a weighted average duration of more than four years. Volume commitments increase over time, while pricing combines fixed and variable components bounded by both floors and ceilings. Management expects NBMs to cover more than half of bit shipments in FY27 and approximately two-thirds in FY28. NBM-related prepayments and deposits are reported as a separate cash flow item and excluded from adjusted free cash flow ($1.9bn in FQ4 and $2.5bn in FY26).

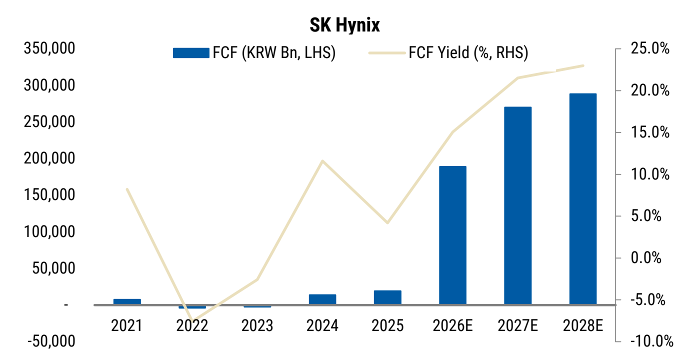
Kioxia (covered by Kazuo Yoshikawa): During its 31 July earnings call, Kioxia described LTAs as serving three purposes: improving visibility into long-term demand, supporting growth investments, and deepening engagement with hyperscale and enterprise customers. The company targets placing 50% of shipment volume under LTAs and stated that it remains largely on track, expecting agreements with major customers by CY2028. Some agreements have already been concluded, while others remain under negotiation. Current discussions mainly focus on CY2027–2028 volumes, although some customers seek longer durations. Terms are customized and covered by NDAs, and Kioxia has indicated that it will not pursue LTAs at the expense of material price concessions. During its June Investor Day, the company highlighted LTAs as a tool to stabilize earnings and improve investment decision-making, while targeting data center revenue of more than 60% by FY2028. The extension of the Kioxia–SanDisk Yokkaichi JV through 2034 and a new long-term DRAM partnership with Nanya further strengthen supply chain resilience.

Exhibit 5: What companies are saying about LTA

Dimension	Samsung	SK hynix	Micron	SanDisk	Kioxia
Allocation	60–70% of capacity	Not disclosed ("appropriate level")	~50%+ of revenue (target)	>50% of FY27 bits, ~⅔ of FY28 bits	50% of volume by CY2028 (target)
Duration	Rolling 5-yr (5+1 option)	~5-yr (varies)	5-yr (CY26–30); 3-yr auto	Up to 5-yr	CY27–28 focus; some longer
Reported customers	AWS, MSFT, Google, Meta, Oracle *(rumored)*	Big techs incl. NVIDIA *(rumored)*	4 large + 3 mid *(unnamed)* ; Auto: Qualcomm, Visteon, HARMAN, JOYNEXT, DENSO, Astemo, Hyundai Mobis; Ford, GM	Not named (datacenter + edge)	Hyperscale + enterprise (not named)
Progress	5 signed, 5 in final talks	~10 concluded	16 SCAs	10 NBMs / 8 customers (5 April + 5 new)	On track to 50% by 2028
Collateral / pricing	Advance payments required (~25% received); price floors on mainstream products	Deposits; non-uniform, volatility-responsive pricing	$22bn deposits/commitments (~$18bn cash); take-or-pay ex-auto, non-cancelable; CQ2 ceiling + floor; ~$100bn RPO	$93.9bn min. rev at floor; RPO $59.8bn ($91.1bn incl. post-Q); $16.5bn guarantees; fixed + variable (floors/ceilings)	Deposits n/d; "price & profit first"

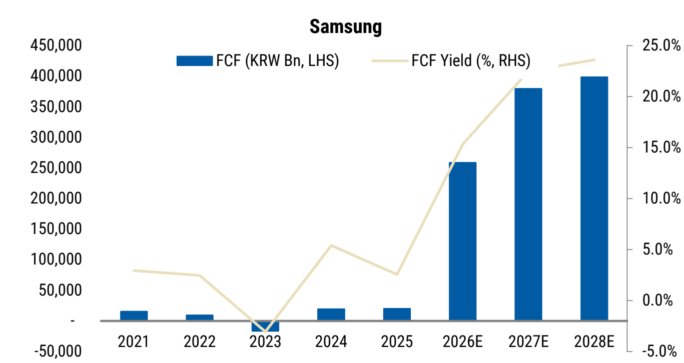
Source: Company data. Rumored customers are media-sourced.

Exhibit 6: Hynix's FCF and FCF yield



Source: Factset, Morgan Stanley Research.

Exhibit 7: Samsung's FCF and FCF yield



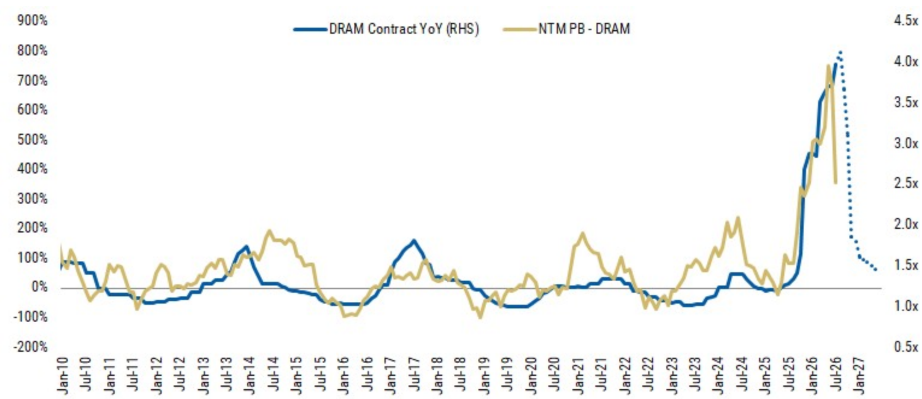
Source: Factset, Morgan Stanley Research.

Memory Cycle (=)

A small wrinkle... A memory cycle peak, measured by the second derivative of pricing (the YoY pricing peak), is a normal part of the industry's evolution, and this cycle may prove no different, aside from (1) the sheer magnitude of the up-cycle (+700% YoY, or roughly 7x historical pricing peaks) and (2) its unusually long duration. DRAM has emerged as one of the key bottlenecks to the AI build-out, yet the market appears unconvinced about the durability of the cycle, with memory stocks trading at roughly 3x NTM P/E and implying little to no growth premium. In our view, multiple expansion could become a larger driver of returns from here as investors begin to price in a longer earnings duration and the prospect of significant capital returns. However, understanding what the market may be discounting, and the disconnect versus the consensus bullish AI thesis, remains important.

…amidst the biggest memory shortage in history… How can stocks correct so sharply when memory is foundational to the performance of every AI model? Memory stocks have rallied substantially, and earnings and revisions have largely validated those gains. However, much of the earnings uplift has come from pricing, and that pricing is likely to plateau over the next 12 months before eventually declining as new capacity enters production, potentially from 2028 onward. In our view, this explains the market's longer-term skepticism and why valuations remain depressed. That said, valuations look exceptionally inexpensive today if earnings power proves sustainable across the cycle.

Exhibit 8: DRAM contract YoY vs. Memory NTM P/B



Source: Trendforce, Morgan Stanley Research

Recent industry checks summary: 3Q26 DRAM contract prices are tracking +15% QoQ in early transactions, slightly below our previous expectation of +20%, while 3Q26 NAND prices are tracking +20% QoQ. As incremental pricing trends begin to moderate into 4Q26, the urgency around customer procurement appears to have eased, given the reduced need to pull forward low-cost inventory. The likely shift of more capacity from consumer applications to eSSD and robust AI demand should continue to absorb supply.

DRAM

- There is no significant change in overall DRAM supply-demand dynamics based on our latest checks. CSPs remain willing to sign LTAs for DRAM and aim to cover at least 90% of demand through LTAs. We have also heard that incremental neo-cloud orders are under LTA negotiations for both DRAM and NAND, which could further increase the portion of supplier capacity locked under LTAs.
- HBM pricing remains under negotiation and has yet to be finalized, based on our checks. Suppliers continue to target 50–100% YoY price increases to align HBM margins with those of commodity DRAM. Reports suggest a potential reduction in HBM specifications to 8-high (8-Hi) stacking at 192GB, below the 12-high (12-Hi) 288GB Rubin configuration. Based on our checks, both 8-Hi and 12-Hi Rubin Ultra

samples exist, while the final design remains undecided. In our view, pricing, thermal challenges, and tight supply are driving these changes.

