UBS

Global Research
28 May 2026

Initiation of Coverage

Kioxia Holdings Corp

Peak is not here yet

Equities

Japan

Semiconductors

12-month rating	**Buy**
	Prior : No Rating
12m price target	**¥79,000**
	Prior :
Price (28 May 2026)	**¥61,280**
RIC: 285A.T **BBG:** 285A JP	

Trading data and key metrics

52-wk range	¥65,450-1,982
Market cap.	¥33,464b/US$210b
Shares o/s	546m (ORD)
Free float	30%
Avg. daily volume ('000)	34,971
Avg. daily value (m)	¥1,130,121.5
Common s/h equity (03/27E)	¥4840b
P/BV (03/27E)	6.9x
Net debt to EBITDA (03/27E)	NM

EPS (reported, basic) (¥)

	From	To	% ch	Cons.
03/27E	-	9,002.5	-	7,475.0
03/28E	-	11,390.8	-	9,269.9
03/29E	-	9,757.0	-	11,237.3

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Initiating coverage with Buy rating and price target of ¥79,000

Consensus OP estimates are ¥6.43trn for FY3/27 and ¥7.47trn for FY3/28. In comparison, we forecast ¥7.11trn and ¥8.99trn for the respective fiscal years, significantly exceeding consensus, especially for FY3/28. NAND flash memory prices are likely to rise qoq for the next six quarters before peaking in Q3 2027 (about 1.5 years from now, link). Kioxia has established a competitive advantage in terms of bit cost by successfully focusing on horizontal miniaturisation technology, which limits wafer cost increases. We think this sustained favourable market environment and cost advantage are not yet priced into the stock.

AI demand has transformed the NAND flash memory market

Historically, NAND flash memory has been used primarily for storage for PCs, smartphones, tablets, and AI training data. For AI inference applications, though, NAND flash memory has become a part of the computational system, akin to DRAM, due to the need to retain users' chat history. Even with such compression technologies as TurboQuant KV cache, overall demand is likely to continue to rise, with the rapid growth driven by AI still unmitigated. And with the company's bit supply growth remaining below +20% yoy, we expect supply-demand conditions to remain tight (link).

Established cost advantages within the industry

The company has maintained the highest operating margin in the industry since 2022. While Korean competitors have focused on vertical stacking, Kioxia has prioritised horizontal bit expansion and selected technologies for reducing costs. This strategy has succeeded in cutting wafer costs by about 50% and bit costs by 10–20%, on our estimates. Investor perceptions of the company's lag based on simple comparisons of stacked layers are likely to improve.

Valuation: Upside for both earnings and multiples

Our price target is set at ¥79,000, based on estimated BPS at the FY3/28 fiscal year end and a PBR of 4.7x. The PBR multiple of 4.7x is derived from an average ROE of 41% for FY3/28-FY3/31 and a cost of equity (CoE) of 8.6%. This valuation method has been applied consistently across all Asian memory companies. The price target corresponds to an EV/EBITDA of 4x, which aligns with both the historical 10-year average EV/EBITDA for the memory sector and the company's average since its public listing.

Highlights (¥b)	03/24	03/25	03/26	03/27E	03/28E	03/29E	03/30E	03/31E
Revenues	1,076.6	1,706.5	2,337.6	9,121.0	11,301.0	10,181.0	9,711.0	9,711.0
EBIT (UBS)	(252.7)	451.7	870.4	7,107.0	8,991.0	7,701.0	6,961.0	6,941.0
Net earnings (UBS)	(243.7)	272.3	554.5	4,916.1	6,220.3	5,328.1	4,816.5	4,803.2
EPS (UBS, diluted) (¥)	(452.1)	505.2	1,015.4	9,002.5	11,390.8	9,757.0	8,820.1	8,795.7
DPS (net) (¥)	0.0	0.0	0.0	2,700.7	3,417.2	2,927.1	2,646.0	2,638.7
Net (debt) / cash	(1,101.3)	(827.6)	(775.3)	1,715.0	5,612.7	9,559.9	12,981.7	16,287.5
Profitability/valuation	**03/24**	**03/25**	**03/26**	**03/27E**	**03/28E**	**03/29E**	**03/30E**	**03/31E**
EBIT (UBS) margin %	(23.5)	26.5	37.2	77.9	79.6	75.6	71.7	71.5
ROIC (EBIT) %	(15.3)	28.1	45.5	263.9	264.7	219.0	205.8	205.0
EV/EBITDA (UBS core) x	-	2.8	4.5	4.4	3.2	3.2	3.0	2.6
P/E (UBS, diluted) x	-	4.3	8.0	6.8	5.4	6.3	6.9	7.0
Equity FCF (UBS) yield %	-	15.4	7.1	11.8	17.2	16.6	14.5	14.2
Dividend yield (net) %	-	0.0	0.0	4.4	5.6	4.8	4.3	4.3

Source: Company accounts, LSEG Eikon, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of ¥ 61,280 on 28-May-2026

UBSResearch THESIS MAP a guide to our thinking and what´s where in this report

PIVOTAL QUESTIONS

Q: Q: Can the company maintain its industry-leading NAND flash memory operating margin through 2027?

We expect Kioxia to sustain industry-leading NAND margins versus key peers through CY26–27, supported by its lead in lateral (horizontal) scaling. However, beyond 2027—particularly with the transition to BICS10 (332 layers) and subsequently the 400-layer generation—it remains uncertain whether this advantage in lateral scaling can be maintained to the same extent as today.

Q: Is AI inference a temporary driver of NAND flash memory demand, as in the case of AI training, or is it a structural growth driver?

We view AI inference as a sustainable and structural driver of growth in NAND flash memory demand. For AI inference, NAND flash memory's performance and capacity are design variables that define user experience. This role is unlikely to change.

Q: How long will NAND flash memory prices continue to rise?

We expect supply shortages to persist through 2027, as capacity expansion lags demand growth. Qoq price increases are likely to peak around 3Q 2027.

UBSVIEW

NAND flash memory prices are likely to rise qoq for the next six quarters before peaking in Q3 2027 (about 1.5 years from now). By successfully focusing on horizontal miniaturisation technology, the company has established a competitive advantage in terms of bit cost, one that we expect to persist for several years.

EVIDENCE

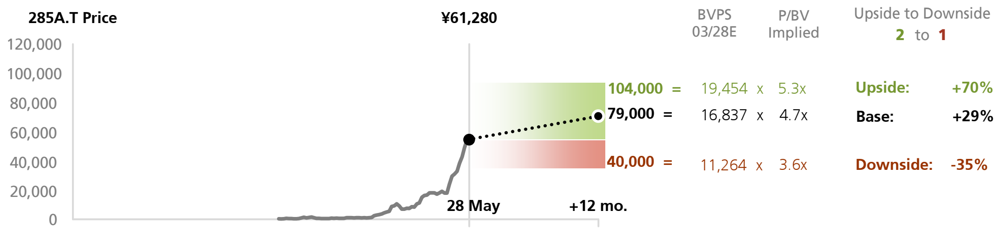
AI demand growth has benefited not only NAND flash memory companies but also HDD manufacturers, which occupy a lower tier of the storage hierarchy. Currently, few NAND flash memory or HDD companies expect demand from hyperscalers to decelerate.

On the supply side, companies in both the DRAM and NAND flash memory businesses are prioritising capacity expansion for DRAM. As a result, NAND flash memory supply is unlikely to grow in 2026 or 2027. Kioxia has similarly indicated that it intends to increase capex, but wafer shipment volumes are likely to decline.

WHAT´S PRICED IN?

Based on our discussions with investors, most now think NAND flash memory prices will stay elevated. However, doubts persist about whether they can remain at such high levels. Compared to DRAM, NAND flash memory is more vulnerable to supply-demand imbalances.

UPSIDE/DOWNSIDE SPECTRUM



Source: UBS Research

Value drivers	OP (FY3/28E)	NAND price USD$/GB (FY3/28E)	Bit cost advantage (FY3/28E)	EV/EBITDA (FY3/28E)	ROE FY3/28-FY3/31E average	PBR (FY3/28E)
¥104,000 upside	¥11,062 bn	$0.35	20%	X 4	43%	X 5.3
¥79,000 base	¥8,991 bn	$0.30	10%	X 4	41%	X 4.7
¥40,000 downside	¥4,581 bn	$0.18	-5%	X 3	31%	X 3.6

Source: UBS estimates

COMPANY DESCRIPTION

Kioxia is a leading global semiconductor manufacturer specializing in NAND flash memory and SSDs, holding a top-tier market share in this field. Originating from Toshiba's memory business, it operates as a dedicated manufacturer focused on the NAND business, offering products tailored for data centers and smart devices.

PIVOTAL QUESTIONS

Q: Can the company maintain its industry-leading NAND flash memory operating margin through 2027?

UBSVIEW

We expect Kioxia to sustain industry-leading NAND margins versus key peers through CY26–27, supported by its lead in lateral (horizontal) scaling. However, beyond 2027—particularly with the transition to BICS10 (332 layers) and subsequently the 400-layer generation—it remains uncertain whether this advantage in lateral scaling can be maintained to the same extent as today.

EVIDENCE

Key structural factors are high effective bit density, yield stability, sharing of facilities and technology through joint ventures, and competitors' shift in priority to DRAM (HBM) capex.

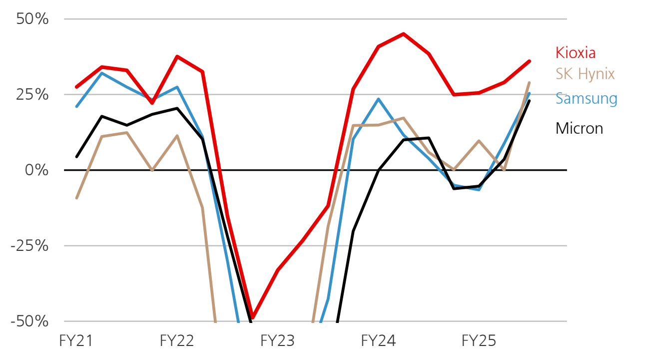
WHAT´S PRICED IN?

Market participants appear to evaluate NAND flash memory competitiveness based primarily on superficial device specifications, such as vertical layer count and multi-level cell count. However, Kioxia's cost advantages per GB from lateral scaling and CBA architecture are likely not fully discounted as a factor differentiating the company from competitors.

Low bit cost leads to high profitability

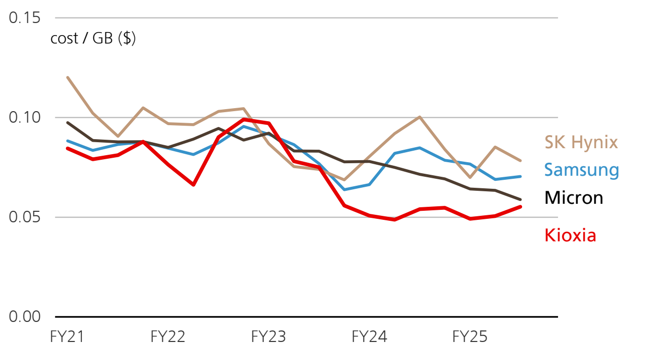
Kioxia consistently maintains the industry-leading operating margin per GB (Figure 1) owing primarily to its lower manufacturing cost per GB, or bit cost, than competitors' (Figure 2). Low bit cost underpins its industry-leading profitability.

Figure 1: NAND business: OPM



Source: Company data, UBS

Figure 2: NAND: Bit cost



Source: Company data, UBS, Gartner

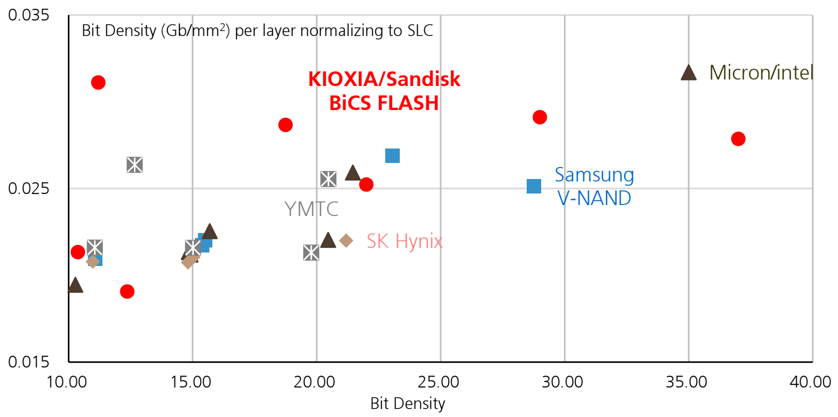
Achieving bit density through lateral scaling

The most effective way to reduce NAND flash memory bit cost is to increase bit density per wafer in one of three ways:

1. Increasing vertical layer count (multi-layering)
2. Increasing bits per cell (multi-levelling)
3. Enhancing lateral bit density (lateral scaling)

Given that there is little difference among companies in terms of multi-layering and multi-levelling, the market uses these metrics as proxy indicators of competitiveness. In contrast, lateral scaling is less commonly used because it is more complex and involves trade-offs with multi-layering and multi-levelling. A plot of lateral bit density against total chip bit density (Figure 3) reveals Kioxia's advantage over competitors in terms of lateral scaling.

Figure 3: Lateral scaling vs bit density



Source: Company data, UBS, Gartner

Lateral scaling inherently conflicts with multi-layering and multi-levelling

To increase density through lateral scaling, memory hole diameters must be reduced and pitch tightened. The resulting increase in the aspect ratio significantly complicates hole etching. As multi-layering progresses, deeper holes lead to further increases in the aspect ratio, thereby making lateral scaling incompatible with multi-layering.

Additionally, reducing hole diameters can lead to lower read currents and greater variability, reducing design margins and complicating multi-levelling control. Lateral scaling is thus also incompatible with multi-levelling.

Kioxia and Micron lead in terms of lateral scaling

Kioxia’s and Micron's latest NAND flash memory products are ahead of competitors’ in terms of lateral scaling, which is complex and not that compatible with multi-layering and multi-levelling. We attribute this lead to Kioxia's expertise in high-aspect-ratio etching, developed during Toshiba's trench-type DRAM era. Similar to NAND, trench-type DRAM requires high-aspect-ratio hole processing, which involves not only deep etching but also simultaneous optimisation of shape control, precision, and speed. Kioxia's accumulated expertise likely gives the company a competitive edge. Micron's ability to achieve lateral density comparable to Kioxia’s may stem from its acquisition of Toshiba's trench-type DRAM plant and similar technologies.

