Asia Technology

Asian investor marketing feedback on memory/Korea tech and holdcos

Technology - Semiconductors

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We met with over 50 investors in Hong Kong last week. In this note we highlight the key areas of investor interest and feedback and try to answer FAQs from the meetings.

Areas of investor interest: all about memory, weak sentiment prior to June-quarter print. After strong share performance in April/May, major Asian memory stocks have fallen 30% since their peak in June to the July 13 close (vs. MXAP/SOX index -6%/-11% as of July 10) due mainly to: i) a growing disconnect between CSP datacenter hardware capex and memory TAM (i.e. sell-side memory TAM expectations moving ahead of CSP's capex projections; ii) Y-Y pricing momentum and secondary delta (q-q pricing momentum) slowing post 2Q26, and iii) lower June quarter EPS print expectations (SEC 2Q26 OP expectations seeing downward revision prior to print last week: *note*). Most investors that we spoke with agree that favorable mid-to-long term memory fundamentals are in place over the next 12-24 months but are worried about crowded positioning and elevated volatility amidst rising ETF product trading activity in the market. We think the nature of investor concern hasn't changed dramatically compared to three months ago when the market had exactly the same debate (*note*). From a broader cycle perspective, we believe we are in a transitional stage from "infrastructure buildout: growth momentum acceleration coupled with beat & raise" to "optimization: growth refinement and earnings durability proof". While we expect CSP datacenter hardware capex spending projections to move up, the degree of upward revision is unclear before the actual results print in (70% the memory sentiment driver at this point, in our view). This is likely to weigh on the memory share sentiment in the short-term before risk-on trade resumes after the CSP result print, and we believe sustainability of earnings durability is the more important share price driver in the midterm. In Asia, we maintain our positive view on major memory makers: **SEC (OW)**, **Kioxia (OW)**, and **Nanya Tech (OW)**.

Demystifying memory industry dynamics and sentiment via answering to FAQ. In this section, we share key FAQs from investors during the meeting. Aside from usual S-D dynamic questions, "LTA" and "HBM pricing" were two key topics during the meetings. Compared to 3M/6M ago, we generally sense more optimism surrounding the LTA concept and witness questions evolving into understanding the LTA in the context of how memory suppliers plan to establish long-term relationships with key customers. Yet, still the majority of investors (more than half) tend to take a cautious view on the LTA concept. On the HBM side, we sense a big gap between our expectations and investors (2x ASP y-y increase next year). Lastly, while investors acknowledge the upside from AI-grade CPU (*memory team view* & *server team view*), we believe the degree of upside is not well understood.

- **How much CSP capex hike should happen to justify memory value TAM?** Our May-2026 published Memory Industry TAM for 2026E-2027E stands at US$348-720bn and this represents 50-70% of CSP hardware capex estimates projected from our U.S. hardware research team. Many investors view the hyperscale players' capex to be underestimated by the market (mainly sell-side consensus) and expect it to move up to US$1trn/US$1.5trn for the respective forecast period in next 3-6M. Capex upward revision is likely to lower the

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memory's value share within capex, alleviating the concern on the sustainability trajectory. This was also a large part of the share price trigger in April's result season, in our view. On the other hand, if CSP hardware capex spending hikes move up by a marginal amount, this could be taken negatively to memory suppliers' share sentiment.