- **PC DRAM 3Q26 contract prices being set at +15-20% QoQ**, moderating from the +45-50% surge in 2Q26. 8GB DDR4 modules reached around US$139 (+17% MoM), while 16GB DDR5 modules reached around US$238 (+14% MoM). The DDR5 discount to DDR4 widened to 7% from 6% in the prior quarter. 3Q26 negotiations remain tense and have largely shifted into August, with suppliers seeking +20–30% price increases while buyers resist.
- **Consumer/specialty DRAM rose +10-20% MoM, led by 4Gb and 8Gb.** Price increases are moderating because buyers have reached cost-tolerance limits rather than because supply has improved. DDR3 spot pricing has fallen below contract pricing, providing an early indication of softening consumer demand. TrendForce expects structural tightness to persist as suppliers continue shifting capacity toward HBM and server DRAM and plan to exit consumer DRAM, with the upcycle extending into 2027 at a more moderate pace.

NAND

- **While AI demand for eSSD remains very strong, suppliers and module makers have started to see softer demand from consumer customers entering late 2Q26 and early 3Q26,** while industrial and automotive demand remains stable. Pricing should remain supported at current levels from the supplier perspective.
- **Inventory levels remain low at suppliers but have increased at module makers and distributors** across both DRAM and NAND. We expect procurement strategies to normalize from 3Q26. According to TrendForce's latest publication, CSPs now hold 2.5–3 months of inventory and aim to build buffers to 4–5 months.
- **NAND pricing continues to diverge by product type.** SLC ASPs rose +34–51% MoM due to acute shortages of legacy-process products across automotive, industrial, communications, and edge AI applications. MLC ASP growth slowed to +4–8% MoM as buyers encountered pricing ceilings. TrendForce expects this divergence to continue, with SLC pricing remaining elevated while MLC price increases continue to slow. Pricing for 512Gb TLC wafers and 1Tb QLC wafers increased 1.4% and 14.8% MoM, respectively. Contract pricing remains under negotiation, and we note greater pushback on the QLC side given elevated prices relative to HDDs.

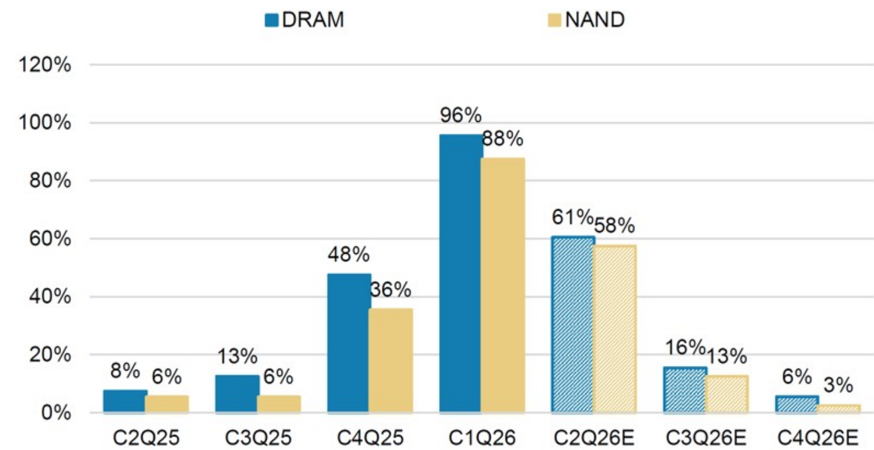
Inventory

- Module makers and distributors, which have roughly 90% exposure to consumer end markets, held an average of 12.5 weeks of inventory at the end of 2Q26, versus a peak of 15 weeks in the previous cycle, according to TrendForce data in Exhibit 10 and Exhibit 11 . While demand from AI-related customers remains exceptionally strong, procurement behaviour in non-AI consumer markets has become more conservative, weighing on shipments.

Capex

- Capex acceleration is progressing as expected. This should not pose a near-term risk if AI demand continues to grow and sustain tight supply-demand conditions. However, capacity expansion in China has become more aggressive as returns improve and supply shortages persist. We note an incremental addition of 50k wafers per month from YMTC, as well as capacity additions at Solidigm's Dalian Fab 2 in 2027. CXMT has also moved forward with funding plans for a new DRAM fab in Beijing and is currently discussing financing.

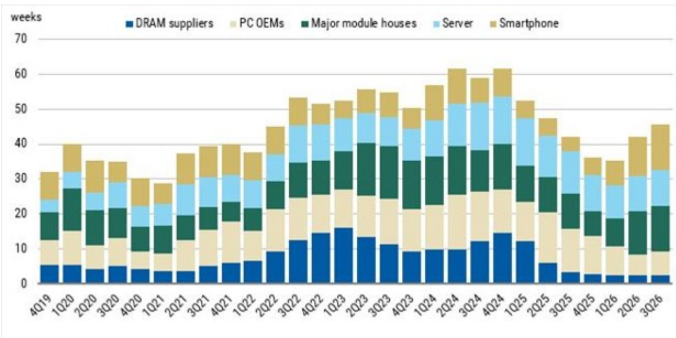
Exhibit 9: Memory QoQ contract prices



Source: TrendForce, Morgan Stanley

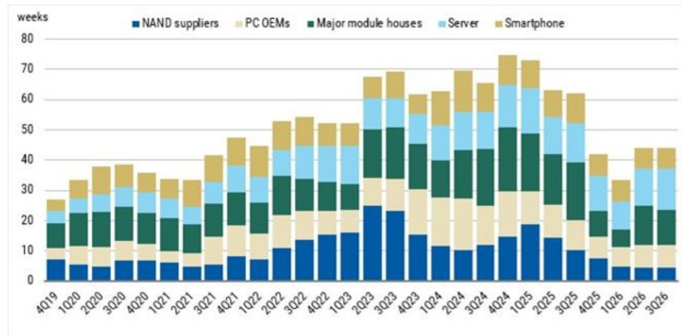
Key Charts

Exhibit 10: DRAM inventory



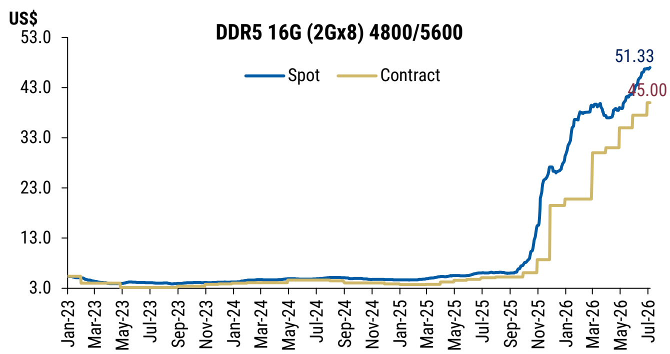
Source: Trendforce, Morgan Stanley Research

Exhibit 11: NAND inventory



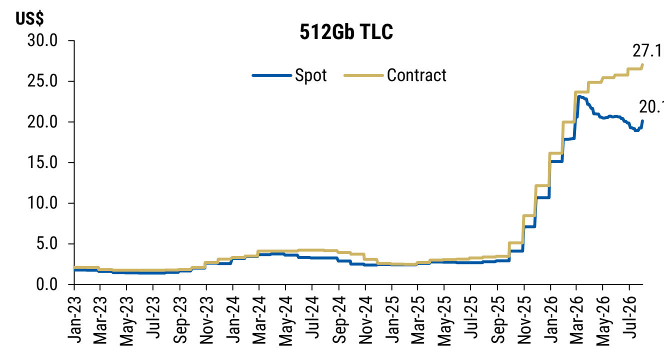
Source: Trendforce, Morgan Stanley Research

Exhibit 12: DRAM spot & contract prices



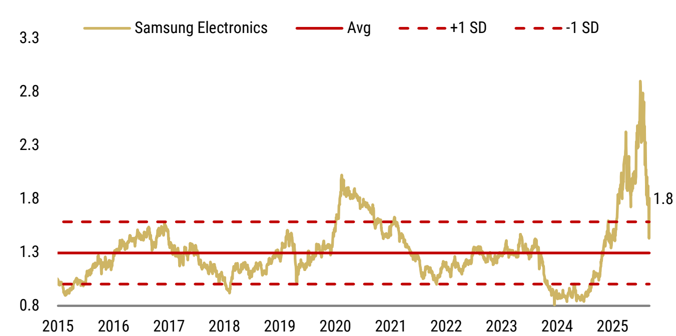
Source: Trendforce, Morgan Stanley Research