CUA/CBA: Not low-temperature processes but differentiated manufacturing

Another way to increase lateral density is CUA (CMOS under array), which places peripheral circuits beneath the array to improve area efficiency. Different companies may use different naming conventions, but their goals are the same.

However, as multi-layering progresses, the thermal processes used to form memory cells can damage the CMOS created earlier, leading to peripheral circuit degradation and, in turn, device performance deterioration and increased difficulty in controlling multi-levelling. To address this issue, companies have developed low-temperature processes for CUA.

Starting with BiCS8, Kioxia has adopted CBA (CMOS direct bonding to array), whereby CMOS and arrays are fabricated on separate wafers and joined via hybrid bonding to prevent thermal damage.

Companies are cautious about adopting CBA because of such issues as reduced throughput and yield. Kioxia leveraged its technological expertise to achieve mass production, prompting competitors to follow suit.

Increasing bit density without raising wafer costs

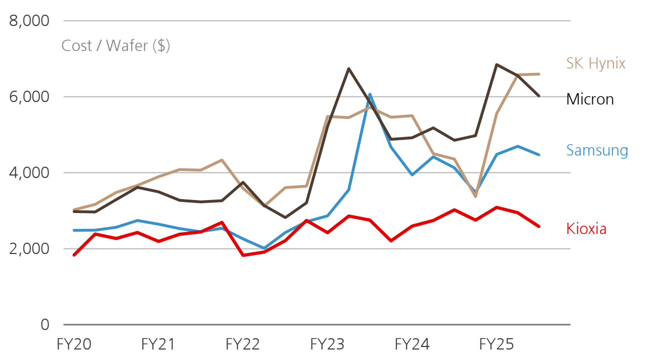
Bit cost does not decline on higher bit density alone; stable wafer costs are also necessary.

Kioxia has improved bit density across generations while keeping wafer manufacturing costs (per wafer) from rising (Figure 4). We estimate Samsung Electronics' cost per wafer at about $4,000, Micron's and SK Hynix's at around $6,000, and Kioxia's at a much lower $2,000. With wafer costs less than half competitors', Kioxia's bit cost is also lower.

Kioxia's low wafer manufacturing costs probably result from comparing and selecting bit density improvement methods based on cost efficiency. Semiconductor wafer costs depend on capex and throughput. For example, increasing the number of layers in the next generation would reduce throughput and raise wafer manufacturing costs in the absence of countermeasures. Developing high-throughput equipment or using more equipment can boost throughput but also involves more capex and thus ultimately increases costs.

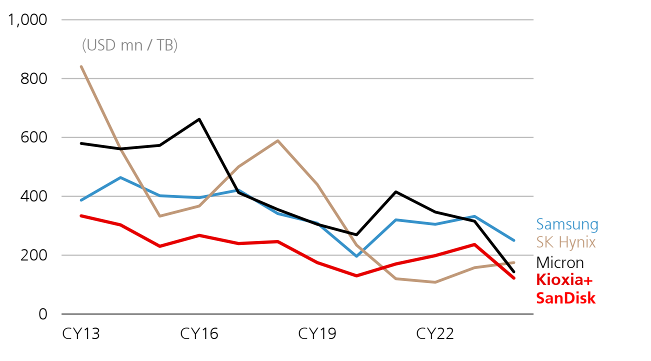
Kioxia carefully evaluates multi-layering, multi-levelling, and lateral scaling and keeps capex lower than competitors' so as to minimise the final bit cost (Figure 5).

Figure 4: Manufacturing cost per wafer



Source: Company data, UBS, Gartner

Figure 5: Capex required per TB increase (3-yr cumulative)



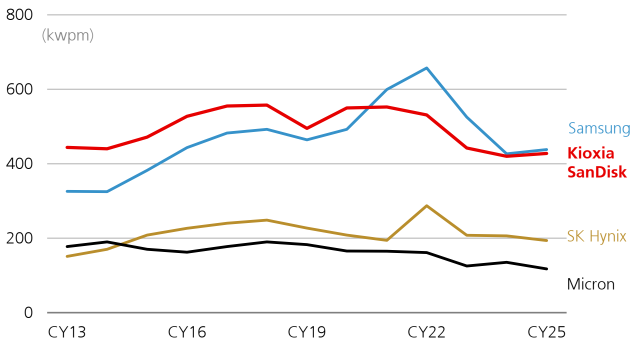
Source: Company data, UBS, Gartner

Economies of scale through joint ventures enable high yields with complex processes

While using such complex processes as high-aspect-ratio etching and CBA, Kioxia maintains industry-leading yields and is thus able to keep wafer manufacturing costs low. The foundation for high yields lies in joint ventures. The ones in Yokkaichi and Kitakami involve shared investments, depreciation, R&D, and facility costs. Larger production scale accelerates the learning curve and thereby enables such new processes as high-precision etching and hybrid bonding to ramp up faster. This self-reinforcing competitive advantage tends to strengthen over time.

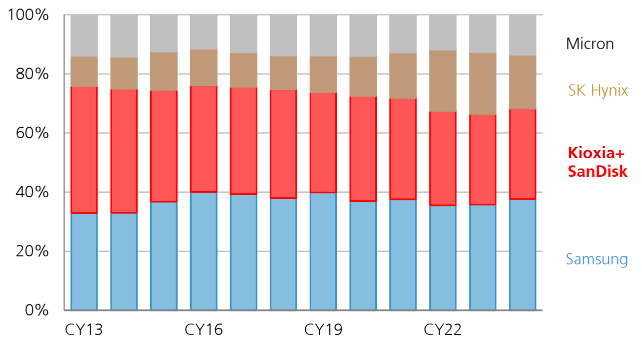
In terms of production scale, Kioxia cannot match Samsung on its own but comes close with its joint ventures included (Figure 6). Leveraging this production scale, Kioxia achieved high yields with complex processes early on. As a result, its bit shipment share is comparable to Samsung's, despite significantly lower capex (Figure 7).

Figure 6: Wafer capacity per month (kwpm)



Source: Company data, UBS, Gartner

Figure 7: Bit supply breakdown by market share



Source: Company data, UBS, Gartner

Kioxia has consistently pursued a strategy of minimising bit costs to advance its NAND flash memory technology roadmap (Figure 8). This approach has enabled the company to maintain industry-leading operating margins per GB.

Competitors' priority on HBM leads to delays in NAND flash memory advancements

The competitive landscape favours Kioxia. Samsung, SK Hynix, and Micron are heavily allocating capital, technology, and personnel to HBM and advanced DRAM. These moves make sense for capturing high-margin segments but limit resources for NAND flash memory scaling and architecture optimisation. As long as competitors stick with this type of capital allocation, they are unlikely to narrow the bit cost gap in the short term.

Margin leadership likely to last through 2027

Based on the above, we think Kioxia can maintain its leading NAND flash memory operating margin through 2027. Its low bit cost is not merely a generational advantage but is also a structural competitive advantage underpinned by process capabilities that enable lateral scaling and CBA in mass production and also by economies of scale from joint ventures. Competitors would need to significantly shift their capital allocation and R&D priorities toward NAND flash memory to achieve a comparable cost structure in the short term.

A downside risk scenario for Kioxia is that the margin gap could narrow before 2027 if competitors accelerate NAND flash memory capex and technical resources after their HBM investment peaks, pursue lateral scaling and architecture optimisation, and rapidly improve mass production yields.

Figure 8: NAND technology roadmap

	Generation	Layer	Die capacity/Gb	Bit Type		Die Area/mm^2	Mass production	Bit density
Samsung V-NAND	1st	24	128	MLC	2	133	Jul-13	0.96
	2nd	32	128	MLC	2	84	May-14	1.52
		32	128	TLC	3	68	Aug-14	1.89
	3rd	48	256	TLC	3	97	Aug-15	2.64
	4th	64	256	TLC	3	75	Dec-16	3.42
		64	512	TLC	3	127	Dec-17	4.03
		64	1024	QLC	4	180	Aug-18	5.68
	5th	92	256	TLC	3	57	May-18	4.53
		92	512	TLC	3	92	Jul-18	5.57
		92	1024	QLC	4	134	Jul-18	7.62
	6th	128	256	TLC	3	45	Jun-19	5.64
		128	512	TLC	3	74	Jun-19	6.91
		133	512	TLC	3	67	Aug-19	7.67
	7th	176	512	TLC	3	46	Dec-20	11.07
		176	1024	QLC	4	66	Dec-22	15.51
	8th	236	1024	TLC	3	67	Nov-22	15.38
	9th	286	1024	TLC	3	44	Apr-24	23.07
		286	1024	QLC	4	36	26H1	28.77
KIOXIA BiCS FLASH	1st (prototype)	24		MLC				
	2nd	48	128	MLC	2	99	Mar-16	1.29
		48	256	TLC	3	105	Jul-16	2.43
	3rd	64	128	TLC	3	37	Jul-17	3.42
		64	256	TLC	3	71	Jul-17	3.61
		64	512	TLC	3	86	Jul-17	5.93
		64	768	QLC	4	86		8.97
	4th	96	256	TLC	3	51	Jul-18	5.03
		96	512	TLC	3	84	Oct-18	6.09
		96	1,362	QLC	4	159		8.55
	5th	112	256	TLC	3	36	Jul-20	7.08
		112	512	TLC	3	62	Jul-20	8.24
		112	1,362	QLC	4	140	Oct-20	9.70
	6th	162	512	TLC	3	49		10.37
		162	1,024	QLC	4	83		12.36
	8th	218	1,024	TLC	3	55	Jul-24	18.75
		218	2,048	QLC	4	93	Oct-25	22.00
	9th	120	512	TLC	3	46	Mar-26	11.20
	10th	332	1,024	TLC	3	35	CY26	29.00
		332		QLC	4		CY26	37.60
Micron	1st	32	256	MLC	2	123	Oct-15	2.08
		32	384	TLC	3	168	Oct-15	2.28
	2nd	64	256	TLC	3	59	Jul-17	4.36
		64	512	TLC	3	108	Jul-17	4.74
		64	1024	QLC	4	157	May-18	6.53
	3rd	96	512	TLC	3	82	Oct-18	6.25
		96	1024	QLC	4	113	Oct-18	9.08
	4th	128	1024	TLC	3	132	Jul-20	7.76
	5th	176	512	TLC	3	50	Nov-20	10.27
		176	1024	QLC	4	69	Jan-22	14.92
	6th	232	512	TLC	3	34	Jul-22	14.85
		232	1024	TLC	3	65	Jul-22	15.69
		232	1024	QLC	4	50	Apr-24	20.46
	9th	276	1024	TLC	3	48	Jul-24	21.46
		276	1024	QLC	4	29	Jun-25	35.00
SK Hynix	1st	24	64	MLC	2		Nov-14	
	2nd	36	128	MLC	2	88	Apr-16	1.45
	3rd	48	256	TLC	3	92	Nov-16	2.78
	4th	72	256	TLC	3	72	Jul-17	3.55
		72	512	TLC	3	119	Feb-18	4.30
		76	512	MLC	2	200	Mar-19	2.56
	5th	96	512	TLC	3	84	Nov-18	6.09
		96	1024	TLC	3	162	Jan-19	6.33
	6th	128	512	TLC	3	63	Jun-19	8.09
		128	1024	TLC	3	118	Jun-19	8.68
	7th	176	512	TLC	3	47	Jun-21	10.98
	8th	238	512	TLC	3	35	Jun-23	14.81
		238	1024	TLC	3	68	Dec-23	15.03
	9th	321	1024	TLC	3	48	Nov-24	21.19
		321	2048	QLC	4	71	Aug-25	28.80
YMTC	1st	32	256	MLC	2		Sep-18	
	2nd (X1)	64	256	TLC	3	58	Sep-19	4.43
	3rd (X2)	128	512	TLC	3	60	Apr-20	8.47
		128	1362	QLC	4	123	Sep-21	11.06
	4th (X3)	232	1024	TLC	3	68	Dec-22	15.02
		232	1024	QLC	4	52	Jul-23	19.78
	5th (X4)	160	512	TLC	3	40	Aug-24	12.66
		267	1024	TLC	3	50	Sep-25	20.47

Source: Company data, UBS, Gartner

PIVOTAL QUESTIONS

Q: Is AI inference a temporary driver of NAND flash memory demand, as in the case of AI training, or is it a structural growth driver?

UBSVIEW

We view AI inference as a sustainable and structural driver of growth in NAND flash memory demand. For AI inference, NAND flash memory's performance and capacity are design variables that define user experience. This role is unlikely to change.

EVIDENCE

AI inference has evolved as a real-time service that responds instantly to end-user actions. With the implementation of RAG and agentic search, architectures are being explored and introduced to offload and restore KV cache data stored in GPU HBM using high-performance NAND flash memory/SSDs. More relevant themes are well explained by a recent APAC focus note by Nicolas Gaudois

WHAT'S PRICED IN?

The market appears to view storage demand for AI inference as sporadic, tied to the number of servers deployed, as in the case of AI training. Consequently, NAND flash memory is still perceived as a peripheral storage component. However, NAND flash memory actually complements HBM for AI inference, functioning as a core component that constrains response speed and the scale of models that can be handled. This shift in role is not yet fully priced into the stock, in our view.

AI inference at a point where memory matters more than computation

Unlike AI training, AI inference does not conclude with a single series of computations because when users continue a chat, AI models need to retain the earlier context. This memory is stored in the KV cache.

AI models process numerical data (attention) representing word importance, relationships, and context. When a prompt is entered, all of the earlier context is fed as numerical data, and responses are generated through computation. If the AI models were to go over the entire context and recompute for every response from scratch, response times would become excessively slow. To address this issue, AI models store the results of prior computations in memory, as the KV cache, and read them to shorten response times.