- **Where are we in terms of LTA progress? How big is LTA out of the total volume now and will be in the future?** We are beginning to witness an increase in LTA discussion among major memory makers and MU was very vocal in their latest results (*note*) about their LTA structure including duration, pricing, target margin profile, and other variables. It is unclear how big the LTA is out of the total volume for Korean memory makers and comparing the LTA quality is also very challenging at this stage. Therefore, until clear LTA visibility is out and available to the market, we may continue to see headline noise on its impact to ceiling prices and margins. We believe that more than half of the total contract volume will eventually be under LTA and it is important that memory makers will aim for their floor price and margin to be equivalent or above the pre-AI era. We continue to view LTA as a key element for the durability of earnings.
- **Will LTA lead to a slower ASP increase and cap margin improvement?** LTA provides both suppliers and customers a strong bond to secure volume visibility and a certain price range. Especially when the AI hardware capex hike burden remains elevated, it is imperative that the LTA discussion provides greater clarity to both parties. On the other hand, price stabilization is natural and inevitable as both parties will reach an agreement on a certain range of pricing for the next 3-5 years. For the latest LTA contract, it was suggested that the contract pricing is benchmarked using the latest quarter. While we do not disagree on this, we believe upside is still open, as: a) we do not believe all the LTA volume has been secured and, even within key customers, not all the discussed volume is locked up by LTA, implying both parties could strike another LTA heading into 2027E at a higher price, b) we believe there are other elements that provide greater value than price ceilings, such as greater volume visibility or different contract terms ("take or pay", for example), and c) even with an increase in LTA, we anticipate pricing to continue to move up for the non-LTA portion, which will still be pushing up the average pricing toward upside. It remains unclear how LTA translates into actual near-term pricing and margin, which is why we worry about the immediate margin cap. On a mid-to-long term horizon, we would rather focus on over-the-cycle profitability, and this is the strongest counter-argument to some investors' view of memory as cyclical and expectations that prices should correct 50-70% during the down-cycle.
- **Near-term memory pricing outlook and 2027E projection?** We still maintain our ~20%/~10% like-for-like ASP increase expectation for CY3Q26E/4Q26E. Compared to 1-2M ago, we see an increase in the range of pricing expectations among investors (from 15-20% q-q increase to 10-30% q-q increase) as a result of the 2Q26 actual pricing trend, where we saw Korean memory makers' actual DRAM price increase was below that of global peers (MU and NYT May-quarter/June-quarter DRAM ASP trend at low-60%/high-60% q-q increases). We believe the difference could be explained by 1) base differences (Korean memory makers' March-quarter ASP increase was notably higher vs. US/TW peers) and 2) product mix differences (higher LPDDR sales into mobile customers could result in lower blended ASP increase; server vs. mobile grade price difference is as high as 30-40% per GB). Some investors asked if the LTA mix impact also resulted in price differences, but this remains unclear. Moving into 2027E, we believe a single digit % ASP increase every quarter is still a fair assumption, with half of volume based on LTA using average price point in 2026 contracts and half of volume based on contract pricing, which is likely to reflect the tightening S-D.
- **HBM ASP expectation gap remains wide between us and buyside consensus.** A surprising majority of buyside expectations on HBM pricing for next year were for a 2x y-y increase, and many investors were looking for EPS upward revision from HBM ASP hikes (i.e. HBM ASP per GB needs to rise 2x in order for margin to meaningfully catch

up vs. normal DDR5). In our estimates, HBM industry ASP is currently near US$1.8/Gb, which is below that of non-HBM server industry ASP (incl. both DDR5/LPDDR5 solutions) at around $2/Gb; therefore, investors' argument is valid from a purely economic perspective. However, we believe memory makers consider a memory operation's overall profitability when speaking to their major CSP customers (DRAM, NAND, and HBM holistically rather than individual product base) and carefully monitor customers' memory spending appetites. We should bear in mind that HBM is a bundled product with GPU installation in AI server, and CPU-driven demand upside is a secondary order impact to better manage agentic AI. Also, as HBM ASP is negotiated every year (vs. conventional memory facing 3-5 years of multi-year LTA discussions), memory makers can raise ASP the following year. We believe it is imperative to sustain the trade loss ratio concept from HBM to overall DRAM industry S-D and forecast 25-30% like-for-like ASP increases y-y to be in a more reasonable range.

- **Slower HBM4 ramp well understood by the market, higher traction on HBM4E 12Hi.** Given multiple supply chain reports and discussions, the NVDA Vera Rubin rack assembly delay and subsequent HBM4 sourcing plan downward revision is not new to the market and is well understood. Kyber's rack delay speculation (*link*) was a new surprise to the market, but we haven't seen a capacity operation plan revision from the supply chain. (JPMe: 630k wafer allocation to HBM next year out of ~2.3k total DRAM WSPM annually.) Following the Korean memory makers' series of HBM4E 12Hi first customer samplings during 2Q26, investors seem to acknowledge that HBM4E mainstream is likely to be 12Hi instead of 16Hi. In our May-2026 HBM S-D model revisions (*note*), we have reflected 12Hi:16Hi usage in GPU unit mix at 65%:35% for next year, which means that downside from NVDA consumption remains limited for 2027E. Instead, as seen in our CoWoS July-2026 assumption revisions (*note*), we see greater demand from Google TPU and AWS Trainium pipeline, which means that the overall HBM S-D shortage is likely to continue throughout our forecast period. Some investors also pointed out that AI model labs could be a greater part of memory demand drivers as they begin direct sourcing while developing their own custom chips.