Exhibit 13: NAND spot & contract prices



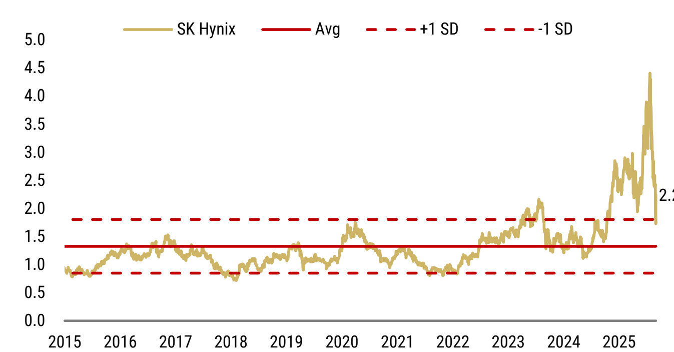
Source: Trendforce, Morgan Stanley Research

Exhibit 14: Samsung NTM P/B mean reversion



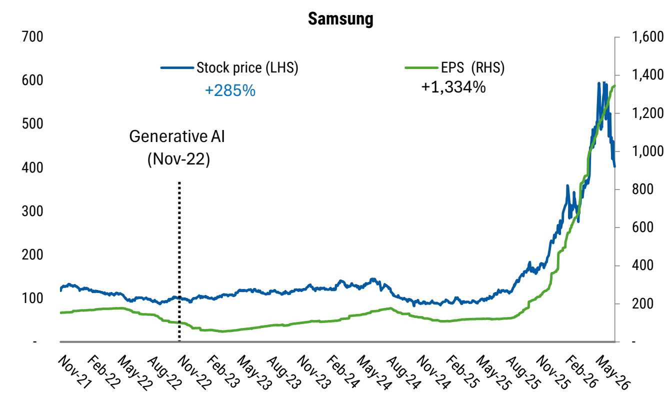
Source: FactSet, Morgan Stanley Research

Exhibit 15: SK hynix NTM P/B



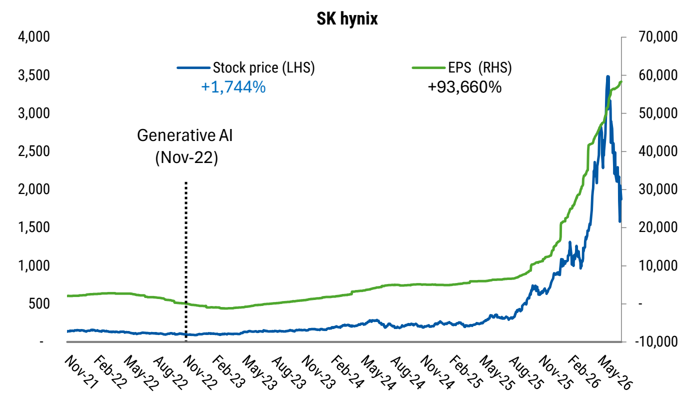
Source: FactSet, Morgan Stanley Research

Exhibit 16: Samsung EPS vs. share price



Source: FactSet, Morgan Stanley Research

Exhibit 17: SK hynix EPS vs. share price



Source: FactSet, Morgan Stanley Research

Earnings Estimate Changes

SK hynix: Earnings estimate revisions

We have incorporated 2Q26 results, including a one-time non-operating gain from asset disposals, the latest management guidance, and our updated industry outlook into our model. We have modestly reduced our 2H26 commodity DRAM and NAND ASP assumptions due to weaker-than-expected consumer demand in China, which has started to affect the magnitude of pricing increases. Our 2027–28 assumptions for commodity DRAM and NAND remain largely unchanged. However, we see stronger HBM growth more than offsetting the weaker 2026 base and supporting DRAM segment revenue and operating profit growth in 2027–28. We have also slightly increased our NAND bit-growth assumptions to reflect the impact of node migration.

As a result, our 2026-28 EPS estimates change 13%, -2% and 1%, respectively. The increase in 2026e EPS is largely due to the one-off investment gain of KRW63.27tr. Our residual income-based price target is unchanged at W2,600,000, implying 74% upside from here and 2.6x 2027e P/B.

Exhibit 18: SK hynix – earnings estimate revisions

	FY26E			FY27E			FY28E		
(W bn)	Previous	Revised	Change	Previous	Revised	Change	Previous	Revised	Change
Sales	**347,635**	**332,304**	**-4%**	**515,354**	**508,346**	**-1%**	**586,029**	**586,397**	**0%**
DRAM (& HBM)	**260,943**	247,023	-5%	**393,041**	378,146	-4%	**454,660**	461,732	2%
NAND	84,588	85,361	1%	120,209	130,200	8%	129,264	124,665	-4%
Operating Profit	**277,967**	**258,406**	**-7%**	**419,983**	**415,511**	**-1%**	**460,987**	**468,223**	**2%**
DRAM (& HBM)	218,807	201,617	-8%	333,514	320,365	-4%	375,715	382,727	2%
NAND	59,161	56,790	-4%	86,469	95,146	10%	85,271	85,496	0%
OP Margin	**80%**	**78%**	**-2pp**	**81%**	**82%**	**0pp**	**79%**	**80%**	**1pp**
DRAM (& HBM)	84%	**82%**	**-2pp**	85%	**85%**	**0pp**	83%	**83%**	**0pp**
HBM	70%	**72%**	**2pp**	69%	**78%**	**9pp**	70%	**80%**	**10pp**
NAND	70%	**67%**	**-3pp**	72%	**73%**	**1pp**	66%	**69%**	**3pp**
Net Profit	**226,427**	**257,323**	**14%**	**326,334**	**321,626**	**-1%**	**354,688**	**360,746**	**2%**
EPS for consensus	318,486	361,277	13%	459,012	451,280	-2%	498,894	506,170	1%

Source: Company data, Morgan Stanley Research estimates

Exhibit 19: Residual income model

RIM													
Fiscal period	**FY24A**	**FY25A**	**FY26E**	**FY27E**	**FY28E**	**FY29E**	**FY30E**	**FY31E**	**FY32E**	**FY33E**	**FY34E**	**FY35E**	**Terminal**
Forecast year		**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**value**
Total Shareholder Equity	73,916	120,667	384,280	704,927	1,069,104	1,371,246	1,646,435	1,920,867	2,192,651	2,528,353	2,929,238	3,415,011	3,517,461
Core Net Profit	19,797	42,948	196,867	321,716	365,335	303,300	276,348	275,590	272,942	336,860	402,042	486,931	501,539
Residual income		31,759	167,832	259,087	263,328	162,980	102,831	70,470	36,415	65,403	88,231	122,137	125,801
ROE		**44.14%**	**77.98%**	**59.07%**	**41.19%**	**24.86%**	**18.32%**	**15.45%**	**13.27%**	**14.27%**	**14.73%**	**15.35%**	**14.47%**
Discount period		0.00	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50
Discount factor		1.00	0.95	0.85	0.76	0.68	0.61	0.55	0.49	0.44	0.40	0.36	0.36
PV of Equity Capital		**31,759.5**	**158,941.8**	**220,056.0**	**200,590.1**	**111,345.3**	**63,006.8**	**38,725.3**	**17,946.9**	**28,909.0**	**34,977.1**	**43,424.6**	**44,727.4**

Beginning Equity Capital	384,280
PV of Equity Capital	962,650
PV of Continuing Value	541,991
Total Equity Value	**1,888,921**
FD shares outstanding ('000)	728,002
Per share value	**2,600,000**

Source: Company data, Morgan Stanley Research estimates

Exhibit 20: Financial Summary

Income Statement					
(W bn)	FY24A	FY25A	FY26E	FY27E	FY28E
Revenue	66,193	97,147	332,304	508,346	586,397
Gross Profit	31,828	58,692	291,989	476,513	548,921
SG&A	-8,361	-11,485	-33,582	-61,002	-80,698
EBITDA	36,049	61,137	276,188	443,759	506,375
Operating profit/loss	23,467	47,207	258,406	415,511	468,223
Financial Income	-853	4,551	3,006	2,302	6,237
Pretax profit	23,885	50,318	334,693	417,813	474,460
Net Profit	19,797	42,948	257,756	321,716	365,335
Margins					
Gross Margin	48.1%	60.4%	87.9%	93.7%	93.6%
EBITDA Margin	54.5%	62.9%	83.1%	87.3%	86.4%
Operating Margin	35.5%	48.6%	77.8%	81.7%	79.8%
Net Income	29.9%	44.2%	77.6%	63.3%	62.3%
Growth Rates					
Sales		46.8%	242.1%	53.0%	15.4%
EBITDA		69.6%	351.8%	60.7%	14.1%
Operating Income		101.2%	447.4%	60.8%	12.7%
Net Income		116.9%	500.2%	24.8%	13.6%