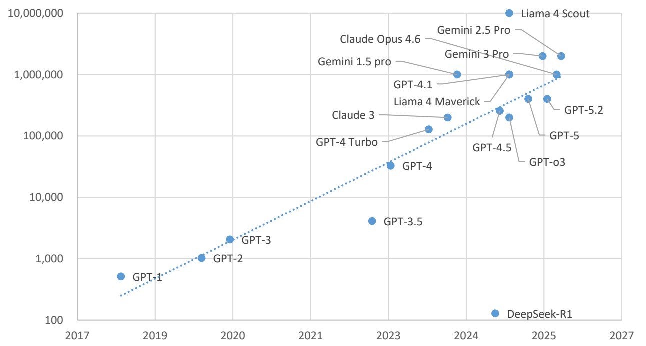
A key point here is that the KV cache size grows exponentially as chats get longer.

KV cache size grows as context windows get larger

Improving AI response accuracy generally requires enlarging the context window to increase the amount of information used for responses. AI vendors have historically enlarged model context windows at a remarkable pace of double or more annually (Figure 9).

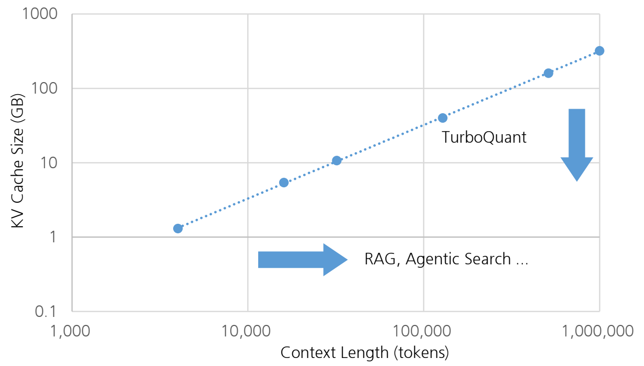
However, as context windows get larger, KV cache sizes grow significantly, resulting in bottlenecks in the capacity of HBM, where KV cache is stored. The evolution of AI inference, including RAG and agentic search, has further exacerbated KV cache-related memory capacity constraints. Such technologies as TurboQuant have been developed to reduce KV cache sizes.

Figure 9: Context window length by model



Source: Company data, UBS

Figure 10: Context length vs KV cache size



Source: UBS

KV cache growth driven by RAG and agentic search

RAG (retrieval-augmented generation)

RAG has rapidly become the industry standard for minimising hallucinations (plausible falsehoods) in AI models and generating accurate responses based on internal enterprise data.

RAG involves the retrieval of relevant information from external databases based on user queries and passes on the search results as part of the context (prompt) to the AI model for response generation. RAG significantly increases KV cache size because the former incorporates a large volume of search results into the context beyond the user-input prompt.

Agentic Search

RAG is a static process for generating responses to user inputs with one-time inference, even though search results are appended. However, as more complex reasoning and autonomous task execution have become required, AI architectures have evolved from static RAG to dynamic agentic search, which differs from traditional one-question-one-answer AI chats. Instead of performing a one-time search and inference, the agent autonomously repeats a search/inference cycle of planning, tool execution, result evaluation, and re-search until the task is completed. This multi-step, continuous task execution significantly increases the number of tokens per task, from hundreds to millions, resulting in a dramatic increase in KV cache size.

Multi-agent inference

Recently, advanced systems that deploy multiple agents in response to a single user prompt, performing agentic search repeatedly and concurrently, have become more common. In such cases, KV cache size increases proportionately to the number of agents used.

Offloading KV cache overflow from HBM to NAND flash memory

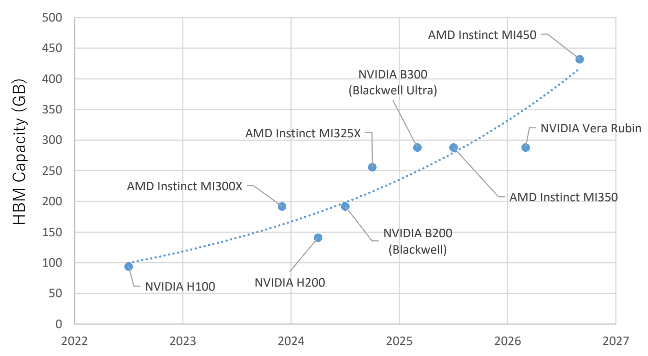
The shift to multi-agent inference systems greatly enhances response accuracy but imposes unprecedented memory and storage demands on the underlying infrastructure because the context window of AI models, i.e., KV cache capacity, has grown exponentially.

For instance, processing a 100,000-token context window can use about 40GB of memory, depending on the model. This amount of memory is nearly half the HBM capacity of NVIDIA's H100, the current standard enterprise GPU.

To accommodate steadily growing KV cache sizes, HBM capacity per GPU module continues to increase (Figure 11), driving HBM demand exponentially (Figure 12).

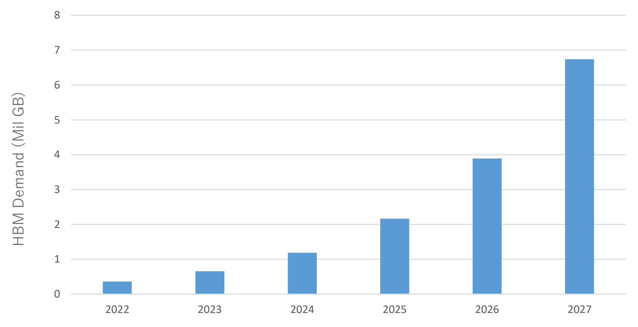
However, it is no longer feasible to maintain such vast data volumes solely with HBM, which has very high unit costs and strict physical constraints. Scaling inference now requires offloading KV cache to external storage (e.g., SSDs) and restoring it to HBM as needed.

Figure 11: HBM capacity per GPU module



Source: UBS, company data, industry public data

Figure 12: HBM demand driven by AI server (UBSe)



Source: UBS estimates

An issue arises during switching

This transition introduces latency issues. For AI inference, when chats continue and context windows become too large or when the users handled by a GPU change, interruptions occur, requiring a switch to another process and then a reversion.

During this process, the GPU must offload KV cache and reload it upon resumption. If KV cache offloading (writing) or reloading is slow, the time needed to return the first token increases, resulting in a considerably degraded user experience. For AI inference, the focus is shifting from fast computation to quick memory recall.

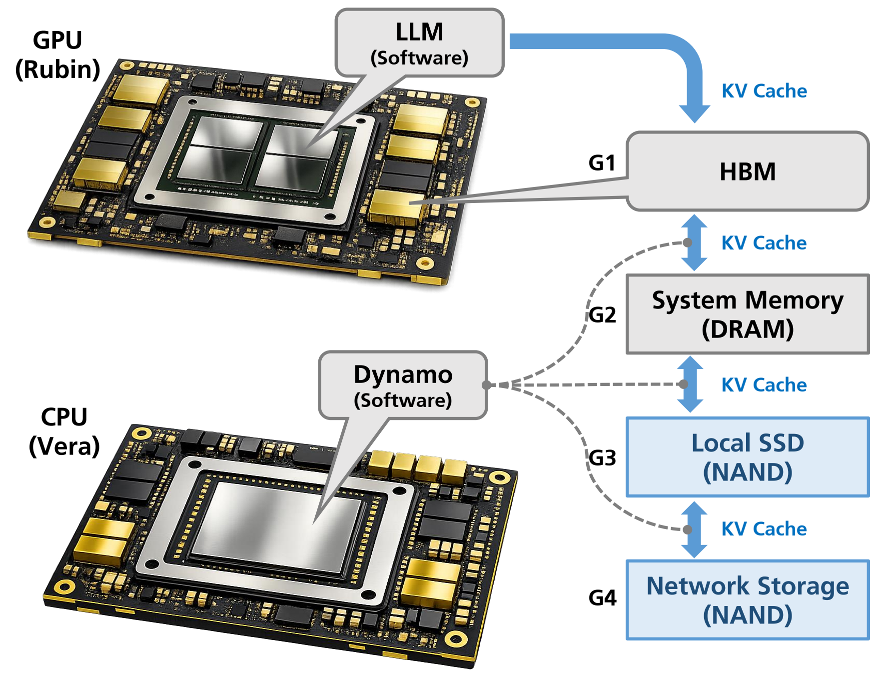
Approaches for quick memory recall

Memory architecture for KV cache offloading

To address the explosive growth of KV cache sizes, inference infrastructure is evolving into a multi-tiered memory hierarchy (memory tiering) with HBM as the top tier (G1), followed by system DRAM (G2), local SSD (G3), and shared network storage (G4). This is the basis of NVIDIA's Inference Context Memory Storage (ICMS) concept, which redefines KV cache as AI-native persistent data instead of temporary cache. This architecture efficiently offloads and manages KV cache to low-latency NAND flash memory flash storage (Figure 13).

NVIDIA Dynamo integrates and controls these tiered storage layers at the software level, enabling transparent movement and restoration of KV cache blocks from GPU memory to various storage tiers. By maintaining and reusing context across these external storage tiers over extended periods, the architecture significantly reduces recalculation (prefill) at the start of inference and thereby allows the same GPU resources to economically handle more simultaneous users and agent processes.

Figure 13: Overview diagram of the ICMS concept



Source: UBS, company data

GPU Direct Storage (GDS) and throughput improvements from compression technologies

The biggest challenge in operations that offload the KV cache to external SSDs is the latency involved in reloading data to the GPU when resuming an interrupted session – namely 'time to first token' (TTFT).

In conventional storage restoration processes, data is first read into CPU memory, after which the CPU manages DMA (direct memory access) and transfers the data to the GPU via PCIe. As a result, when large-scale concurrent access occurs, the CPU itself becomes a severe bottleneck. As a technology that resolves this structural flaw, adoption of GPU direct storage (GDS) is expanding rapidly; GDS completely bypasses the CPU, using RDMA to transfer data directly from network storage to GPU HBM.

In validation combining GDS and TurboQuant on Pure Storage's FlashBlade system, latency associated with KV cache restoration was improved by up to 10X compared with the conventional approach. In this configuration, the data volume itself is compressed to one-fifth, significantly reducing consumption of storage I/O bandwidth while enabling context delivery to begin with consistently ultra-low latency, regardless of GPU cluster size.

Next-generation offload architecture enabled by CXL and NVIDIA CMX

In addition to innovation in NAND storage, an intermediate memory expansion approach using the CXL (Compute Express Link) interface is also being commercialised as a standard specification for inference infrastructure.

The industry's first CXL-based KV cache server, announced by Penguin Solutions, provides GPUs with up to 11TB of memory expansion capacity at far lower latency than conventional NVMe-based approaches. In environments deploying this CXL system equipped with Astera Labs controllers, GPU idle time was reduced, utilisation improved by 75%, and overall inference throughput doubled, according to reports.

For even larger-scale deployment, NVIDIA has begun offering the new NVIDIA CMX (Context Memory Storage) platform as a rack-level shared context layer. CMX is built on the next-generation STX architecture integrating the NVIDIA BlueField-4 DPU and Spectrum-X Ethernet network, and can raise inference throughput by up to 5X compared with general storage configurations.

Unprecedented NAND demand created by KV cache offload

With AI inference systems shifting to hierarchical memory architectures, the bottleneck in the inference process has completely shifted from compute capability to storage performance. In general, the storage layer is the slowest domain in server architecture and is currently the biggest bottleneck limiting inference throughput.

As a result, AI inference systems are becoming structurally more dependent on high-performance NAND storage solutions, and they are creating the long-term growth fundamentals of the NAND market.

Rapid shift from HDD to QLC eSSD

To enable high-speed offload of the massive KV cache required by AI inference systems, data centres are shifting offload destinations from nearline HDDs to ultra-high-capacity QLC (quad-level cell) enterprise SSDs. Demand growth in this area has been remarkable, with the volume zone doubling in capacity in one year from 61TB in 2024 to 122TB in 2025.

To meet this enormous storage demand from AI data centres, Kioxia plans to launch a data centre solution with 245TB effective capacity (256TB raw capacity) using 9th-generation 321-layer QLC NAND. SK Hynix is also advancing development of an ultra-high-capacity 244TB product using 321-layer 4D NAND technology. Samsung, too, is bringing forward its mass-production schedule for 64TB and 128TB QLC SSDs to capture demand for high-density inference storage. Solidigm, which has led the QLC market as an early mover, has already shipped 122TB and 256TB drives on a scale of tens of exabytes, riding the wave of higher capacities on a scale far exceeding that of peers.

Explosive consumption of physical wafers by pSLC

RAG and agentic search processes involve frequent access to large-scale vector databases. As a result, extremely high random access performance (IOPS) is required, which necessitates operating NAND in high-speed pSLC (pseudo-SLC) mode. However, this method, which operates cells capable of storing 3-bit or 4-bit data as 1-bit cells, entails the severe penalty of sacrificing about two-thirds of effective storage capacity.

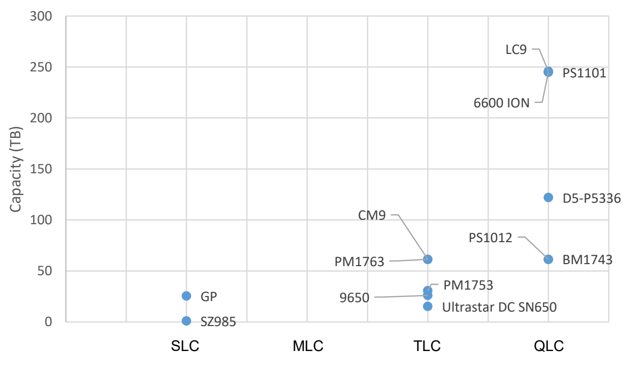
As a result, achieving the same effective capacity as when using standard SSD requires 3X–4X more wafer production. That is further exacerbating both supply tightness and the sharp expansion in demand in the NAND flash market.