- **Where is the bigger shortage between DRAM and NAND?** While both DRAM and NAND are in tight situations, we see a greater shortage in DRAM (self-sufficiency at 50-60%; supply relative to order ratio) over NAND (self-sufficiency at 70-80%). DRAM remains tight despite the increase in the capacity buildout trend (DRAM WSPM annual increase by ~390k every year over 26-29E), and suppliers should see the worsening shortage continuing into next year followed by a continued shortage into 2028E. Compared to DRAM, NAND S-D is less tight and consumer electronics grade demand downward revisions are greater than expected. On the other hand, KV cache offloading grade enterprise SSD demand is seeing exceptionally strong upward revisions, and memory makers are now forecasting 500EB and 2027E y-y growth nearing the +50% range with potential upside risk. Investors think NAND S-D could fare relatively better than the headline risk profile (relatively stronger China NAND competition risk vs. DRAM) and expect a favorable ASP trend for the eSSD segment (leading US CSP customers willing to subsidize eSSD ASP as high as US$0.5-0.55 per GB by end of the year).

- **China competition risk assessment – investors do not yet worry about China supply**. Even after all of the noise (e.g. Apple testing to qualify Chinese memory vendors for a mainland China market version – *link*) and aggressive capacity build out headlines, investors appeared less concerned about China competition. On DRAM, there seems to be little evidence of a meaningful technology gap narrowing versus the leading DRAM producers (frontier players on 1cnm at the moment and scaling down to 1dnm, while the Chinese DRAM competitor is still working through 1znm-1anm). In addition, if the China DRAM supplier allocates greater capacity to HBM for China ecosystem inference chip buildout purposes, this would alleviate its penetration concern (applying the similar

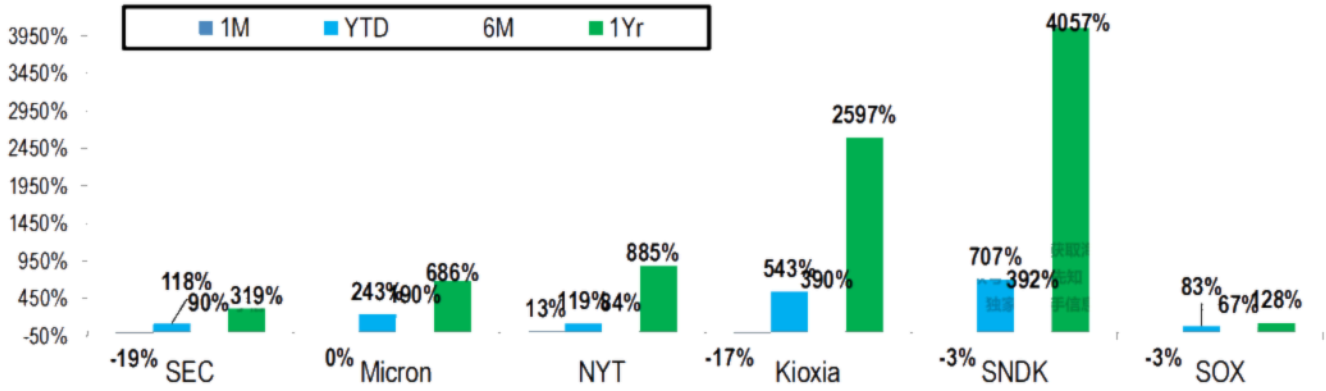
trade loss ratio logic to that of global peers) to the conventional DRAM market, not to mention the overall market is in shortage. In addition, leading Chinese NAND makers are reported to be investing in both DRAM (half of the cleanroom space) and NAND for their new fab next year (*link*) and this is likely to be a positive development for NAND S/D dynamics through 2028E. Overall, despite capex expectations running above market growth for Chinese memory makers, we do not see this as a material downside risk to our memory sector view and investors were generally aligned with this view.