Cash Flow Statement					
(W bn)	FY24A	FY25A	FY26E	FY27E	FY28E
Net Income (Loss)	**19,797**	**42,948**	**257,756**	**321,716**	**365,335**
Add: Depreciation & Amortization	12,582	13,930	17,781	28,248	38,152
Less: Changes in Working Capital	5,600	(4,096)	(82,715)	(28,324)	(11,739)
Tax: non-cash adjustment	(20,014)	(11,417)	(3,288)	0	0
Less: Net interest expense	(4,332)	(1,582)	(215)	0	0
Cash flows from operating activities	**29,796**	**53,373**	**191,517**	**321,640**	**391,747**
Acquisition of PP&E	(15,898)	(28,432)	(57,150)	(76,252)	(87,960)
Other Operating cashflows	16,163	13,589	2,198	0	0
Cash flows from Investing activities	**(18,005)**	**(48,054)**	**(85,010)**	**(76,252)**	**(87,960)**
Changes in LT Borrowings	(7,376)	768	(4,173)	(1,920)	(4,316)
Changes in Short term Borrowing (revolver)	0	0	0	0	0
Dividend Payout	0	0	0	0	0
Other Investing Cashflows	(602)	(596)	(2,521)	0	0
Cash flows from Financing activities	**(8,704)**	**(1,445)**	**(9,941)**	**(2,989)**	**(5,474)**
Cash and cash equivalents - closing	11,205	14,924	113,023	355,422	653,736
Increase(decrease) in cash & cash equivalents	3,087	3,874	96,565	242,399	298,313
FX impact	530	(155)	1,831	0	0

Balance Sheet					
(W bn)	FY24A	FY25A	FY26E	FY27E	FY28E
Cash & Cash Equivalents	11,205	14,924	113,023	355,422	653,736
Trade and other receivables	14,360	18,585	74,833	97,959	107,779
Inventory	13,314	14,289	22,835	27,050	38,600
Other current assets	448	1,641	1,914	1,914	1,914
Current Assets	**42,279**	**69,458**	**245,768**	**515,508**	**835,191**
Tangible Assets	60,157	79,839	118,566	164,418	211,993
Intangible Assets	4,019	4,049	5,565	7,717	9,950
Other non-current assets	5,493	3,232	4,020	4,020	4,020
Total Assets	**119,855**	**176,108**	**467,080**	**784,824**	**1,154,316**
Trade and other payables	15,716	15,566	14,431	13,448	23,079
Short term Borrowings	5,252	8,162	5,858	5,858	5,858
Other current liabilities	3,689	13,423	46,001	46,001	46,001
Current Liabilities	**24,965**	**37,379**	**66,470**	**65,487**	**75,118**
Borrowings	17,432	14,086	12,008	10,088	5,772
Long-term other payables	529	395	402	402	402
Other Nont-current liabilities	2,796	3,332	3,635	3,635	3,635
Total Liabilities	**45,940**	**55,441**	**82,800**	**79,896**	**85,212**
Capital Stock	3,658	3,658	3,658	3,658	3,658
Retained Earnings	65,418	106,577	363,700	684,257	1,043,845
Total Shareholders' Equity	**73,916**	**120,667**	**384,280**	**704,927**	**1,069,104**
Total Liabilities & SE	**119,855**	**176,108**	**467,080**	**784,824**	**1,154,316**
Net Debt	8,527	(12,694)	(128,320)	(372,639)	(675,269)

Ratio Analysis					
(W bn)	FY24A	FY25A	FY26E	FY27E	FY28E
ROE (AOY)	31.1%	44.1%	101.9%	59.1%	40.7%
ROE (EOY)	26.8%	35.6%	67.0%	45.6%	33.7%
ROA	18.0%	29.0%	80.0%	51.4%	37.2%
ROIC (AOY)	18.8%	31.6%	84.6%	88.2%	82.7%
Asset Turnover	0.6	0.6	0.7	0.6	0.5
Days sales outstanding	79	70	82	70	67
Days inventory outstanding	114	104	113	106	120
Days payable outstanding	180	173	100	76	90
Current Ratio	1.7	1.9	3.7	7.9	11.1
Debt to Equity	0.6	0.5	0.2	0.1	0.1
Net Debt to Equity	0.1	(0.1)	(0.3)	(0.5)	(0.6)
EPS, for consensus	27,182	59,300	361,277	451,280	506,170
BVPS (MW)	101,515	166,418	538,871	988,321	1,492,866
DPS	2,204	3,000	4,862	1,500	1,625
EBITDA	36,049	61,137	276,188	443,759	506,375
P/E	9	11	4	3	3
P/BV	2.33	3.91	2.84	1.55	1.03
EV/EBITDA	5	8	3	2	1
EV/Sales	2.73	4.72	2.90	1.42	0.71
Dividend Yield (%)	0.93	0.46	0.32	0.10	0.11
FCF	17,568	29,200	135,017	339,183	406,676
Share Price (KRW)	236,500	651,000	1,533,000	1,533,000	1,533,000
Shares Outstanding (000 AOY)	728,002	724,177	712,260	712,696	712,696

Source: Company data, Morgan Stanley Research estimates

Samsung Electronics: Earnings estimate revisions

We have incorporated 2Q26 results and the latest management guidance into our model. We have modestly reduced our 2H26 commodity DRAM and NAND ASP assumptions due to weaker-than-expected consumer demand in China, which has started to affect the magnitude of pricing increases. However, more aggressive HBM pricing in 2027e should largely offset the lower base effect. We have also materially reduced our 2026–27 smartphone shipment and margin assumptions following management's comments on weak smartphone demand stemming from memory cost pressures.

As a result, our 2026-28 EPS estimates change -10%, -2% and 0%, respectively. Our residual income-based price target is unchanged at W381,000, implying 65% upside from here and 2.1x 27e P/B.

Our price target for the preferred shares remains unchanged at W3[illegible] 20% discount to common shares unchanged.

Exhibit 21: Samsung Electronics – earnings estimate revisions

	FY26E			FY27E			FY28E		
(W bn)	Previous	Revised	Change	Previous	Revised	Change	Previous	Revised	Change
Sales	**736,813**	**729,325**	**-1%**	**1,025,374**	**1,059,408**	**3%**	**1,089,757**	**1,141,164**	**5%**
Semiconductor (DS)	532,816	541,158	2%	785,336	838,510	7%	811,406	883,037	9%
Memory	501,148	511,081	2%	735,140	788,314	7%	758,461	830,093	9%
Display	27,749	30,564	10%	28,760	32,137	12%	29,515	32,992	12%
Mobile/Network	147,309	139,174	-6%	174,141	164,901	-5%	204,958	194,040	-5%
Harman	15,898	18,018	13%	17,893	21,029	18%	18,430	21,660	18%
Operating Profit	**422,053**	**388,668**	**-8%**	**640,908**	**628,963**	**-2%**	**639,812**	**648,203**	**1%**
Semiconductor (DS)	410,967	383,841	-7%	620,631	619,742	0%	616,454	624,934	1%
Memory	412,483	387,623	-6%	620,646	619,757	0%	614,999	623,479	1%
Display	1,273	1,846	45%	1,438	1,607	12%	1,476	1,650	12%
Mobile/Network	5,462	1,107	-80%	13,218	3,206	-76%	16,547	15,742	-5%
Harman	830	1,562	88%	1,789	2,103	18%	1,843	2,166	18%
OP Margin	**57.3%**	**53.3%**	**-4.0ppt**	**62.5%**	**59.4%**	**-3.1ppt**	**58.7%**	**56.8%**	**-1.9ppt**
Semiconductor (DS)	77.1%	70.9%	-6.2ppt	79.0%	73.9%	-5.1ppt	76.0%	70.8%	-5.2ppt
Memory	82.3%	75.8%	-6.5ppt	84.4%	78.6%	-5.8ppt	81.1%	75.1%	-6.0ppt
Display	4.6%	6.0%	1.4ppt	5.0%	5.0%	0.0ppt	5.0%	5.0%	0.0ppt
Mobile/Network	3.7%	0.8%	-2.9ppt	7.6%	1.9%	-5.6ppt	8.1%	8.1%	0.0ppt
Harman	5.2%	8.7%	3.4ppt	10.0%	10.0%	0.0ppt	10.0%	10.0%	0.0ppt
Net Profit	**363,935**	**326,239**	**-10%**	**501,264**	**488,811**	**-2%**	**504,285**	**504,847**	**0%**
EPS for consensus	53,984.9	48,652.0	-10%	74,381.2	72,527.9	-2%	74,499.5	74,582.5	0%