Figure 14: SSD specs by manufacturer

	Model	Cell type	Capacity (TB)	Layers
Samsung				
	SZ985	SLC	1	64
	BM1743	QLC	61	176
	PM1753	TLC	31	286
	PM1763	TLC	61	286 (V9)/400 (V10)
SK Hynix				
	PS1012	QLC	61	192
	PS1101	QLC	245	321
	AI-N P	SLC		
Micron				
	9650	TLC	26	276
	6600 ION	QLC	245	276
Solidigm				
	D5-P5336	QLC	122	192
Western Digital				
	Ultrastar DC SN650	TLC	15	112
Kioxia				
	CM9	TLC	61	218
	LC9	QLC	246	218
	GP	SLC	26	96

Source: UBS estimates based on company data

Figure 15: NAND: cell level vs capacity



Source: UBS estimates based on company data

TurboQuant does not reduce KV cache-related NAND demand

KV cache compression technology has advanced in recent years. In the case of Google's TurboQuant, the footprint per token can be compressed from 16-bit to 3-bit with no loss in accuracy. As a result, KV cache size shrinks, for example, from 125GB to around 23GB.

Meanwhile, offloading moves data from HBM to system memory or SSD once KV cache size is greater than available HBM. That is, whether offload technology is used depends on whether the size of the compressed KV cache exceeds available HBM capacity. If it fits, compression alone is sufficient. If it does not, offload is required.

As noted earlier, context length for major LLMs is more than doubling annually. Because KV cache size is proportional, it is growing at the same rate. In contrast, it takes around two years for per-GPU-module HBM capacity to double.

Even with compression technologies such as those used in TurboQuant, this widening gap cannot be bridged, meaning compression technology is not eliminating the need for offload. Once growth in context length pushes compressed KV cache beyond HBM capacity, offload becomes necessary again. In fact, companies are beginning to use KV cache compression technology in combination with offload to extend the context length models can handle.

KV cache offloading changes NAND's role

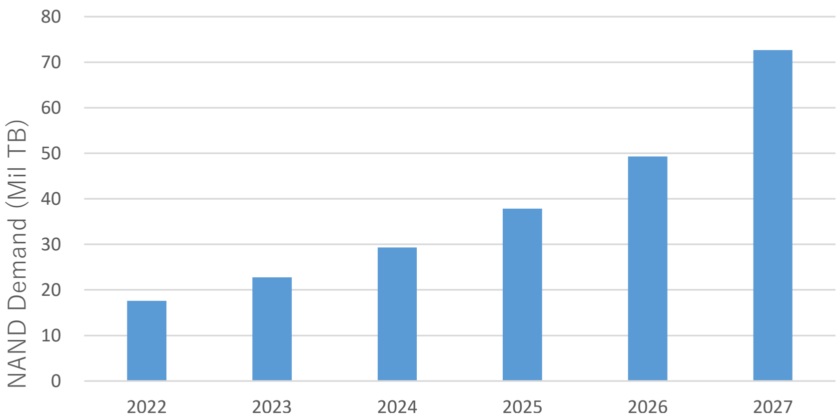
In this way, AI inference systems are shifting toward a hierarchical memory architecture. Specifically, compression is applied within HBM as the first tier, and excess capacity is offloaded to NAND as a second tier. As a result, KV cache offloading is being repositioned from niche architectural optimisation to an essential requirement for supporting the ongoing evolution of AI inference, where context length continues to expand.

Consequently, NAND flash in AI inference is evolving beyond its traditional storage use, from a passive remote 'warehouse' to an active online 'material supply device' tightly coupled with GPU operation. As the storage layer near computation begins to participate in every link of data processing alongside GPUs, NAND flash demand will no longer be determined solely by standalone storage demand. Instead, like HBM, it will become linearly correlated with GPU deployment, because each GPU requires dedicated high-performance NAND to drive and sustain inference workflows.

This structural change represents significant upside potential for NAND demand growth. NAND is shifting from a peripheral component for AI accelerators to a mission-critical enabler.

According to NVIDIA estimates, large-scale multi-agent inference systems require as much as 16TB of KV cache capacity per GPU module. Even if this falls to one-fifth with TurboQuant, we expect NAND bit demand to increase sharply, as shown in Figure 16.

Figure 16: NAND demand driven by KV cache (UBSe)



Source: UBS estimates

Upside risk to NAND demand: HBF (high bandwidth flash)

One factor that could further boost NAND demand is high bandwidth flash (HBF), which is rapidly attracting attention as a next-generation technology to complement HBM. HBF is a new memory tier positioned between ultra-high-speed HBM and high-capacity SSDs, and is designed to simultaneously secure capacity expansion and power efficiency in AI inference workloads.

While conventional HBM achieves ultra-high speed bandwidth by vertically stacking DRAM, the key feature of HBF is that it vertically stacks NAND flash to form high-capacity long-term memory.

SK Hynix has announced 'H3', a new hybrid architecture integrating HBM and HBF. Under this H3 architecture, not only HBM but also HBF is placed in parallel immediately next to the GPU, enabling data processing in close proximity to the processor. As a result, by offloading the KV cache, which retains vast amounts of context, to the HBF tier, GPUs and HBM can focus on their original high-speed computing tasks, dramatically improving the power efficiency and throughput of the overall inference system.

High capacity and wide bandwidth are supporting AI inference

In theoretical performance terms, while the bandwidth of a standard NVMe PCIe 4.0 SSD is capped at about 7,000MB/s, HBF is estimated to be capable of delivering a staggering data transfer speed of more than 1,638GB/s. In terms of capacity, while next-generation HBM4 is limited to 64GB per module, HBF can provide a substantially greater capacity of 512GB per module.

In fact, HBF currently under development by SanDisk is reportedly capable of boosting capacity by 8X while maintaining cost and bandwidth levels comparable to those of HBM by stacking 16 layers of NAND.

With the rise of multi-agent inference systems, the memory bandwidth and capacity required to maintain both processing speed and accuracy are likely to continue increasing. As a result, many in the industry see HBF as a core foundational technology in future AI inference infrastructure.

Hyperscalers may adopt in 2028

Seeing the very large potential of the HBF market, leading memory companies are competing to develop HBF with the aim of achieving early standardisation and establishing mass production technologies.

In February 2026, SK Hynix and SanDisk launched the HBF Spec Standardization Consortium in the US and began joint work toward global standardisation of HBF technology under the Open Compute Project (OCP). SanDisk has moved quickly to build an HBF supply chain, and aims to launch a pilot line in Japan as a production base by H2

2026 and to commercialise the technology during 2027. SK Hynix likewise views HBF as a technology extension from HBM, and the company is also targeting 2027 for the start of mass production. Competitor Samsung Electronics has been conducting HBF-related research behind the scenes since the early 2020s and is strengthening its own portfolio through acquisition of related patents.

Based on these developments, we think HBF engineering samples are likely to appear before the end of 2027, and that actual adoption by major processor vendors such as Google, NVIDIA, and AMD could come as early as 2028.

PIVOTAL QUESTIONS

Q: How long will NAND prices continue to rise?

UBSVIEW

While the NAND market is in a solid upswing, capacity expansion is lagging demand growth, and we believe supply shortages will continue through 2027. We expect the pace of price increases to peak around Q3 2027 in qoq terms.

EVIDENCE

Comments from major listed NAND and HDD companies consistently support the view that demand is strong and current supply tightness is severe. Meanwhile, investment in NAND output expansion continues to be held back by factory space constraints, growing equipment lead times, tight availability of engineering staff, and priority investment in HBM. Industry inventories remain at low levels, which is leading to higher contract prices and longer contract terms. We therefore think supply shortages are likely to continue at least through 2026–27.

WHAT´S PRICED IN?

The market appears to be assuming a traditional silicon cycle scenario, with the recent rise in NAND prices causing NAND demand to weaken, resulting in oversupply. However, market observers appear to be overlooking the fact that current NAND demand is being supported by core demand from AI data centres, where price elasticity is extremely low, and that investment in capacity expansion is lagging.

Strong demand and severe supply tightness

We have obtained the following comments on NAND market trends from major HDD and NAND manufacturers. All of them point to strong NAND demand and extremely tight supply.

1. Hard disc drive manufacturers

Western Digital (WDC, US)

- Inference generates huge volumes of new, unstructured data. The scale is such that storing it on SSDs is not economically viable, and cloud operators are directing inference-related bulk data to HDDs. This is creating structural demand.
- 2026 is nearly sold out. We have firm orders from our seven biggest customers through the end of 2026. In addition, we have strong commercial agreements with three of the top five, with coverage through 2027 for two of them and through 2028 for one.
- AI inference expands the role of HDDs beyond training to the entire AI value chain.

Seagate Technology (STX, US)

- Nearline production capacity (87% of HDD sales) is fully allocated through 2026. In the coming months, we will begin taking orders for H1 2027, and discussions related to 2028 demand are progressing.
- Inference-driven data growth will continue to support strong demand for high-capacity enterprise HDDs. Growth is coming not from unit volume increases, but from migration to higher-capacity drives.
- The top priority for cloud customers is securing supply, and that supports price discipline.

Toshiba (JP)

- OP in the HDD business reflects firm trends, backed by expanding data centre demand driven by AI inference infrastructure.'

- The S300 AI HDD is a dedicated product designed for AI video analytics and edge inference, and it is optimised for mixed read/write workloads for real-time AI processing.

2. NAND flash manufacturers

SanDisk (SNDK, US)

- As AI workloads expand, enterprise SSD demand is accelerating across the ecosystem. Inference in particular is meaningfully increasing NAND content per deployment.
- Data centres are expected to become the largest NAND market in 2026, supported by the expansion of AI inference and rising storage strength per server.
- AI inference requires low latency, high throughput, and high endurance. This evolution is shifting competition from price to performance capability.
- We are developing high bandwidth flash (HBF) to address the capacity and bandwidth bottlenecks of conventional memory in large-scale AI inference. HBF delivers HBM-class bandwidth with NAND-level cost and density.
- Together with SK Hynix, we are leading the standardisation of HBF for AI inference and KV cache expansion, enabling broad adoption.

Micron Technology (MU, US)

- For NAND, AI inference is a bigger bit-growth driver than training. Inference and retrieval-augmented generation (RAG) architectures are driving a surge in data centre SSD demand.
- Inference equals IOPS. In AI inference environments, extreme random read performance and low tail latency are required to keep GPUs fully utilised.
- The Micron 9650 PCIe Gen6 SSD delivers up to 5.5mn random read IOPS and was designed to remove storage bottlenecks in AI inference.
- Industry supply is expected to remain significantly below demand even after 2026, driven by the buildout of AI inference.

Kioxia (285A, JP)

- Inference-related NAND demand is growing at a double-digit pace in data centre AI servers, edge AI devices, and AI PCs.
- In collaboration with NVIDIA, we are developing a super-high IOPS SSD targeting over 10mn IOPS, and a next-generation 100mn IOPS SSD for AI inference.
- The high-IOPS CD9P Series provides consistently low latency and high throughput for AI/HPC workloads, maximising GPU utilisation.
- For NAND/SSD dedicated to KV cache applications, we are working with NVIDIA on specification development and demand assessment. We are targeting mass production around 2027, and believe this can be addressed with TLC SSDs using 8th-generation BiCS FLASH™.
- By combining pre-trained models with proprietary data such as RAG, AI inference will bring explosive growth in server numbers and sustained expansion in SSD demand.
- As competitors have focused on HBM and reduced NAND investment, Kioxia has opportunities for price increases and share gains.'

Samsung Electronics (005930.KS, KR)

- AI inference and KV cache are driving a sharp expansion in enterprise SSD (ESSD) demand. ESSD is expected to account for approximately 37% of total NAND demand in 2026.
- We are mass-producing KV SSDs and high-performance PCIe Gen6 SSDs optimised for AI inference workloads, with a focus on high-IOPS TLC products.'

- Memory semantic SSD provides up to a 20X performance improvement for AI inference tasks requiring high IOPS with small chunks.
- As AI workloads shift from training to inference, demand for high-performance NAND and SSDs will be driven higher on a sustained basis.

SK Hynix (000660.KS, KR)

- As the AI market shifts from training to inference with distributed architecture, NAND and enterprise SSD demand will grow strongly.'
- Our AIN-P (AI-NAND performance) targets are 50mn IOPS in 2026 and 100mn IOPS in 2027 for ultra-low-latency AI inference.'
- Together with SanDisk, we are developing HBF to bridge the gap between HBM and SSDs. In inference scaling, HBF provides 10X the capacity of HBM at a lower cost.
- AI inference is pushing storage from the periphery to the compute core, triggering explosive growth in enterprise SSD demand.

Capacity expansion cannot keep up with demand

As the above discussion should make clear, AI server demand is a core growth engine for NAND, with robust growth in server unit shipments and increased per-server NAND use driving NAND demand higher.

However, monthly NAND wafer production capacity has been declining since a peak in 2022 (Figure 17). That means investment in NAND capacity expansion is being restrained by factory space constraints, longer equipment lead times, tight availability of engineering staffing, and – above all – priority investment in HBM.

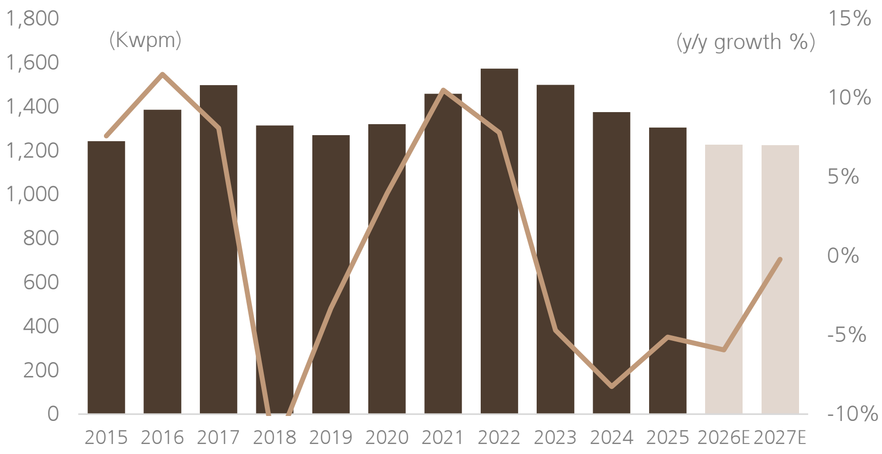
Even though wafer production capacity is trending down, NAND bit supply continues to increase through technological innovation, as noted above. Even so, bit supply has never exceeded demand, and we do not expect the gap to be closed before 2027 (Figure 18).