- **Are we seeing any inventory destocking risk?** Typically, a memory down-cycle begins with a surge in memory component inventory across the channel and on customers' balance sheets. Given the prevailing shortage (procurement, installation, and actual consumption trend outpacing the supply increase), we see a decline in major customers' memory inventory (across consumer electronics to server, and B2B side) and little risk of unexpected inventory destocking. As memory consumption cannot exceed the amount of supply (added by inventory), we believe memory procurement eventually needs to be normalized, narrowing the theoretical S-D gap. However, this should not be read as a signal for a potential inventory build-up immediately, as multiple end-demand areas are being disrupted by limited supply. Some segment demand (consumer and automotive applications) could recover quickly when supply improves amid stable pricing trends. Lastly, a few investors also asked if power supply will become a bottleneck and widen the gap between upstream semiconductor and downstream server rack installation in datacenter. Specific lead times and inventory in the supply chain remain unclear, and we would closely monitor finished server rack inventory related risk to memory procurement going forward.
- **Mixed takes on Korea's AI mega-investment plan; more positive bias towards memory SPE from potentially higher capex spending.** Investors generally found the US$3+trn Korean AI mega-investment master plan announcement net-negative to memory sector sentiment as the initial interpretation was focused on lack of supply discipline. We believe there are many moving parts in actual capex execution, and additional fab investment will be necessary on an extremely long-term horizon after Korean memory producers fill in Yong-in fab. It is important to note that supply debottlenecking is necessary to sustain the aforementioned AI capex race while memory sustains adequate value share. From a capex perspective, we believe up to 20% or higher annualized capex could be spent vs. our published forecast, looking at the pace of near-term and mid-to-long term fab construction schedules. MU's US$50bn additional capex plan (*link*) on top of its previous US$200bn spending echoes a similar view and news reports (*link*) on Samsung potentially pulling in Yong-in fab infrastructure for up to two years is a clear indication of memory makers' fab first strategy to obtain flexibility in preparing new supply and the capacity to respond to its multi-year shortage view.
- **Where else do we see bottlenecks in the memory supply chain?** Within the memory sub-components industry, we currently see an increase in the shortage of memory-grade substrate and PCB (both at DRAM/NAND) and controller IC as well as DDR4 (mainly for NAND). This is a result of the broadening range of different memory specs required by key customers (demanding various SKUs instead of of only high density SKU). While memory makers' overall TAM (GB terms) is unchanged, the increase in module SKUs (higher number of DRAM modules or SSD modules) will result in greater sourcing needs for respective components. Therefore, we consider market speculation on memory-grade substrate price cuts (*link*) as unrealistic and view the ongoing BT substrate (FC-CSP) migration/conversion to ABF substrate (*JPM Asia Tech research view*) as a tailwind to S-D improvement. The aforementioned trend is also favorable to third party NAND controller IC solution providers and DDR4 solution providers, in our view. Lastly, a few investors asked if we are seeing S/D tightness in the silicon wafer sector as well (little evidence of substantial S-D dynamic improvement in the next 6-9M, according to our discussions with memory suppliers).

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- **MLCC received the second most attention outside of memory, followed by ABF substrate, with relatively less interest in RV ideas than in the past**. Most investors understand the similarities between memory and MLCC cycles (both following S-D with AI being the new demand driver) but continue to underestimate the supply bottlenecks (increase in different needs of AI server grade MLCC at low yield and trade loss due to larger form-factor SKU production). Our bullish MLCC sector thesis (*note*) is based on 1) structural product mix improvement driven by AI server related demand strength and 2) S-D tightness resulting in broad-based MLCC ASP strength for non-AI products. Another area of investor pushback was on potentially much weaker-than-expected IT MLCC demand (due mainly to component price hikes driven by production cutbacks), which could push back the point of shortage. In terms of key catalysts, investors are waiting for clear signals of price hikes to justify demanding valuations (e.g. SEMCO is trading at 18x FY28E to JPM EPS or 14x to bullish investor EPS expectations above W90k). It remains unclear if leading MLCC producers (**Murata/Taiyo Yuden** – both OW, covered by Akinori Kanemoto, and **SEMCO**) will provide a clear path to a price hike in the upcoming July result season. This is a key reason why MLCC stocks saw a big selloff (three suppliers collectively down 34% since the peak in June vs. TPX/Kospi -2%/-25%) alongside weak memory stock sentiment, in our view. Substrate sector thesis is unchanged (higher layer migration towards AI applications and S/D tightness potentially extending beyond 2028E); however, we are witnessing similar risk-off sentiment to that of MLCC on followers such as **LGIT**. Overall interest levels in LGE were low, but a few investors pointed out the 2Q26 headline print and the expectation reset post robotics-related sentiment cooldown could put the stock in a relatively safe spot vs. the memory sector. Lastly, interest in overall **relative value trade ideas** in Korea has edged down vs. 3M ago as an increasingly large portion of NAV is now correlated to that of the memory semi stock share price trend (e.g. **SK Inc**, **Samsung C&T**, **SK Square** [not covered], and others). We expect the sector interest to return once shareholder return visibility becomes more clear on underlying assets, and risk-on trade sentiment returns post major CSP customers' datacenter hardware capex spending hike announcements.

Figure 1: Global memory makers' share price performance including SOX (Philadelphia Semiconductor Index)



Source: Bloomberg Finance L.P.