Source: Company data, Morgan Stanley Research estimates

Exhibit 22: Residual Income model

RIM											
Fiscal period	**FY26A**	**FY27E**	**FY28E**	**FY29E**	**FY30E**	**FY31E**	**FY32E**	**FY33E**	**FY34E**	**FY35E**	**FY36E**	**Terminal**
Forecast year	**0**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**value**
Total Shareholder Equity	-	1,219,890	1,692,393	2,072,565	2,395,999	2,669,129	2,930,365	3,266,667	3,671,559	4,175,355	4,760,034	4,902,835
Residual Income		418,667	337,391	196,030	98,836	14,229	(28,391)	12,317	38,288	84,943	103,238	59,634
Core Net Profit	-	488,811	504,847	412,515	355,778	305,474	293,580	368,646	437,236	536,141	617,023	635,533
ROE		**80.14%**	**34.67%**	**21.91%**	**15.92%**	**12.06%**	**10.49%**	**11.90%**	**12.60%**	**13.67%**	**13.81%**	**13.4%**
Discount period		0.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	
Discount factor		1.00	0.90	0.80	0.72	0.65	0.58	0.52	0.47	0.42	0.38	0.38
PV of Equity Capital		**418,667.1**	**302,592.6**	**157,678.9**	**71,300.2**	**9,206.3**	**(16,474.1)**	**6,409.8**	**17,870.7**	**35,557.5**	**38,758.3**	**22,388.4**

Beginning Equity Capital	1,692,393
PV of Equity Capital	553,131
PV of Continuing Value	271,294
Total Equity Value	**2,516,819**
FD shares outstanding ('000)	6,606,854
Per share value	**381,000**

Source: Company data, Morgan Stanley Research estimates

Exhibit 23: Financial Summary

Income Statement

(W bn)	FY24A	FY25A	FY26E	FY27E	FY28E
Revenue	300,871	333,606	729,299	1,059,408	1,141,164
Gross Profit	114,309	131,370	540,694	872,702	872,474
SG&A	-81,583	-87,769	-151,983	-243,664	-272,983
EBITDA	75,357	90,528	434,463	682,076	715,301
Operating profit/loss	32,726	43,601	388,711	628,963	648,203
Financial Income	3,718	4,507	7,979	5,781	10,436
Pretax profit	37,530	49,548	397,241	634,819	655,646
Net Profit	34,451	45,207	326,239	488,811	504,847
Margins					
Gross Margin	38.0%	39.4%	74.1%	82.4%	76.5%
EBITDA Margin	25.0%	27.1%	59.6%	64.4%	62.7%
Operating Margin	10.9%	13.1%	53.3%	59.4%	56.8%
Net Income	11.5%	13.6%	44.7%	46.1%	44.2%
Growth Rates					
Sales		10.9%	118.6%	45.3%	7.7%
EBITDA		20.1%	379.9%	57.0%	4.9%
Operating Income		33.2%	791.5%	61.8%	3.1%
Net Income		31.2%	621.7%	49.8%	3.3%

Cash Flow Statement

(W bn)	FY24A	FY25A	FY26E	FY27E	FY28E
Net Income (Loss)	**34,451**	**45,207**	**326,239**	**488,811**	**504,847**
Add: Depreciation & Amortization	42,631	46,927	45,752	53,114	67,098
Less: Changes in Working Capital	1,568	(16,758)	(115,176)	(83,897)	(27,089)
Less: Net tax expense	(43,913)	(17,723)	(60,875)	(146,008)	(150,798)
Less: Net interest expense	25,308	9,882	3,522	5,824	10,515
Cash flows from operating activities	**72,983**	**85,315**	**269,798**	**317,844**	**404,572**
Acquisition of PP&E	(51,250)	(47,372)	(109,872)	(142,668)	(149,936)
Other Operating cashflows	12,939	17,781	70,336	0	0
Cash flows from Investing activities	**(85,382)**	**(68,512)**	**(147,459)**	**(142,668)**	**(149,936)**
Changes in LT Borrowings	405	(46)	449	0	0
Changes in Short term Borrowing	5,871	4,655	(4,342)	0	0
Dividend Payout	0	0	0	0	0
Other Investing Cashflows	(1,373)	(1)	0	0	0
Cash flows from Financing activities	**(7,797)**	**(13,478)**	**(45,353)**	**(33,625)**	**(32,344)**
Cash and cash equivalents - closing	53,706	57,856	139,704	281,255	503,548
Increase(decrease) in cash & cash equivalents	(20,196)	3,325	76,986	141,551	222,293
FX impact	4,821	826	4,852	0	0

Balance Sheet

(W bn)	FY24A	FY25A	FY26E	FY27E	FY28E
Cash & Cash Equivalents	53,706	57,856	139,704	281,255	503,548
Trade and other receivables	53,246	58,609	151,230	216,111	237,752
Inventory	51,755	52,637	59,749	79,340	106,404
Other current assets	9,446	10,617	11,621	11,621	11,621
Current Assets	**227,062**	**247,685**	**436,352**	**662,376**	**933,373**
Tangible Assets	205,945	215,305	275,140	354,323	427,568
Intangible Assets	23,739	29,481	36,036	46,406	55,999
Other non-current assets	31,793	41,859	75,831	75,831	75,831
Total Assets	**514,532**	**566,942**	**913,773**	**1,375,359**	**1,879,992**
Trade and other payables	61,523	68,114	37,715	38,291	59,906
Short term Borrowings	15,380	18,752	18,544	24,368	34,883
Other current liabilities	6,366	9,920	33,196	33,196	33,196
Current Liabilities	**93,326**	**106,411**	**111,157**	**117,557**	**149,688**
Borrowings	3,936	6,487	5,894	5,894	5,894
Long-term other payables	5,510	5,602	8,459	8,459	8,459
Other Nont-current liabilities	9,039	11,413	22,130	22,130	22,130
Total Liabilities	**112,340**	**130,622**	**149,068**	**155,468**	**187,598**
Capital Stock	898	898	898	898	898
Retained Earnings	370,513	402,136	686,107	1,131,663	1,592,075
Total Shareholders' Equity	**402,192**	**436,320**	**764,705**	**1,219,890**	**1,692,393**
Total Liabilities & SE	**514,532**	**566,942**	**913,773**	**1,375,359**	**1,879,992**
Net Debt	(93,299)	(100,582)	(189,314)	(325,041)	(536,818)

Ratio Analysis

(W bn)	FY24A	FY25A	FY26E	FY27E	FY28E
ROE (AOY)	8.8%	10.6%	53.5%	48.3%	33.8%
ROE (EOY)	8.4%	10.1%	42.0%	39.3%	29.1%
ROA	6.9%	8.2%	43.4%	41.9%	30.3%
ROIC (AOY)	7.6%	9.1%	53.6%	54.3%	41.8%
Asset Turnover	1	1	1	1	1
Days sales outstanding	65	64	76	74	76
Days inventory outstanding	71	66	64	67	72
Days payable outstanding	105	109	60	53	64
Current Ratio	2.4	2.3	3.9	5.6	6.2
Debt to Equity	0.3	0.3	0.2	0.1	0.1
Net Debt to Equity	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)
EPS, for consensus	4,956	6,562	48,652	72,528	74,583
BVPS (MW)	57,742	63,731	113,118	180,557	250,244
DPS	1,446	1,662	4,090	5,089	4,896
EBITDA	75,357	90,528	434,463	682,076	715,301
P/E	16	20	5	3	3
P/BV	1.41	2.02	2.17	1.36	0.98
EV/EBITDA	6	8	3	2	2
EV/Sales	1.53	2.26	1.97	1.23	0.95
Dividend Yield (%)	1.77	1.29	1.66	2.07	1.99
FCF	19,413	33,325	158,876	175,176	254,637
Share Price (KRW)	81,500	128,500	246,000	246,000	246,000
Shares Outstanding (000 AOY)	6,783,369	6,657,842	6,606,854	6,606,854	6,606,854

Source: Company data, Morgan Stanley Research estimates

Risk Reward – SK hynix (000660.KS)

Robust commodity super-cycle supported by AI in 2026-2027

PRICE TARGET W2,600,000

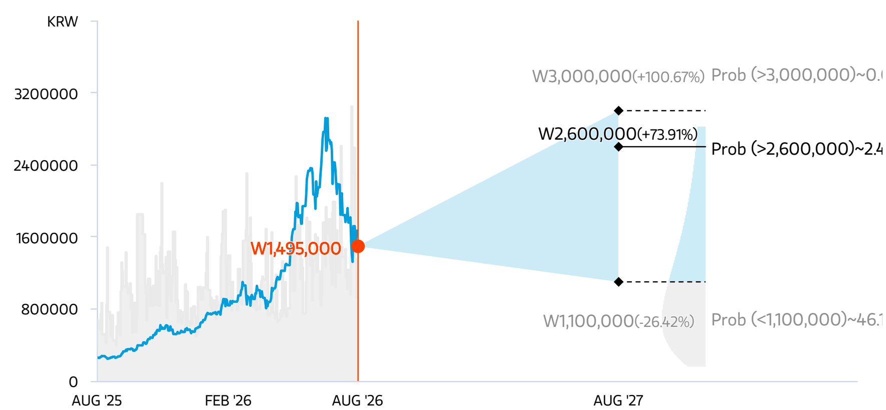
Base case, residual income valuation model. We assume a cost of equity of 11.5% (5% risk-free rate, 6.5% risk premium, 1.0 beta) and a terminal growth rate of 3%.