This is not the pattern one would expect in a conventional silicon cycle. In fact, consumer electronics devices such as smartphones, personal computers, and tablets are currently under significant pressure from rising NAND prices. Replacement demand will likely be suppressed going forward, and our view is that shipment growth is likely to turn negative from 2026.

However, we think the consumer segment now accounts for only around one-third of total NAND demand and that the share will decline further over time (Figures 19-20). As a result, total NAND demand is likely to continue increasing, supported by NAND (SSD) for inference AI, where price elasticity is very low.

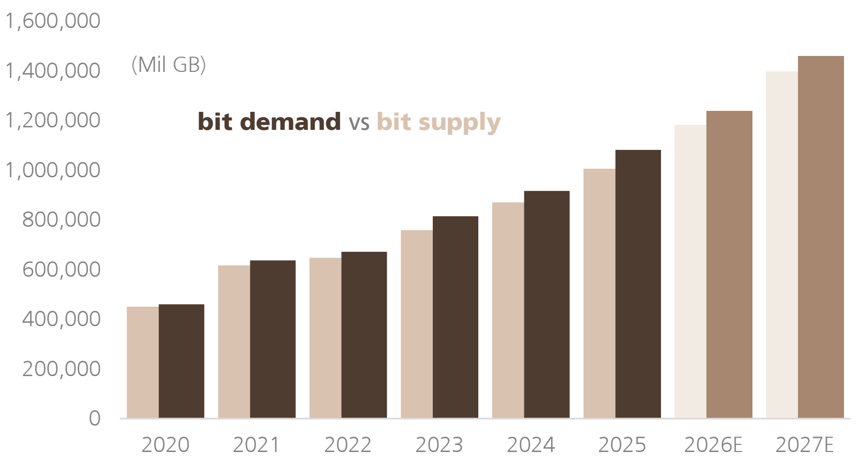
We believe the supply shortage will continue until 2027. Price increases are likely to continue on a qoq basis until peaking around Q3 2027 (Figure 21).

Figure 17: NAND: Total capacity and yoy growth



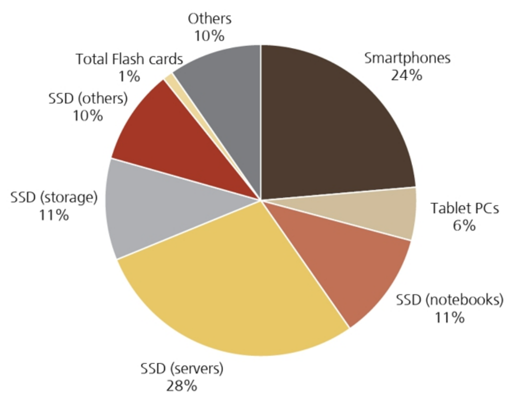
Source: Company data, UBS estimates

Figure 18: NAND: Bit demand vs bit supply



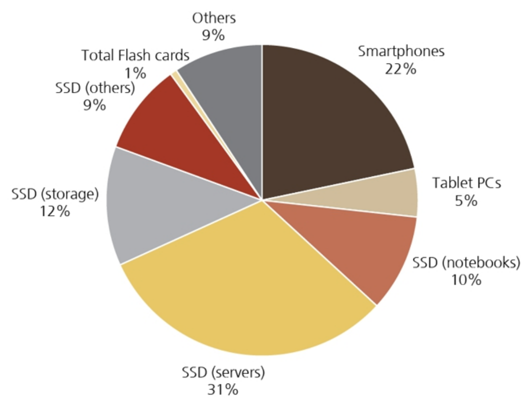
Source: Company data, UBS estimates

Figure 19: NAND bit demand by application (CY26E)



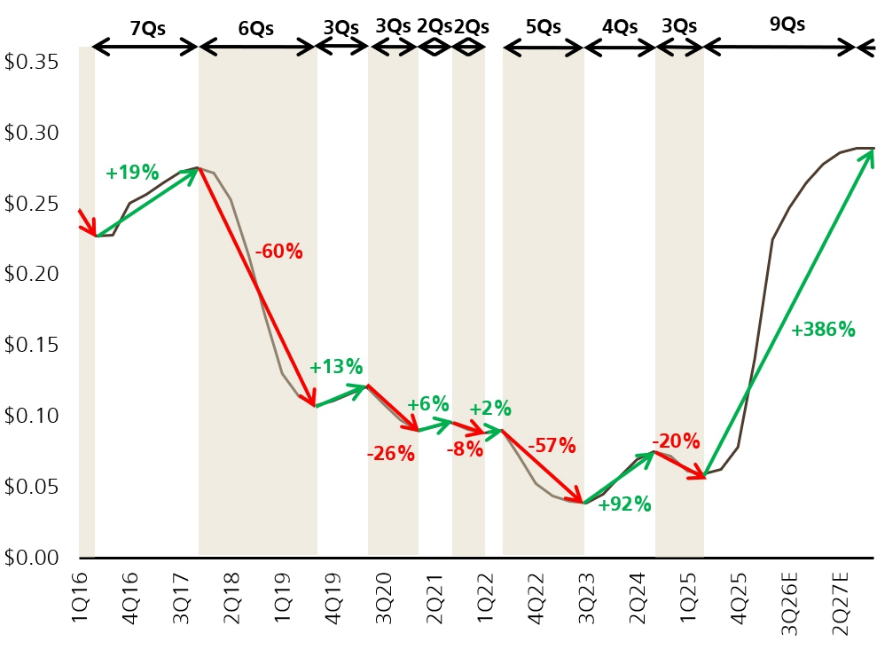
Source: Gartner, UBS estimates

Figure 20: NAND bit demand by application (CY27E)



Source: Gartner, UBS estimates

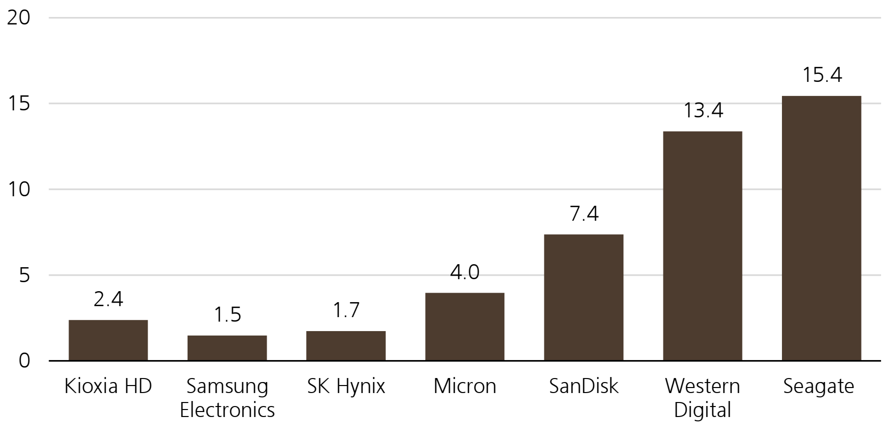
Figure 21: NAND price trend ($/1GB)



Source: Company data, UBS estimates

WHAT´S PRICED IN?

Memory Peers: EV/EBITDA (FY27)



Source: UBS estimates, LSEG

Based on our discussions with investors, views on the NAND industry are currently mostly constructive. It is widely recognised that, at the inflection point where AI computing shifts from learning to training, the importance of NAND as a device increases. That has supported bullish views on the NAND industry not only within the NAND industry itself but also in the HDD industry, which sits one layer below NAND in the memory hierarchy, and where demand has strengthened for similar reasons.

Because the current market is exceptionally strong, most investor interest is focused on how long the current surge in NAND prices will continue. However, before this market recovery, NAND manufacturers had fallen into substantial losses. In FY3/23, Kioxia had a relatively low loss ratio, and, by FY3/25, Kioxia alone was profitable while other companies were around the breakeven point, prompting active debate over why Kioxia's margins were higher.

A new area of debate recently, amid what appears likely to be an unprecedented price surge, is the sustainability of current prices. We are forecasting a 7.3-fold increase in quarterly NAND industry sales from Q1 2025 to Q3 2027. Even if the price surge continues for some time, a supply–demand equilibrium point should emerge eventually and the market will likely weaken at some stage. Bears, thinking 'the higher the peak, the deeper the valley', are concerned that an extraordinary price surge could be followed by an extraordinary price decline. Bulls, meanwhile, reason that any price decline may end up being comparatively mild because the current price surge is being driven by AI demand.

Few investors believe Kioxia is leading in the technology competition for the hyperscalers driving AI demand. In the case of AI demand, SK Hynix, which established a technological lead in HBM in DRAM, is preparing mass production of HBF using that technology, and SanDisk, Kioxia's joint venture partner, is also preparing for HBF mass production. As supply frameworks at these two companies are being established, few investors believe the Super IOPS advocated by Kioxia will become the industry standard. Super IOPS represents an extension of SSD technology designed to further enhance access speeds, whereas HBF constitutes an intermediate memory layer positioned between DRAM (specifically HBM) and SSD, serving a fundamentally different use case.

Kioxia's largest customer has long been Apple. Given Apple's significant influence in the industry, there are likely few situations in which Kioxia could gain the upper hand in negotiations. A significant number of investors are concerned about this concentration on a specific customer. If the company succeeds in its current efforts to capture AI demand, investors will likely view that as a potential positive for earnings and margins from the perspective of customer mix.

Earnings estimates

Kioxia's bit growth is expected to track market growth at approximately 20% going forward, with the company guiding to high-teens growth for CY26. Over the next two years, the transition from 112-layer BiCS5 to 218-layer BiCS8 is set to progress (with a partial ramp of 332-layer BiCS10 as well).The migration from BiCS5 to BiCS8 increases bit shipments by 2.6x; however, the required expansion in layer-stacking equipment roughly doubles, effectively halving wafer production capacity. As a result, assuming a constant equipment base, bit growth would be a function of 2.6x yield offset by 0.5x wafer capacity, implying a net increase of approx. 1.3x, or roughly 30% bit growth.

UBS forecasts Kioxia's bit growth at +18% YoY for FY3/27 and +25% for FY3/28. This assumes that wafer-equivalent production capacity at the Kioxia–SanDisk joint venture facilities declines from 460k/month at end-FY3/26 to 400k/month at end-FY3/27 and 370k/month at end-FY3/28. Based on Tokyo Electron disclosures (link), capex per 1k/month of capacity is estimated at $112mn for BiCS10, $102mn for BiCS8, and $80mn for BiCS5. Accordingly, UBS assumes incremental investments of $22mn for the transition from BiCS5 to BiCS8, and $32mn from BiCS8 to BiCS10, forming the basis of its capex estimates.

Relative to Visible Alpha consensus, UBS forecasts outperformance for FY3/28. This divergence is primarily driven by pricing and volume assumptions: consensus expects bit ASPs to decline by 3.2% YoY from FY3/27 to FY3/28, whereas UBS assumes flat pricing. Additionally, UBS projects stronger bit growth (+25% YoY vs. consensus at +21.5%). Many Japanese equipment vendors anticipate an acceleration in Kioxia's capex in 2H FY3/27 versus 1H, supporting UBS's view that bit growth will reaccelerate from +18% in FY3/27 to +25% in FY3/28.

The joint venture agreement with SanDisk was renewed on 30 January. The updated terms underscore Kioxia's technological leadership and enhanced bargaining power vis-à-vis SanDisk. Key provisions include: (1) a five-year extension of the JV agreement from 31 December 2029 to 31 December 2034; and (2) total consideration of $1.165bn (¥178.2bn), payable as $175mn on 1 April 2026, and the remaining $200–300mn annually in five installments each December from 2026 through 2029. While foundational technology development is conducted jointly, Kioxia has historically taken the lead in mass-production technologies. The revised terms suggest that the company is now able to secure compensation commensurate with its technological contributions, which is a positive development. As a reminder, the manufacturing JV structure with SanDisk results in approximately ¥200bn of annual shipments being recorded in both revenue and cost of goods sold for SanDisk-bound output, yielding zero profit contribution at the operating level.

On shareholder returns, Kioxia has historically struggled to generate cash since its days under Toshiba, leaving limited capacity for capital returns. However, the recent unprecedented upswing in NAND pricing has driven significant balance sheet improvement, prompting increasing debate in the equity market regarding potential distributions. At the FY3/26 earnings release, management indicated an initial focus on establishing a stable dividend policy. Similar discussions are also emerging among peers such as Samsung Electronics and SK Hynix. Given the commodity nature of the NAND industry, UBS views a combination of stable dividends and opportunistic share buybacks as the most pragmatic approach.

UBS assumes a 30% payout ratio, in line with the typical 30–35% range for Japanese corporates. In contrast, the Visible Alpha consensus reflects a 13% payout ratio; however, this appears to be skewed by a significant portion of zero-dividend assumptions based on the company's historical lack of distributions.

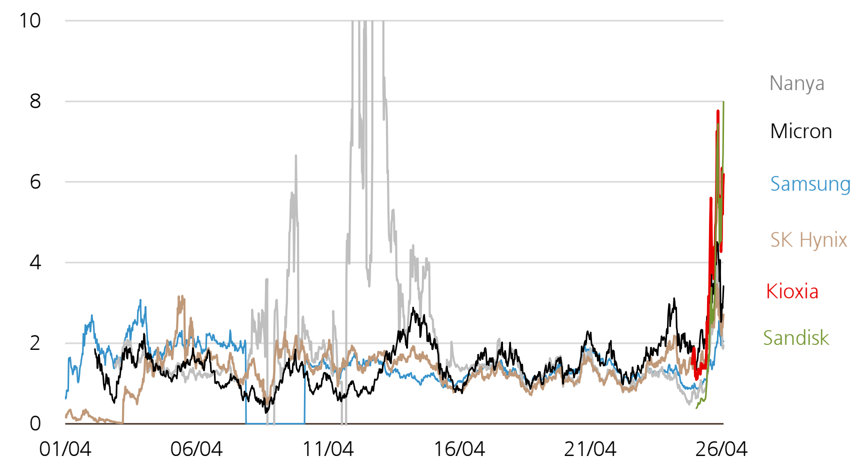
Will the multiple diverge from its historical range?