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Table 1: Valuation and financial metric comparison for our coverage universe

Company	Rating	Ticker	Mkt. cap ($ mn)	PT (LC)	PT Upside	PE (x)			Historical Average (x)			EPS Y-Y (%, JPMe)			JPM EPS vs. Consensus			PB			Historical Average (x)			ROE (%)		
						FY24A	FY25E	FY26E	L1YR	L2YR	L3YR	FY24A	FY25E	FY26E	FY24A	FY25E	FY26E	FY24A	FY25E	FY26E	L1YR	L2YR	L3YR	FY24A	FY25E	FY26E
Tech																										
Samsung Electronics	OW	005930 KS	1,205,008	480,000	86%	5.2	3.7	3.0	9.2	12.7	13.0	586%	41%	23%	8.7%	5.9%	21.6%	2.1	1.5	1.1	1.8	1.4	1.4	40.0%	48.1%	38.5%
Hynix	OW	285A JP	226,428	155,000	15%	6.8	4.7	3.8	8.3	7.7	7.7	875%	43%	32%	1.5%	19.0%	57.2%	5.2	3.9	2.4	3.8	3.1	3.1	137.1%	83.7%	67.9%
SEMCO	OW	009150 KS	64,428	240,000	86%	65.6	31.3	19.8	25.8	19.5	16.3	116%	110%	58%	3.8%	14.3%	15.4%	5.4	7.4	5.5	4.0	2.1	1.3	14.3%	23.7%	27.9%
ISU Petasys	OW	007660 KS	4,915	185,000	86%	25.9	15.8	13.8	39.9	23.8	17.2	30%	64%	29%	1.1%	13.6%	11.6%	7.2	9.1	3.7	10.0	6.9	5.3	28.0%	32.8%	29.3%
LG Electronics	OW	011070 KS	10,439	130,000	67%	15.1	13.4	11.0	16.7	9.3	8.7	201%	12%	22%	26.3%	15.4%	20.6%	2.3	2.0	1.7	1.5	1.1	1.3	15.0%	14.8%	15.7%
Lotte Chemical	N	011170 KS	3,808	100,000	34%	30.8	25.8	n.a.	34.9	28.9	26.0	29%	23%	n.a.	0.8%	1.3%	n.a.	0.3	0.3	n.a.	0.9	0.5	0.2	20.4%	28.3%	n.a.
Hanmi Semiconductor	UW	042700 KS	13,127	200,000	-3%	64.4	48.1	n.a.	81.9	47.8	34.9	41%	34%	n.a.	-8.9%	-17.8%	n.a.	20.2	14.2	n.a.	18.6	14.1	9.8	41.8%	42.5%	n.a.
LG Display	N	034220 KS	3,472	13,000	46%	n.a	6.1	n.a.	14.1	63.4	45.5	n.a.	n.a.	n.a.	n.a.	-6%	n.a.	0.6	0.6	n.a.	0.8	0.7	0.6	-1.8%	5.3%	n.a.
Naver Tech	OW	035420 KS	43,317	730	68%	31.1	8.7	8.1	15.7	107.8	78.2	n.a.	57%	19%	8.6%	3.6%	-1.7%	3.3	2.1	1.6	2.3	1.4	1.3	15.4%	45.1%	38.3%
Samsung SDS	N	018260 KS	9,957	175,000	-4%	20.5	16.7	n.a.	18.2	15.0	14.9	-6%	23%	n.a.	0.3%	0.1%	n.a.	1.6	1.3	n.a.	1.3	1.3	1.2	8.7%	7.7%	n.a.
LG Electronics	N	066570 KS	20,337	190,000	3%	10.5	8.5	n.a.	9.8	8.7	8.2	138%	23%	n.a.	35.7%	37.0%	n.a.	1.1	1.0	n.a.	0.8	0.7	0.8	10.7%	11.8%	n.a.
Battery Materials																										
SKC	UW	011790 KS	2,935	72,000	-18%	n.a	n.a	n.a.	n.a.	298.2	85.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.6	1.7	n.a.	4.0	3.2	2.8	-11.9%	-3.2%	n.a.
Hotels																										
Samsung C&T	OW	028260 KS	39,298	570,000	58%	25.9	8.9	n.a.	16.3	13.2	12.6	-2%	186%	n.a.	-93.9%	99.7%	n.a.	1.0	0.9	n.a.	1.2	0.9	0.8	3.8%	10.3%	n.a.
SK Inc	OW	034730 KS	28,648	870,000	47%	3.0	2.0	1.3	10.6	8.7	8.9	807%	49%	7.9%	52.7%	86.1%	70.5%	0.3	0.2	0.1	0.6	0.6	0.6	10.0%	8.7%	7.3%
LG Corp	N	003550 KS	10,133	140,000	10%	5.2	7.6	n.a.	7.7	7.1	6.6	141%	28%	n.a.	11.2%	9.2%	n.a.	0.5	0.5	n.a.	0.5	0.5	0.5	5.7%	6.5%	n.a.

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