Consensus Price Target Distribution W680,000.00 W3,161,483 MS PT W5,300,000.00

Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



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

Source: Refinitiv, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 6 Aug 2026. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology here

OVERWEIGHT THESIS

- We believe the commodity cycle is likely to stay robust in 2026 and into 2027, thanks to AI inference demand growth.
- Our earnings estimates reflect downside protection from LTAs into 2028, stronger commodity pricing assumptions, and a stronger HBM pricing reset in 2027.
- Our sensitivity analysis suggests that the market is not yet assigning any meaningful P/E premium to the company's LTA-backed memory earnings and FCF.

Consensus Rating Distribution

98%	Overweight
2%	Equal-weight
0%	Underweight

● MS Rating

Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Pricing Power:	*Positive*
Secular Growth:	*Positive*
Self-help:	*Positive*

View descriptions of Risk Rewards Themes here

BULL CASE W3,000,000

Memory TAM grows; AI HBM leadership is extended

We see a stronger-than-expected commodity cycle for DRAM and NAND, supported by AI inference demand moving into 2027. Our bull scenario valuation implies 6.6x 2027e P/E.

BASE CASE W2,600,000

Commodity up-cycle

We see a stronger-than-expected commodity cycle for DRAM and NAND, supported by AI inference demand in 2026 and into 2027. HBM competition risks remain but are being increasingly recognized by the market. Our price target implies 5.8x 2027e P/E, underpinned by Hynix's leadership in HBM and a sharp rebound in commodity memory pricing.

BEAR CASE W1,100,000

2028 down cycle

We assume a period of AI computing digestion in 2028, leading to more aggressive margin erosion for the HBM segment owing to competitors' aggressive capacity expansion and pricing competition, as well as faster DRAM pricing drops with muted demand recovery. Our bear case valuation implies 2.4x 2027e P/E.

Risk Reward – SK hynix (000660.KS)

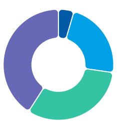
KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
Revenue Growth (%)	46.8	242.1	53.0	15.4
OPM (%)	48.6	77.8	81.7	79.8
CAPEX	(28,432.4)	(57,150.2)	(76,251.9)	(87,959.6)

INVESTMENT DRIVERS

- Supply and demand outlook for DRAM, NAND, and HBM
- Global demand for data center products (server DRAM, enterprise SSD)

GLOBAL REVENUE EXPOSURE



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

MS ALPHA MODELS

1/5 MOST | 3 Month Horizon

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

RISKS TO PT/RATING

RISKS TO UPSIDE

- ASP growth re-acceleration
- Preemptive production cuts or disruption
- Sharp demand improvements
- Significant increase in capital returns

RISKS TO DOWNSIDE

- End demand turning weaker than expected
- Rising competition for DDR5, causing overspending on the supply side.
- Inventories remaining elevated at cloud and Chinese smartphone customers.

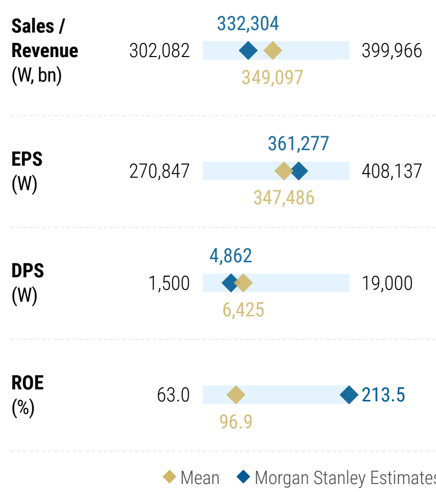
OWNERSHIP POSITIONING

Inst. Owners, % Active 78.9%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e



Source: Refinitiv, Morgan Stanley Research

Risk Reward – Samsung Electronics (005930.KS) Top Pick

Improvement in HBM + commodity up-cycle = stock re-rating

PRICE TARGET W381,000

Base case, derived from our residual income valuation model. At our price target, the 2027e P/B multiple would be c .2x, in line with the stock's commodity cycle peak of 2.0x. We assume an 11.5% cost of equity, based on a beta of 1.0, and our terminal growth rate assumption is 3%.

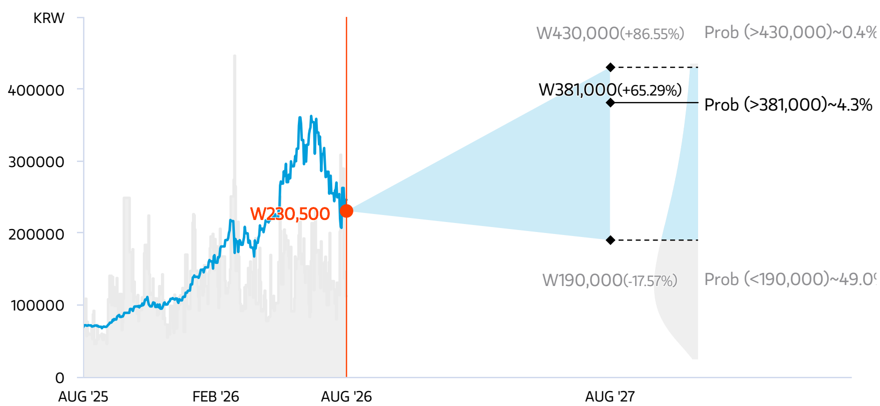
Consensus Price Target Distribution W120,000.00

W725,000.00

Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



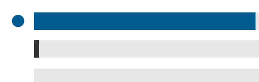
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 6 Aug 2026. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology here

OVERWEIGHT THESIS

- We expect pricing to remain solid on a price per gigabit basis, thanks to AI inference demand.
- We expect HBM improvement and potential market share gains from 2H26.
- Rising prices and falling inventories, along with disciplined supply and improving demand, are positives for margin recovery in the memory business.
- The implied 2027e P/B at our price target is 2x, aligning with the stock's commodity cycle peak of 2.0x.

Consensus Rating Distribution



97% Overweight
3% Equal-weight
0% Underweight

● MS Rating

Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Secular Growth: *Positive*
Self-help: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE W430,000

HPC drives sustained memory pricing

High-performance computing drives sustained memory pricing strength and capital returns exceed expectations: We assume continued robust demand growth for memory and OLED with stabilization in the macro environment and China's failure to successfully enter the memory semiconductor industry. Our bull case valuation is based 14x HBM, 5x conventional memory and 10x P/E for the rest of the group profitability.

BASE CASE W381,000

Commodity cycle recovery

We expect favorable commodity pricing trends to bode well for Samsung's share price with improving HBM market share and new product execution. Our base case reflects our relatively conservative view on HBM progress this year, but sequential improvement in 2026 and beyond support Samsung's earnings growth and stock re-rating amid low expectations. 2027e implied P/B at c.2x.

BEAR CASE W190,000

Slower memory consumption, competition from China

We assume a period of AI computing digestion in 2028, leading to more aggressive margin erosion for the HBM segment owing to competitors' aggressive capacity expansion and pricing competition, as well as faster DRAM pricing drops with muted demand recovery. Our bear case valuation implies 1x 2027e P/B.