The price target in this instance is derived based on a PBR framework, using the relationship PBR=ROE / CoE. To capture a normalised level of long-term ROE, we exclude the near-term FY3/27 and instead apply the average ROE of 41% over FY3/28–31, together with a cost of equity of 8.6%, implying a PBR of 4.7x. This corresponds to approx. 4.0x on an EV/EBITDA basis, which is consistent with the company's historical forward EV/EBITDA range of 3–5x since listing (Figure 24). This valuation range appears to reflect the structural characteristics of the NAND business, which is highly capex-intensive relative to revenue and has historically generated minimal free cash flow. In fact, this is comparable to industries with similar structural economics, such as air transportation, where the median forward EV/EBITDA multiple is also around 4x (Figure 25).

Current EV/EBITDA remains within its historical range, suggesting the equity markets may still view the memory industry as one that does not generate FCF. The investor consensus behind the negative view of the memory industry is that memory is a commodity product with large supply and demand fluctuations and a rapid pace of technological innovation, meaning that technological competition leads to investment competition and that tends to result in oversupply, while the supply–demand outlook is viewed as extremely short, at 3–6 months.

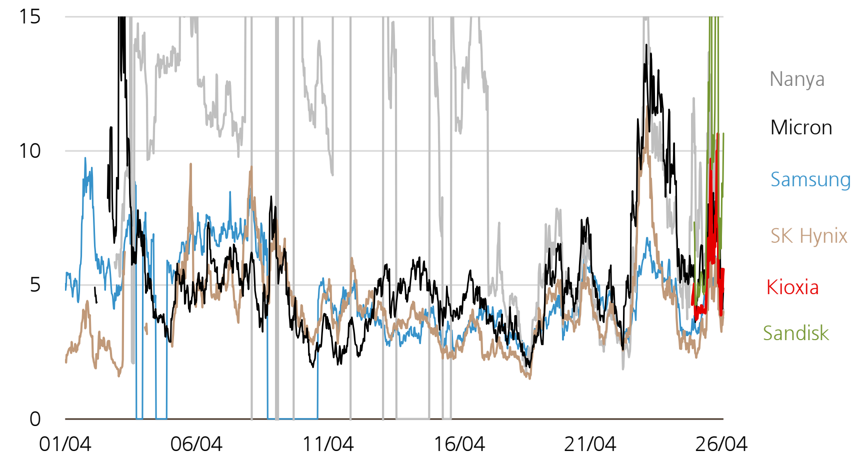
However, as we have argued, NAND is rapidly shifting from being a storage component for smartphones and SSDs, where price elasticity is high, to a core component for AI inference, where price elasticity is low. In other words, as the resilience of operating cash flow increases, the business is changing into one that does generate free cash flow. It is our view that the shift is not yet fully reflected in the current share price.

Figure 23: P/BV multiples of memory companies



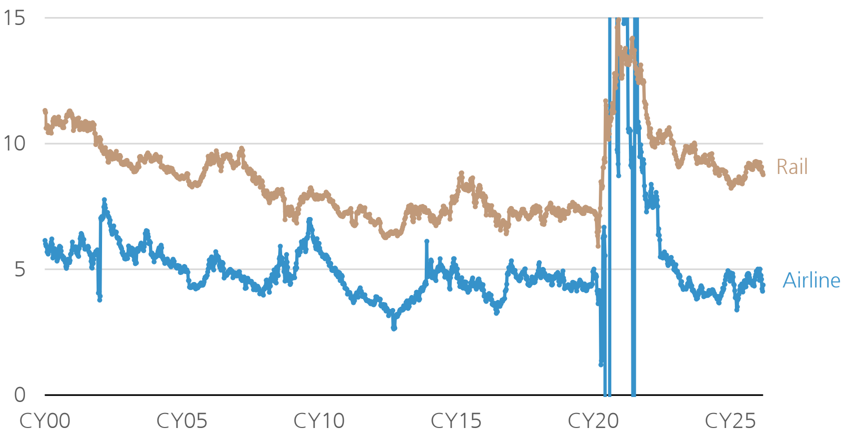
Source: UBS, LSEG Eikon

Figure 24: EV/EBITDA multiples of memory companies



Source: UBS, LSEG Eikon

Figure 25: Average EV/EBITDA comparison: Rail vs Airline industries

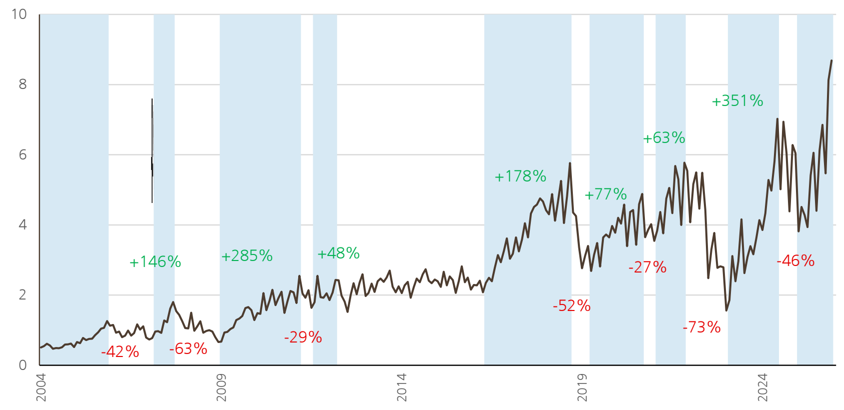


Source: UBS, LSEG Eikon

If the industry does become one that can generate stable FCF, what multiple would be appropriate? One useful reference would be multiples in industries that already generate high FCF while maintaining high levels of capital expenditure – for example, social infrastructure sectors including telecommunications, railways, and electric power. These sectors have been trading at EV/EBITDA levels of around 6X–7X.

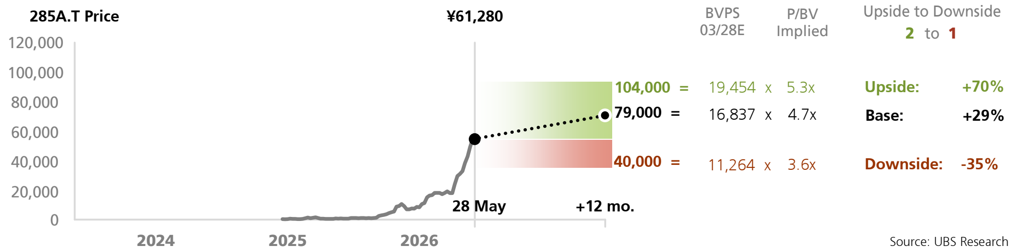
From peak to trough, monthly sales in the NAND industry have declined at an average rate of 47% over the past seven down-phases in the cycle (Figure 26), suggesting sales generally fall by about half. Applying this to our current earnings forecasts, FY3/28 peak sales of ¥8.7trn and OP of ¥6.4trn, would, assuming a 47% decline, fall to sales of ¥4.6trn and OP of ¥2.3trn at bottom. Applying historical sales fluctuation ranges both to future up and down phases of the cycle, we estimate that medium-term stable OP is likely somewhere in the ¥4trn–¥5trn range. Applying the above EV/EBITDA of 6X–10X implies a market capitalisation of ¥33trn, close to that using our current price target.

Figure 26: NAND indsutry: Monthly revenue ($bn) and peak-to-bottom change ratio in revenue



Source: UBS, SIA

UPSIDE/DOWNSIDE SPECTRUM



Value drivers	OP (FY3/28E)	NAND price $/GB (FY3/28E)	Cost advantage per bit (FY3/28E)	EV/EBITDA (FY3/28E)	ROE FY3/28-FY3/31E average	PBR (FY3/28E)
¥104,000 upside	¥ 11,062 bn	$0.35	20%	X 4	43%	X 5.3
¥79,000 base	¥ 8,991 bn	$0.30	10%	X 4	41%	X 4.7
¥40,000 downside	¥ 4,581 bn	$0.18	-5%	X 3	31%	X 3.6

Source: UBS estimates

UPSIDE (¥104,000): This scenario assumes that supply shortages deepen beyond both UBS forecasts and the current consensus range, driving a further sustained increase in prices. UBS updates its memory pricing outlook on a monthly basis in its Memory Monthly report, and has continued to revise forecasts upward almost every month. In the latest report, for instance, the NAND price assumption for 2Q26 has again been raised from the prior +40% (previously unspecified) to +60%. This price strength is being driven primarily by growing AI inference demand. The current expansion in inference workloads is largely supported by revenue growth in AI coding agents, which are increasingly replacing traditional software development processes. Looking ahead, if additional industries—such as the legal sector, diagnostic healthcare, and drug discovery—begin to successfully monetize AI adoption, there could be a further acceleration in inference-driven demand. Under this upside scenario, we apply the same valuation multiple as in our base case, deriving a value of ¥104,000 based on an implied PBR multiple of 5.3x.

BASE (¥79,000): NAND pricing is expected to continue rising on a quarter-on-quarter basis through 3Q27. On a yoy basis, we forecast bit price growth of +214% from FY3/26 to FY3/27, and +0% from FY3/27 to FY3/28. Capex is projected to remain elevated around at ¥480bn in FY3/27, while bit growth is expected at +19% in FY3/27 and +24% in FY3/28, moderating to +12% in FY3/29 as supply-demand conditions ease. For valuation, we apply a PBR of 4.7x based on CoE of 8.6% and medium-term ROE of 41%, deriving a price target of ¥79,000.

DOWNSIDE (¥40,000): This scenario assumes that the current surge in memory pricing has peaked and the industry transitions into a down cycle. However, our downside scenario envisions a more moderate correction than in past cycles: we assume that the peak-to-trough revenue decline is limited to around 50%, with trough levels still remaining elevated relative to historical norms. We believe that NAND demand growth driven by AI inference is structural in nature, implying that the industry may no longer face the same degree of supply-demand volatility that has historically characterized the sector. Accordingly, a return to the prolonged and severe imbalances of prior cycles appears less likely. An extreme downside scenario—where breakthroughs in AI inference architectures or efficiency gains materially reduce demand, effectively reverting the industry to one that struggles to generate free cash flow—is not incorporated into the current UBS base case.

Figure 27: Earnings summary (annual)

Kioxia	FY25	FY26		vs		FY27		vs	
(¥bn)	Actual	Consensus	UBS	Consensus	Y/Y	Consensus	UBS	Consensus	Y/Y
Sales	2,338	8,488	9,121	+633.1	+6,783.4	10,019	11,301	+1,282.5	+2,180.0
bit shipments (mn GB)	156,875	209,811	186,960	-22,851	+30,085	254,507	232,449	-22,058	45,490
y/y	+18%	+34%	+19%	-15pt	+1pt	+21%	+24%	+3pt	+5pt
ASP (¥/GB)	*¥14.90*	*¥40.45*	*¥48.79*	*+¥8.34*	*+3.4*	*¥39.36*	*¥48.62*	*+¥9.26*	*-¥0.17*
y/y	+16%	+171%	+227%	+56pt	+21pt	- 3%	- 0%	+2pt	-228pt
OP (Non-GAAP)	876	6,423	7,111	+687.8	+6,234.8	7,473	8,991	+1,517.6	+1,880.0
OPM%	37%	76%	78%	+2pt	+40pt	75%	80%	+5pt	+2pt
Dividends	0	557	1,475	+918.0	+1,474.8	685	1,866	+1,180.7	+391.3
Dividend payout ratio%	0%	13%	30%	+17pt	+30pt	13%	30%	+17pt	+0pt
Capex	284	465	466	+0.7	+182.0	591	496	-95.2	+30.0