Risk Reward – Samsung Electronics (005930.KS)

KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
Revenue Growth (%)	10.9	118.6	45.3	7.7
OPM (%)	13.1	53.3	59.4	56.8
CAPEX	(47,372.4)	(109,872.4)	(142,667.6)	(149,935.6)

INVESTMENT DRIVERS

- Supply-demand outlook for memory and OLED
- Smartphone market share and margins
- Capital returns of 50% FCF

GLOBAL REVENUE EXPOSURE

- 0-10% India
- 0-10% Japan
- 0-10% Latin America
- 0-10% MEA
- 0-10% UK
- 10-20% APAC, ex Japan, Mainland China and India
- 10-20% Europe ex UK
- 20-30% Mainland China
- 20-30% North America

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

MS ALPHA MODELS

1/5 **MOST**	3 Month Horizon

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

RISKS TO PT/RATING

RISKS TO UPSIDE

- New technological developments, especially in memory and foldable displays
- Longer-lasting memory up-cycle from AI and hyperscale data center growth

RISKS TO DOWNSIDE

- Product and memory cycle, including Apple and new Chinese smartphone competition
- Earnings growth concentration in semiconductors

OWNERSHIP POSITIONING

Inst. Owners, % Active 84.3%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e

	Low	Morgan Stanley Estimates	Mean	High
Sales / Revenue (W, bn)	650,236	729,299	729,390	790,623
EBITDA (W, bn)	373,719	434,463	434,676	482,161
EBIT (W, bn)	337,533	388,711	385,290	434,393
EPS (W)	42,754	48,652	48,296	60,367

◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

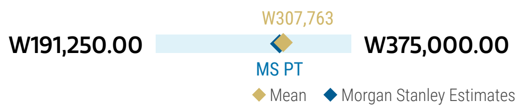
Risk Reward – Samsung Electronics (005935.KS)

Overweight with discount to common shares to narrow

PRICE TARGET W304,800

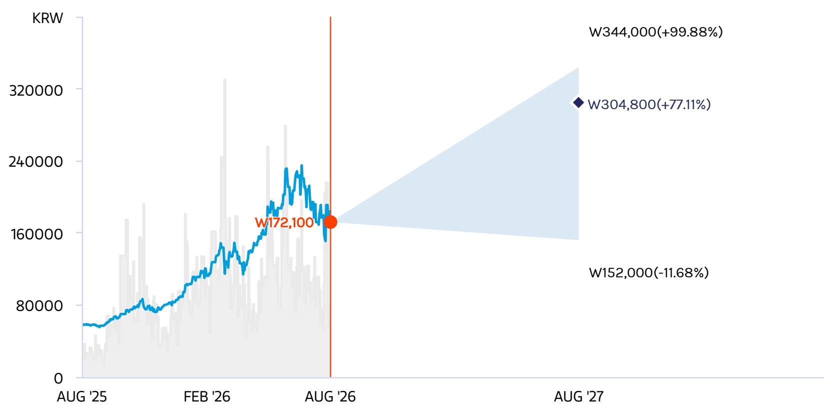
Based on our price target for the common shares and our assumption that the preferred shares trade at a 20% discount to the common shares, based on the past two-year average. We assume an 11.5% cost of equity, based on a beta of 1.0, and our terminal growth rate assumption is 3%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



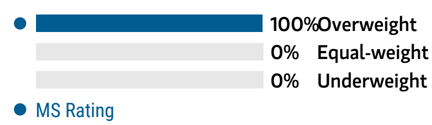
Key: Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- We expect pricing to remain solid on a price per gigabit basis, thanks to AI inference demand.
- We expect HBM improvement and potential market share gains from 2H26.
- Rising prices and falling inventories, along with disciplined supply and improving demand, are positives for margin recovery in the memory business.
- Common shares' implied 2027e P/E is 5x. We assume that the preferred shares' discount to the common shares is 20% (the past 2-year average).

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Secular Growth: *Positive*
Self-help: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE W344,000

20% discount to bull case value for common shares

High-performance computing drives sustained memory pricing strength and capital returns exceed expectations: We assume continued robust demand growth for memory and OLED with stabilization in the macro environment and China's failure to successfully enter the memory semiconductor industry.

BASE CASE W304,800

20% discount to base case value for common shares

We expect favorable commodity pricing trends to bode well for Samsung's share price with improving HBM market share and new product execution. Our base case reflects our optimistic view on commodity upcycle and stock re-rating with LTA to potentially smooth the cyclicality of memory sector.

BEAR CASE W152,000

20% discount to bear case value for common shares

We assume a period of AI computing digestion in 2028, leading to more aggressive margin erosion for the HBM segment owing to competitors' aggressive capacity expansion and pricing competition, as well as faster DRAM pricing drops with muted demand recovery. Our bear case valuation implies 1x 2027e P/B.

Risk Reward – Samsung Electronics (005935.KS)

KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
Revenue Growth (%)	10.9	118.6	45.3	7.7
OPM (%)	13.1	53.3	59.4	56.8
CAPEX	(47,372.4)	(109,872.4)	(142,667.6)	(149,935.6)

INVESTMENT DRIVERS

- Supply-demand outlook for memory and OLED
- Smartphone market share and margins
- Capital returns of 50% FCF

GLOBAL REVENUE EXPOSURE

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

MS ALPHA MODELS

1/5 MOST	3 Month Horizon

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

RISKS TO PT/RATING

RISKS TO UPSIDE

- New technology developments, especially in memory and foldable displays
- Longer-lasting memory up-cycle from AI and hyperscale data center growth
- Further narrowing of discount to common shares

RISKS TO DOWNSIDE

- Product and memory cycle, including Apple and new Chinese smartphone competition
- Earnings growth concentration in semiconductors
- Deepening of discount to common shares

OWNERSHIP POSITIONING

Inst. Owners, % Active 76.8%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e

EPS (W) ◆ 48,652

Note: There are not sufficient brokers supplying consensus data for this metric

◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Morgan Stanley is acting as financial advisor to Grail, Inc. ("Grail") in connection with the proposed strategic collaboration with Samsung C&T and Samsung Electronics, to bring Grail's Galleri multi-cancer early detection test to key Asian markets, as announced on October 16, 2025. The proposed transaction is subject to final execution of definitive collaboration agreements between the parties, as well as customary closing conditions and regulatory approvals. Please refer to the notes at the end of this report.

Risk Reward Reference links

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

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

3. View explanation of regional hierarchies - GEG_Exhibit_Link.pdf

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

5. View explanation of HERS methodology - ESG_HERS_External_Link.pdf

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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: Cindy Huang; Ryan Kim; Shawn Kim; Duan Liu.

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In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from HD Hyundai Electric Co Ltd, LG Display, LG Electronics, Samsung Electronics, SK hynix, SK Square Co Ltd..

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from Samsung Electronics.

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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 July 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	1529	42%	442	47%	29%	750	43%
Equal-weight/Hold	1582	43%	396	42%	25%	773	44%
Not-Rated/Hold	3	0%	1	0%	33%	1	0%
Underweight/Sell	560	15%	97	10%	17%	217	12%
Total	3,674		936			1741	

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.

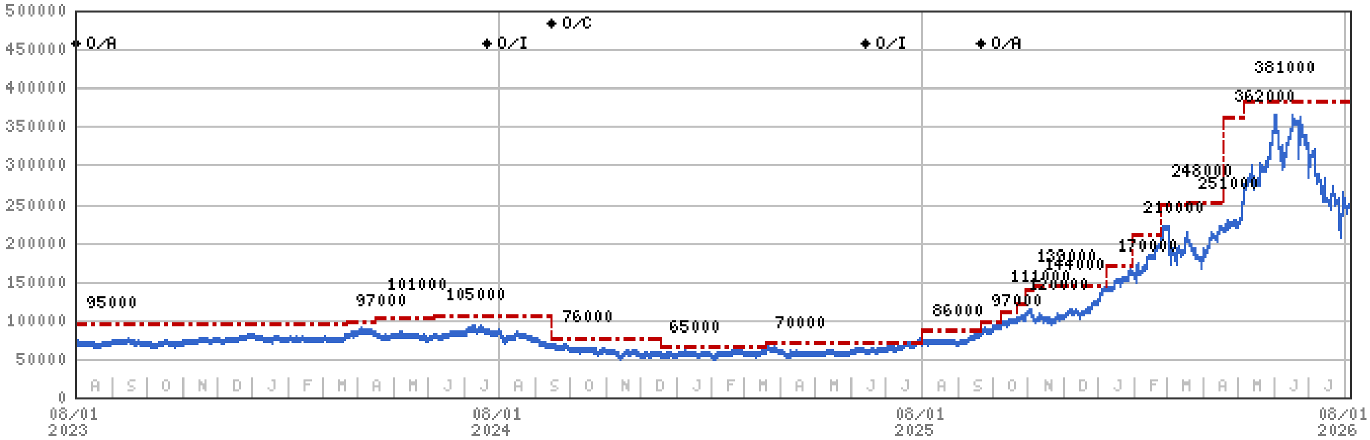
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

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 Electronics (005930.KS) - As of 08/06/26 GMT in KRW
Industry : S. Korea Technology