Source: Company data, company estimates, Visible Alpha, UBS estimates

Figure 28: Earnings estimates

	3/22	3/23	3/24	3/25	3/26							3/27E							CoE (1Q)	3/28E	3/29E
(¥bn)					1Q	2Q	3Q	4Q	1H	2H		1QE	2QE	3QE	4QE	1HE	2HE				
Net sales	1,526.5	1,282.1	1,076.6	1,706.5	342.8	448.3	543.6	1,002.9	791.1	1,546.5	2,337.6	1,813.3	2,135.3	2,387.2	2,784.2	3,948.5	5,171.5	9,121.0	1,750.0	11,301.0	10,181.0
Y/Y		-16%	-16%	59%	-20%	-7%	21%	189%	-13%	94%	37%	429%	376%	339%	178%	399%	234%	290%	411%	24%	-10%
COGS	1,139.8	1,240.2	1,205.9	1,137.0	271.6	326.2	367.0	359.9	597.8	726.9	1,324.7	429.5	449.5	444.5	450.5	879.0	895.0	1,774.0		2,050.0	2,220.0
/ sales	75%	97%	112%	67%	79%	73%	68%	36%	76%	47%	57%	24%	21%	19%	16%	22%	17%	19%		18%	22%
SG&A	170.4	140.9	123.4	117.7	26.3	36.2	33.9	46.2	62.5	80.0	142.5	50.0	60.0	60.0	70.0	110.0	130.0	240.0		260.0	260.0
/ sales	11%	11%	11%	7%	8%	8%	6%	5%	8%	5%	6%	3%	3%	3%	3%	3%	3%	3%		2%	3%
Operating profit	216.2	-99.0	-252.7	451.7	44.9	85.9	142.8	596.8	130.8	739.5	870.4	1,333.8	1,625.8	1,882.7	2,263.7	2,959.5	4,146.5	7,107.0	1,298.0	8,991.0	7,701.0
OPM	14%	-8%	-23%	26%	13%	19%	26%	60%	17%	48%	37%	74%	76%	79%	81%	75%	80%	78%	74%	80%	76%
Non-operating			-90.6	-81.1	-17.6	-29.2	-21.0	-18.5	-46.8	-39.5	-86.3	-0.9	-0.8	-0.9	-0.8	-1.6	-1.6	-3.2		-2.5	-1.8
Finance income			1.8	3.7	2.4	-0.4	1.6	5.9	2.0	7.5	9.5	1.0	1.0	1.0	1.0	2.0	2.0	4.0		4.0	4.0
Finance cost			92.7	85.3	19.9	29.1	22.8	25.0	49.0	47.7	96.7	2.1	2.1	2.1	2.1	4.1	4.1	8.2		7.5	6.8
Other			0.3	0.5	-0.1	0.3	0.1	0.6	0.2	0.8	0.9	0.2	0.3	0.2	0.3	0.5	0.5	1.0		1.0	1.0
Pre-Tax profit	154.4	-186.4	-343.3	370.7	27.3	56.7	121.7	578.3	84.0	700.1	784.1	1,332.9	1,625.0	1,881.9	2,263.0	2,957.9	4,144.9	7,103.8		8,988.5	7,699.2
Tax	48.4	-48.3	-99.6	98.3	9.0	16.0	33.9	170.6	25.1	204.5	229.6	410.5	500.4	579.6	697.2	910.9	1,276.8	2,187.7		2,768.1	2,371.0
Tax Rate	31%	26%	29%	27%	33%	28%	28%	29%	30%	29%	29%	31%	31%	31%	31%	31%	31%	31%		31%	31%
Net profit	105.9	-138.1	-243.7	272.3	18.3	40.7	87.8	407.7	58.9	495.5	554.5	922.4	1,124.6	1,302.3	1,565.8	2,047.0	2,868.1	4,916.1	869.0	6,220.3	5,328.1
Operating CF	549.1	339.1	195.1	476.4	61.1	114.0	147.0	294.4	175.2	441.4	616.5							4,445.1		6,273.9	5,945.6
Investing CF	-400.3	-498.6	-274.9	-173.0	-34.1	-72.8	-61.3	-53.3	-106.9	-114.6	-221.5							-465.7		-495.7	-385.7
Financial CF	-93.3	-50.8	3.2	-322.7	-17.3	15.3	-41.6	-52.4	-2.0	-94.1	-96.1							-2,551.0		-1,895.1	-1,627.9
Shares outstanding (mn)	51.7	51.7	51.8	53.9	53.9	54.0	54.4	54.6	54.0	54.6	54.6							54.6		54.6	54.6
EPS (¥)	204.7	-266.9	-471.0	504.9	33.9	75.3	161.3	746.6	109.2	907.4	1,015.4							9,002.5		11,390.8	9,757.0
BPS (¥)	1,534.0	1,271.6	868.9	1,367.5	1,409.1	1,517.8	1,797.2	2,561.7	1,517.8	2,561.7	2,561.7							8,863.5		16,837.0	23,666.9
Capex	400.9	510.4	305.1	225.6	53.6	91.5	70.9	67.7	145.1	138.6	283.7							480.0		510.0	400.0
Depreciation	445.4	418.2	346.1	312.3	80.0	78.9	77.6	76.4	158.8	154.0	312.8							350.0		390.0	390.0
R&D	140.3	1,282.1	1,076.6	1,706.5	342.8	448.3	543.6	1,002.9	791.1	1,546.5	2,337.6							9,121.0		11,301.0	10,181.0
Shipment	11,574.4	10,533.3	10,639.6	13,290.2	3,092.2	4,205.4	4,415.7	3,974.1	7,297.7	8,389.9	15,687.5							18,696.0		23,244.9	25,953.1
q/q					0%	36%	5%	-10%													
y/y	33%	-9%	1%	25%	-4%	19%	29%	29%	8%	29%	18%							19%		24%	12%
ASP / GB (¥)	¥13.19	¥12.17	¥10.12	¥12.84	¥11.09	¥10.66	¥12.31	¥25.23	¥10.84	¥18.43	¥14.90							¥46.81		¥46.74	¥37.39
q/q					-1%	-4%	15%	105%													
y/y	-3%	-8%	-17%	27%	-17%	-21%	-6%	125%	-19%	51%	16%							214%		0%	-20%

Source: company data, company estimates, UBS estimates

Figure 29: NAND earnings estimates

(JPY bn)	FY18	FY19	FY20	FY21	FY24	1Q	2Q	3Q	4Q	FY25	1QE	2QE	3QE	4QE	FY26E	CoE (1Q)	FY27E	FY28E
Sales	**1,148**	**987**	**1,178**	**1,526**	**1,706.5**	**342.8**	**448.3**	**543.6**	**1,002.9**	**2,337.6**	**1,813.3**	**2,135.3**	**2,387.2**	**2,784.2**	**9,121.0**	**1,750.0**	**11,301.0**	**10,181.0**
Bit Shipments (mn GB)	49,401	66,570	87,063	115,744	132,902	30,922	42,054	44,157	39,741	156,875	41,728	45,067	47,320	52,844	186,960		232,449	259,531
y/y	1380%	35%	31%	33%	25%	-4%	19%	29%	29%	18%	35%	46%	13%	20%	19%		24%	12%
q/q						0%	36%	5%	-10%		5%	8%	5%	12%				
ASP (¥/GB)	¥23.2	¥14.8	¥13.5	¥13.2	¥12.8	¥11.1	¥10.7	¥12.3	¥25.2	¥14.9	¥43.5	¥47.4	¥50.4	¥52.7	¥48.8		¥48.6	¥39.2
y/y					27%	-17%	-21%	-6%	125%	16%	292%	327%	373%	328%	227%		0%	-19%
q/q						-1%	-4%	15%	105%		192%	9%	6%	4%				
OP (Non-GAAP)	**329**	**▲ 60**	**116**	**313**	**453**	**45**	**87**	**145**	**599**	**876**	**1,335**	**1,627**	**1,884**	**2,265**	**7,111**	**1,300**	**8,991**	**7,701**
OPM%	29%	-6%	10%	21%	27%	13%	19%	27%	60%	37%	74%	76%	79%	81%	78%	74%	80%	76%
FCF	**39**	**▲ 194**	**178**	**152**	**253**	**9**	**23**	**76**	**227**	**335**					**3,979**		**5,778**	**5,560**
CapEx	428	357	260	401	226	54	91	71	68	284					466		496	386
Depreciation	319	412	426	445	312	80	79	78	76	313					350		390	390
JPY / USD	110.3	107.7	106.0	112.0	152.6	145.0	147.0	153.0	155.0	151.4					158.3		158.0	158.0
Capacity (K/m)	**564 K**	**550 K**	**550 K**	**551 K**	**358 K**	**400 K**	**480 K**	**480 K**	**460 K**	**455 K**					**433 K**		**390 K**	**350 K**
Shipment (K/m)	**338 K**	**330 K**	**330 K**	**330 K**	**208 K**	**190 K**	**245 K**	**293 K**	**293 K**	**255 K**					**254 K**		**232 K**	**207 K**
Inventory	227.7	215.1	256.5	304.2	352.9	371.9	361.6	353.5	412.6	412.6					486.0		561.6	608.2
Sales ($) / Wafer			2,808	3,436	4,491	4,148	4,150	4,042	7,361	5,040					18,947		25,719	25,941
Cost (¥K) / Wafer			236	272	424	448	433	395	40	414					546		680	813

Source: company data, company estimates, UBS estimates

Kioxia Holdings Corp (285A.T)

Income Statement (¥b)	03/24	03/25	03/26	03/27E	%ch	03/28E	%ch	03/29E	03/30E	03/31E
Revenues	**1,076.6**	**1,706.5**	**2,337.6**	**9,121.0**	*290.2*	**11,301.0**	*23.9*	**10,181.0**	**9,711.0**	**9,711.0**
Gross profit	(129.3)	569.4	1,012.9	7,347.0	*NM*	9,251.0	*25.9*	7,961.0	7,221.0	7,201.0
EBITDA (UBS)	**93.4**	**764.1**	**1,183.2**	**7,457.0**	*NM*	**9,381.0**	*25.8*	**8,091.0**	**7,381.0**	**7,381.0**
Depreciation & amortisation	(346.1)	(312.3)	(312.8)	(350.0)	*-11.9*	(390.0)	*-11.4*	(390.0)	(420.0)	(440.0)
EBIT (UBS)	**(252.7)**	**451.7**	**870.4**	**7,107.0**	*NM*	**8,991.0**	*26.5*	**7,701.0**	**6,961.0**	**6,941.0**
Associates & investment income	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Other non-operating income	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Net interest	(90.6)	(81.1)	(86.3)	(3.2)	*96.3*	(2.5)	*21.5*	(1.8)	(1.1)	(0.4)
Exceptionals (incl goodwill)	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Pre-tax profit	**(343.3)**	**370.7**	**784.1**	**7,103.8**	*NM*	**8,988.5**	*26.5*	**7,699.2**	**6,959.9**	**6,940.6**
Tax	99.6	(98.3)	(229.6)	(2,187.7)	*NM*	(2,768.1)	*-26.5*	(2,371.0)	(2,143.3)	(2,137.4)
Profit after tax	**(243.7)**	**272.3**	**554.5**	**4,916.1**	*NM*	**6,220.3**	*26.5*	**5,328.1**	**4,816.5**	**4,803.2**
Preference dividends	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Minorities	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Extraordinary items	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Net earnings (local GAAP)	**(243.7)**	**272.3**	**554.5**	**4,916.1**	*NM*	**6,220.3**	*26.5*	**5,328.1**	**4,816.5**	**4,803.2**
Net earnings (UBS)	**(243.7)**	**272.3**	**554.5**	**4,916.1**	*NM*	**6,220.3**	*26.5*	**5,328.1**	**4,816.5**	**4,803.2**
Tax rate (%)	0.0	26.5	29.3	30.8	*5.2*	30.8	*0.0*	30.8	30.8	30.8

Per Share (¥)	03/24	03/25	03/26	03/27E	%ch	03/28E	%ch	03/29E	03/30E	03/31E
EPS (UBS, diluted)	(452.1)	505.2	1,015.4	9,002.5	*NM*	11,390.8	*26.5*	9,757.0	8,820.1	8,795.7
EPS (local GAAP, diluted)	(452.1)	505.2	1,015.4	9,002.5	*NM*	11,390.8	*26.5*	9,757.0	8,820.1	8,795.7
EPS (UBS, basic)	(452.1)	505.2	1,015.4	9,002.5	*NM*	11,390.8	*26.5*	9,757.0	8,820.1	8,795.7
DPS (net) (¥)	0.0	0.0	0.0	2,700.7	-	3,417.2	*26.5*	2,927.1	2,646.0	2,638.7
Cash EPS (UBS, diluted) [1]	189.8	1,084.5	1,588.2	9,643.4	*NM*	12,104.9	*25.5*	10,471.1	9,589.2	9,601.4
Book value per share	834.1	1,368.2	2,561.7	8,863.5	*246.0*	16,837.0	*90.0*	23,666.9	29,840.9	35,997.9
Average shares (diluted)	539.1	539.1	546.1	546.1	*0.0*	546.1	*0.0*	546.1	546.1	546.1

Balance Sheet (¥b)	03/24	03/25	03/26	03/27E	%ch	03/28E	%ch	03/29E	03/30E	03/31E
Cash and equivalents	192.9	171.9	477.9	1,906.4	*298.9*	5,789.5	*203.7*	9,721.4	13,127.6	16,417.3
Other current assets	458.4	634.8	1,139.9	2,162.7	*89.7*	2,623.1	*21.3*	2,472.0	2,463.0	2,468.5
Total current assets	**651.4**	**806.7**	**1,617.8**	**4,069.1**	*151.5*	**8,412.6**	*106.7*	**12,193.5**	**15,590.7**	**18,885.8**
Net tangible fixed assets	1,328.5	1,297.2	1,233.3	1,363.3	*10.5*	1,483.3	*8.8*	1,493.3	1,573.3	1,633.3
Net intangible fixed assets	406.7	405.9	406.8	406.8	*0.0*	406.8	*0.0*	406.8	406.8	406.8
Investments / other assets	478.4	409.8	432.1	432.1	*0.0*	432.1	*0.0*	432.1	432.1	432.1
Total assets	**2,864.9**	**2,919.7**	**3,690.1**	**6,271.3**	*70.0*	**10,734.8**	*71.2*	**14,525.7**	**18,002.9**	**21,358.0**
Trade payables & other ST liabilities	999.7	696.1	878.6	1,080.4	*23.0*	1,204.4	*11.5*	1,280.7	1,402.0	1,410.9
Short term debt	866.4	289.0	219.4	43.9	*-80.0*	43.9	*0.0*	43.9	43.9	43.9
Total current liabilities	**1,866.1**	**985.2**	**1,098.0**	**1,124.3**	*2.4*	**1,248.3**	*11.0*	**1,324.6**	**1,445.9**	**1,454.8**
Long term debt	427.8	710.5	1,033.8	147.5	*-85.7*	132.8	*-10.0*	117.6	102.0	85.9
Other long term liabilities	121.3	486.3	159.2	159.2	*0.0*	159.2	*0.0*	159.2	159.2	159.2
Preferred shares	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Total liabilities (incl pref shares)	**2,415.2**	**2,182.0**	**2,291.0**	**1,431.0**	*-37.5*	**1,540.2**	*7.6*	**1,601.4**	**1,707.0**	**1,699.9**
Common s/h equity	**449.6**	**737.6**	**1,398.9**	**4,840.2**	*246.0*	**9,194.5**	*90.0*	**12,924.1**	**16,295.7**	**19,658.0**
Minority interests	0.1	0.1	0.2	0.2	*0.0*	0.2	*0.0*	0.2	0.2	0.2
Total liabilities & equity	**2,864.9**	**2,919.7**	**3,690.1**	**6,271.3**	*70.0*	**10,734.8**	*71.2*	**14,525.7**	**18,002.9**	**21,358.0**

Cash Flow (¥b)	03/24	03/25	03/26	03/27E	%ch	03/28E	%ch	03/29E	03/30E	03/31E
Net income (before pref divs)	(243.7)	272.3	554.5	4,916.1	*NM*	6,220.3	*26.5*	5,328.1	4,816.5	4,803.2
Depreciation & amortisation	346.1	312.3	312.8	350.0	*11.9*	390.0	*11.4*	390.0	420.0	440.0
Net change in working capital	146.0	(183.8)	(400.3)	(821.0)	*-105.1*	(336.5)	*59.0*	227.5	130.2	3.5
Other operating	(56.6)	70.9	144.8	(5.3)	-	(4.9)	*8.8*	(4.4)	(3.9)	(3.5)
Operating cash flow	**191.8**	**471.7**	**611.8**	**4,439.8**	*NM*	**6,269.0**	*41.2*	**5,941.2**	**5,362.9**	**5,243.2**
Tangible capital expenditure	(324.2)	(291.6)	(295.4)	(480.0)	*-62.5*	(510.0)	*-6.3*	(400.0)	(500.0)	(500.0)
Intangible capital expenditure	(0.7)	(1.8)	(2.6)	0.0	-	0.0	-	0.0	0.0	0.0
Net (acquisitions) & disposals	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Other investing	30.2	52.6	62.2	0.0	-	0.0	-	0.0	0.0	0.0
Investing cash flow	**(294.6)**	**(240.8)**	**(235.8)**	**(480.0)**	*-103.5*	**(510.0)**	*-6.3*	**(400.0)**	**(500.0)**	**(500.0)**
Equity dividends paid	0.0	0.0	0.0	(1,474.8)	-	(1,866.1)	*-26.5*	(1,598.4)	(1,445.0)	(1,441.0)
Share issues / (buybacks)	0.0	30.4	11.6	0.0	-	0.0	-	0.0	0.0	0.0
Other financing	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Change in debt & pref shares	26.3	(280.6)	(88.6)	(1,056.4)	*NM*	(9.8)	*99.1*	(10.8)	(11.7)	(12.6)
Financing cash flow	**26.3**	**(250.2)**	**(77.0)**	**(2,531.3)**	*NM*	**(1,875.9)**	*25.9*	**(1,609.2)**	**(1,456.7)**	**(1,453.6)**
Cash flow inc/(dec) in cash	**(76.5)**	**(19.3)**	**298.9**	**1,428.5**	*377.8*	**3,883.1**	*171.8*	**3,932.0**	**3,406.2**	**3,289.6**
FX / non cash items	6.3	(1.8)	7.0	0.0	*-100.0*	0.0	-	0.0	0.0	0.0
Balance sheet inc/(dec) in cash	**(70.2)**	**(21.0)**	**306.0**	**1,428.5**	*366.8*	**3,883.1**	*171.8*	**3,932.0**	**3,406.2**	**3,289.6**

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1] Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

Kioxia Holdings Corp (285A.T)

Valuation (x)	03/24	03/25	03/26	03/27E	03/28E	03/29E	03/30E	03/31E
P/E (local GAAP, diluted)	-	4.3	8.0	6.8	5.4	6.3	6.9	7.0
P/E (UBS, diluted)	-	4.3	8.0	6.8	5.4	6.3	6.9	7.0
P/CEPS	-	2.0	5.1	6.4	5.1	5.9	6.4	6.4
Equity FCF (UBS) yield %	-	15.4	7.1	11.8	17.2	16.6	14.5	14.2
Dividend yield (net) %	-	0.0	0.0	4.4	5.6	4.8	4.3	4.3
P/BV	-	1.6	3.2	6.9	3.6	2.6	2.1	1.7
EV/revenues (core)	-	1.3	2.3	3.6	2.6	2.5	2.3	1.9
EV/EBITDA (UBS core)	-	2.8	4.5	4.4	3.2	3.2	3.0	2.6
EV/EBIT (core)	-	4.8	6.1	4.6	3.3	3.4	3.2	2.7
EV/OpFCF (core)	-	2.8	4.5	4.4	3.2	3.2	3.0	2.6
EV/op. invested capital	-	1.4	2.8	12.3	8.8	7.4	6.6	5.6

Enterprise value (¥b)	03/24	03/25	03/26	03/27E	03/28E	03/29E	03/30E	03/31E
Market cap.	-	1,159.7	4,424.6	33,464.2	33,464.2	33,464.2	33,464.2	33,464.2
Net debt (cash)	1,051.6	964.4	801.5	(469.8)	(3,663.9)	(7,586.3)	(11,270.8)	(14,634.6)
Buy out of minorities	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Pension provisions/other	49.1	47.5	44.7	42.9	42.9	42.9	42.9	42.9
Total enterprise value	**-**	**2,171.8**	**5,270.9**	**33,037.3**	**29,843.3**	**25,920.9**	**22,236.4**	**18,872.6**
Non core assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Core enterprise value	**-**	**2,171.8**	**5,270.9**	**33,037.3**	**29,843.3**	**25,920.9**	**22,236.4**	**18,872.6**

Growth (%)	03/24	03/25	03/26	03/27E	03/28E	03/29E	03/30E	03/31E
Revenue	(16.0)	58.5	37.0	NM	23.9	(9.9)	(4.6)	0.0
EBITDA (UBS)	(70.7)	NM	54.9	NM	25.8	(13.8)	(8.8)	0.0
EBIT (UBS)	(155.2)	-	92.7	NM	26.5	(14.3)	(9.6)	(0.3)
EPS (UBS, diluted)	(76.4)	-	101.0	NM	26.5	(14.3)	(9.6)	(0.3)
Net DPS	-	-	-	-	26.5	(14.3)	(9.6)	(0.3)

Margins & Profitability (%)	03/24	03/25	03/26	03/27E	03/28E	03/29E	03/30E	03/31E
Gross profit margin	NM	33.4	43.3	NM	NM	NM	74.4	74.2
EBITDA margin	8.7	44.8	50.6	NM	NM	NM	NM	NM
EBIT (UBS) margin	(23.5)	26.5	37.2	77.9	79.6	75.6	71.7	71.5
Net earnings (UBS) margin	NM	16.0	23.7	53.9	55.0	52.3	49.6	49.5
ROIC (EBIT)	NM	28.1	45.5	NM	NM	NM	NM	NM
ROIC post tax	NM	20.7	32.1	NM	NM	NM	NM	NM
ROE (UBS)	(44.0)	45.9	51.9	157.6	88.6	48.2	33.0	26.7

Capital structure & Coverage (x)	03/24	03/25	03/26	03/27E	03/28E	03/29E	03/30E	03/31E
Net debt / EBITDA	11.8	1.1	0.7	(0.2)	(0.6)	(1.2)	(1.8)	(2.2)
Net debt / total equity %	244.9	112.2	55.4	(35.4)	(61.0)	(74.0)	(79.7)	(82.9)
Net debt / (net debt + total equity) %	71.0	52.9	35.7	(54.9)	NM	NM	NM	NM
Net debt/EV %	-	44.4	15.2	(1.4)	(12.3)	(29.3)	(50.7)	(77.5)
Capex / depreciation %	93.7	93.4	94.4	137.1	130.8	102.6	119.0	113.6
Capex / revenue %	NM	17.1	12.6	5.3	4.5	3.9	5.1	5.1
EBIT / net interest	-	5.6	10.1	NM	NM	NM	NM	NM
Dividend cover (UBS)	-	-	-	3.3	3.3	3.3	3.3	3.3
Div. payout ratio (UBS) %	-	-	-	30.0	30.0	30.0	30.0	30.0

Revenues by division (¥b)	03/24	03/25	03/26	03/27E	03/28E	03/29E	03/30E	03/31E
SSD & Storage	516.4	991.1	1,362.6	6,383.6	8,497.4	7,814.1	7,635.5	7,940.6
Smart Devices	374.3	501.1	760.0	2,387.4	2,383.6	1,906.9	1,525.5	1,220.4
Others	185.9	214.3	215.0	350.0	420.0	460.0	550.0	550.0
Total	**1,076.6**	**1,706.5**	**2,337.6**	**9,121.0**	**11,301.0**	**10,181.0**	**9,711.0**	**9,711.0**

EBIT (UBS) by division (¥b)	03/24	03/25	03/26	03/27E	03/28E	03/29E	03/30E	03/31E
Others	(252.7)	451.7	870.4	7,107.0	8,991.0	7,701.0	6,961.0	6,941.0
Total	**(252.7)**	**451.7**	**870.4**	**7,107.0**	**8,991.0**	**7,701.0**	**6,961.0**	**6,941.0**

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

Forecast returns

Forecast price appreciation	28.9%
Forecast dividend yield	4.4%
Forecast stock return	33.3%
Market return assumption	7.7%
Forecast excess return	25.6%

Company Description

Kioxia is a leading global semiconductor manufacturer specializing in NAND flash memory and SSDs, holding a top-tier market share in this field. Originating from Toshiba's memory business, it operates as a dedicated manufacturer focused on the NAND business, offering products tailored for data centers and smart devices.

Valuation Method and Risk Statement

Our price target is based on PBR. Risk factors include: 1) strong cyclicality of the NAND market and potential price declines following supply-demand equilibrium, 2) reduced demand due to a slowdown in AI investment and restrained semiconductor investment, 3) uncertainty regarding the sustainability of technological superiority, and 4) high profit leverage during periods of price increases.

Quantitative Research Review

UBS Global Research publishes a quantitative assessment of its analysts' responses to certain questions about the likelihood of an occurrence of a number of short term factors in a product known as the 'Quantitative Research Review'. The views for this month can be found below. Views contained in this assessment on a particular stock reflect only the views on those short term factors which are a different timeframe to the 12-month timeframe reflected in any equity rating set out in this note. For previous responses please make reference to (i) previous UBS Global Research reports; and (ii) where no applicable research report was published that month, the Quantitative Research Review which can be found at https://neo.ubs.com/quantitative, or contact your UBS sales representative for access to the report or the Quantitative Research Team on ubs-quant-answers@ubs.com. A consolidated report which contains all responses is also available and again you should contact your UBS sales representative for details and pricing or the Quantitative Research Team on the email above.

Kioxia Holdings Corp

Question	Response
1. Is the industry structure facing the firm likely to improve or deteriorate over the next six months? Rate on a scale of 1-5 (1 = getting worse, 3 = no change, 5 = getting better, N/A = no view)	5
2. Is the regulatory/government environment facing the firm likely to improve or deteriorate over the next six months? Rate on a scale of 1-5 (1 = getting tougher 3 = no change, 5 = getting better, N/A = no view)	3
3. Over the last 3-6 months in broad terms have things been improving/no change/getting worse for this stock? Rate on a scale of 1-5 (1 = getting a lot worse, 3 = not much change, 5 = getting a lot better, N/A = no view)	5
4. Relative to the current CONSENSUS EPS forecast, is the next company EPS update likely to lead to: (1 = negative surprise vs consensus, 3 = in-line with consensus, 5 = positive surprise vs consensus expectations, N/A = no view)	4
5. What's driving the difference?	
6. Relative to YOUR current earnings forecast, is there relatively greater risk at the next earnings result of:(1 = downside skew risk to earnings, 3 = equal upside or downside risk to earnings, 5 = upside skew risk to earnings, N/A = no view)	4
7. What's driving the difference?	
8. Is there an upcoming catalyst for the company over the next three months?	No Catalyst
9. Is there an actual or approximate date for the catalyst?	
10. Is the catalyst date an actual or approximate date?	N/A
11. What is the catalyst?	

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UBS Global Research: Global Equity Rating Definitions

12-Month Rating	Definition	Coverage[1]	IB Services[2]
Buy	FSR is > 6% above the MRA.	54%	24%
Neutral	FSR is between -6% and 6% of the MRA.	40%	21%
Sell	FSR is > 6% below the MRA.	6%	21%

Source: UBS. Rating allocations are as of 31 March 2026.
1:Percentage of companies under coverage globally within the 12-month rating category.
2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

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UBS Securities Japan Co., Ltd.: Atsuhiro Kinoshita, Kenji Yasui.

Company Disclosures

Company Name	Reuters	12-month rating	Price	Price date
Kioxia Holdings Corp	285A.T	No Rating	¥61,280	28 May 2026

Source: UBS Global Research; LSEG Eikon. All prices as of local market close. Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date.

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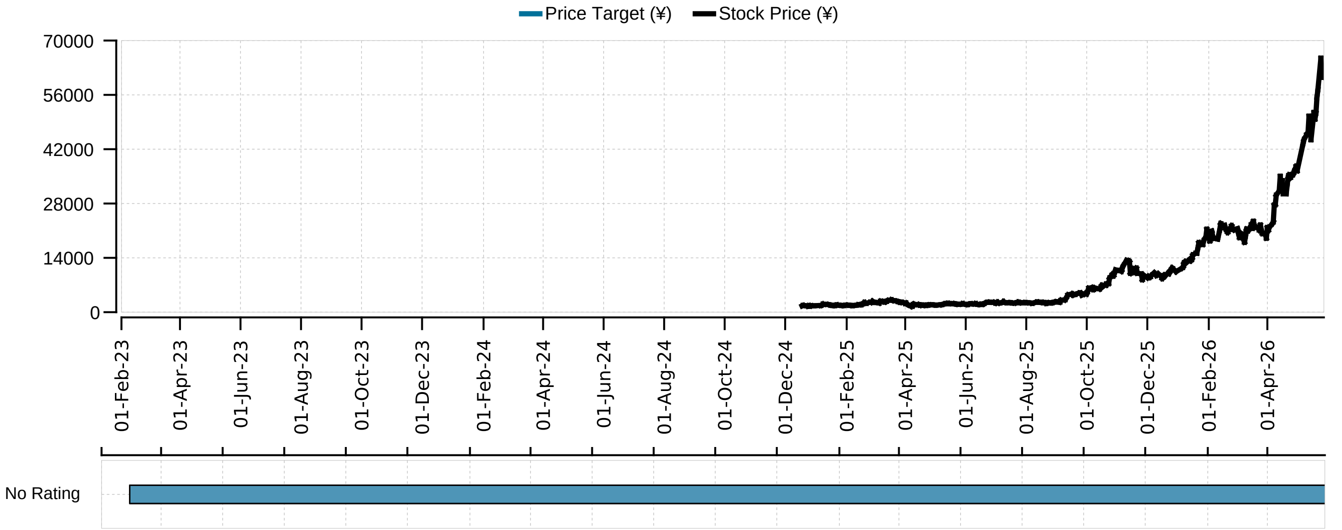
Kioxia Holdings Corp (¥)



Date	Stock Price (¥)	Price Target (¥)	Rating
2023-02-28	NaN	-	No Rating

Source: UBS Global Research; LSEG Eikon as of 28-May-2026. All prices as of local market close. Ratings as of date shown.

Company profile and fee and risk statement under the Japanese Financial Instruments & Exchange Law

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