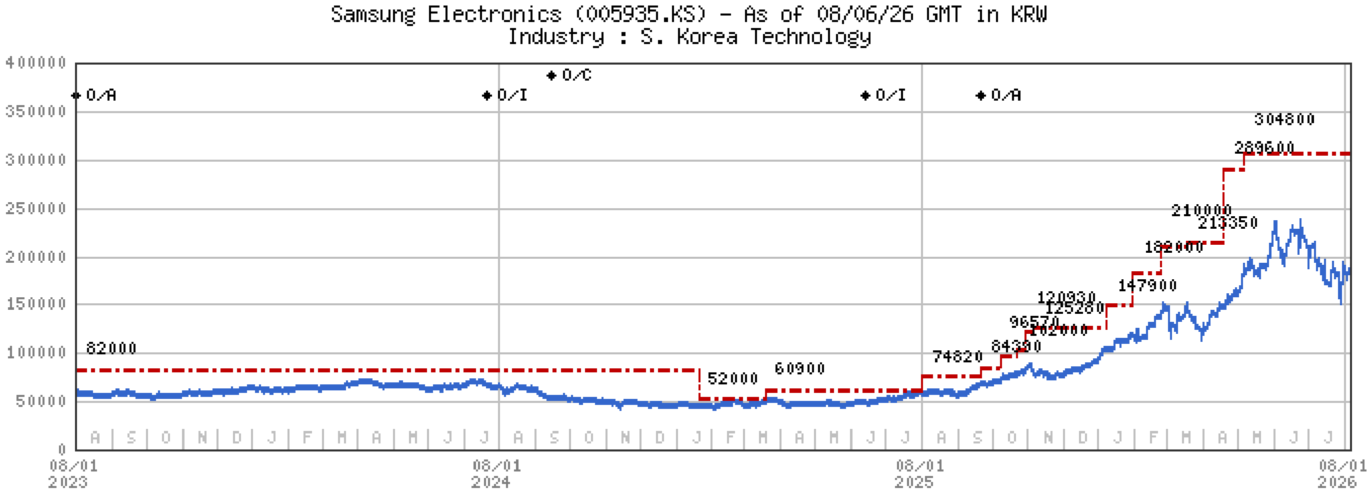
Stock Rating History: 8/1/21 : O/I; 8/12/21 : O/C; 10/4/22 : O/A; 7/21/24 : O/I; 9/15/24 : O/C; 6/13/25 : O/I; 9/21/25 : O/A

Price Target History: 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; 1/8/26 : 170000; 1/30/26 : 210000; 2/24/26 : 248000; 3/18/26 : 251000; 4/19/26 : 362000; 5/6/26 : 381000

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.



Stock Rating History: 8/1/21 : 0/I; 8/12/21 : 0/C; 10/4/22 : 0/A; 7/21/24 : 0/I; 9/15/24 : 0/C; 6/13/25 : 0/I; 9/21/25 : 0/A

Price Target History: 6/8/21 : 84000; 8/12/21 : 77000; 9/15/21 : 82000; 12/3/21 : 83000; 3/18/22 : 82000; 4/28/22 : 73000; 6/10/22 : 69000; 7/5/22 : 65000; 7/22/22 : 60000; 9/17/22 : 58000; 3/21/23 : 60000; 5/30/23 : 77000; 7/7/23 : 82000; 1/20/25 : 52000; 3/19/25 : 60900; 8/1/25 : 74820; 9/21/25 : 84390; 10/8/25 : 96570; 10/23/25 : 102000; 10/30/25 : 120930; 11/5/25 : 125280; 1/8/26 : 147900; 1/30/26 : 182000; 2/24/26 : 210000; 3/18/26 : 213350; 4/19/26 : 289600; 5/6/26 : 304800

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)
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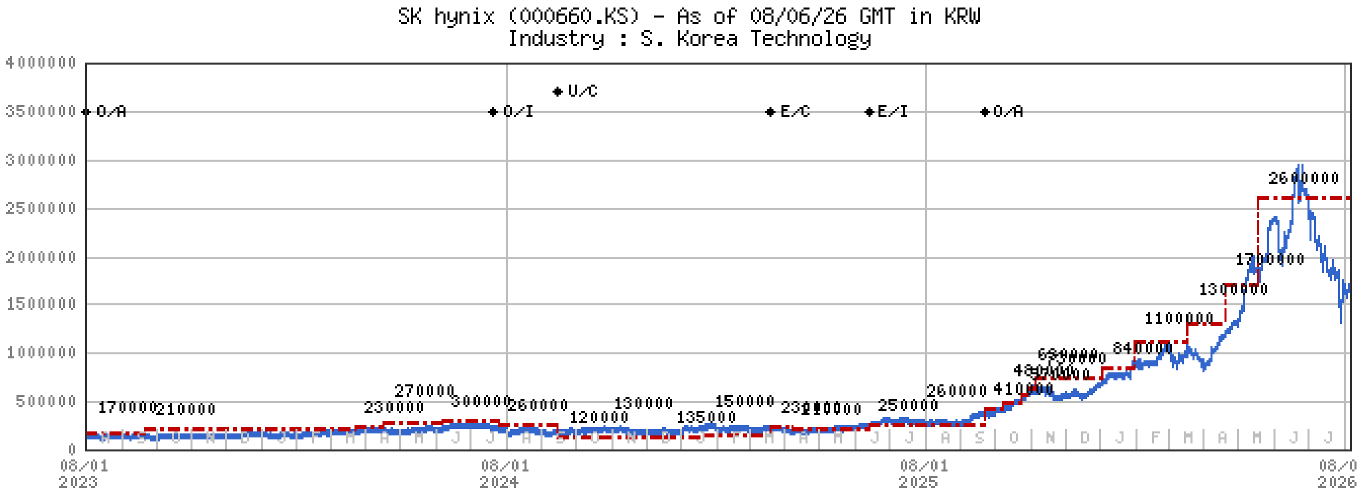

Stock Rating History: 8/1/21 : O/I; 8/12/21 : U/C; 12/3/21 : E/C; 2/11/22 : O/C; 7/22/22 : E/C; 10/4/22 : O/A; 7/21/24 : O/I; 9/15/24 : U/C; 3/19/25 : E/C; 6/13/25 : E/I; 9/21/25 : O/A

Price Target History: 6/8/21 : 156000; 8/12/21 : 80000; 9/15/21 : 88000; 12/3/21 : 110000; 12/23/21 : 125000; 1/24/22 : 130000; 1/28/22 : 136000; 2/11/22 : 155000; 3/18/22 : 150000; 4/27/22 : 130000; 6/10/22 : 120000; 7/5/22 : 110000; 7/22/22 : 105000; 10/4/22 : 130000; 12/7/22 : 120000; 3/21/23 : 110000; 5/30/23 : 140000; 7/7/23 : 170000; 9/21/23 : 210000; 3/22/24 : 230000; 4/16/24 : 270000; 6/6/24 : 300000; 7/25/24 : 260000; 9/15/24 : 120000; 10/24/24 : 130000; 12/18/24 : 135000; 1/20/25 : 150000; 3/19/25 : 230000; 4/7/25 : 210000; 6/13/25 : 250000; 7/24/25 : 260000; 9/21/25 : 410000; 10/8/25 : 480000; 10/23/25 : 570000; 10/29/25 : 630000; 11/5/25 : 730000; 1/2/26 : 840000; 1/30/26 : 1100000; 3/18/26 : 1300000; 4/19/26 : 1700000; 5/18/26 : 2600000

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)

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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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COMPANY (TICKER)	RATING (AS OF)	PRICE* (08/06/2026)
Ryan Kim		
Fadu Inc (440110.KQ)	O (09/21/2025)	W57,900
Hanmi Semiconductor Co. Ltd. (042700.KS)	E (07/22/2026)	W200,500
HD Hyundai Electric Co Ltd (267260.KS)	O (03/25/2025)	W761,000
Isu Petasys Co. Ltd. (007660.KS)	O (02/03/2025)	W83,100
Leeno Industrial Inc. (058470.KQ)	O (04/03/2025)	W66,900
Lotte Energy Materials Corp (020150.KS)	U (04/03/2025)	W31,250
LS Electric (010120.KS)	O (01/22/2026)	W202,500
SK Square Co Ltd. (402340.KS)	O (05/06/2026)	W970,000
Wonik IPS Co Ltd (240810.KQ)	O (08/08/2025)	W92,600
Shawn Kim		
LG Display (034220.KS)	E (06/11/2025)	W9,560
LG Electronics (066570.KS)	E (04/07/2025)	W175,200
LG Innotek (011070.KS)	E (03/12/2025)	W554,000
Samsung Electro-Mechanics (009150.KS)	O (07/31/2025)	W1,229,000
Samsung Electronics (005935.KS)	O (11/18/2019)	W172,100
Samsung Electronics (005930.KS)	O (11/18/2019)	W230,500
SK hynix (000660.KS)	O (09/21/2025)	W1,495,000

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* Historical prices are not split adjusted.