Memory Semis Monthly

July '26 Edition: Further pricing upside amidst LTA negotiations

Equities

Global

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Upside to 2H26 memory pricing

Based upon our industry checks, we increase base-line DDR contract pricing to +32% QoQ in 3Q26 (was +17%) and +18% QoQ in 4Q26 (was +12%), after +67% QoQ in 2Q26. Depending upon pricing under longer term agreements (LTAs), as well as HBM pricing and mix, the QoQ ASP comparisons will vary though by memory vendor. We continue to forecast the DRAM industry to be undersupplied until at least 2Q28. The gap between bit demand growth in 2027 (+36.2% YoY) and supply (+19.3%) is too wide to close by then. If we assume no inventory digestion downstream in 2027 (i.e., no customers' inventory rebuild in 2H26), then the sufficiency ratio would actually deteriorate to -13.6% from -8.1% in 2026E. Both are unprecedented levels over the last 30 years. As for NAND flash, we now forecast +30% QoQ in 3Q26 (was +17%) and +12% QoQ (unchanged) in 4Q26 after +67% QoQ also in 2Q. We forecast the NAND upcycle to continue til at least 4Q27. Net net, this leaves us forecasting memory industry revenues to reach US$992bn in 2026 and US$1,763bn in 2027. The main risk to this unprecedented upcycle remains affordability by customers, notably hyperscalers which will have to continue to tap capital markets to finance this capex.

LTA negotiations continue

Revised LTA negotiations, which incorporate more fixed terms for volumes and pricing, continue. We see some differences between Micron's SCAs, with price "floor" and "ceiling", and those of the Korean memory makers, which we believe have a portion of volumes fixed (c. 60-70% over a 5-year contract), at fixed pricing, to which a variable component (volume and pricing) is added. We believe Samsung is progressing in completing by 3Q more revised LTA agreements with another handful of large customers. The focus remains on DDR5, for which we would expect a target of 50-70% of volumes being tied up to LTAs. As for SK Hynix, we believe negotiations continue to focus on the larger hyperscale customers for both DDR5 and NAND flash.

Slightly raising HBM demand forecasts, Meta not an issue

We tweak our HBM industry demand forecast to 33.1bn Gb in 2026 (+90% YoY) and 58.7bn Gb in 2027 (+77% YoY) from 32.9/58.0bn prior. We assume HBM procurement equivalent to 8.5mil Nvidia AI GPU units in 2026E, and 11.0mil in 2027E, consistent with our recent CoWoS estimate revision (link). We revise our estimates for HBM-equivalent Google TPU units to 4.2mil for 2026E and 9.1mil (up) for 2027E, also tweaking up HBM procurement for AMD and AWS for 2027. Meanwhile, recent press reports of Meta possibly selling compute to outside customers (link) negatively impacted memory stocks earlier this week. Still, this is likely monetisation of older assets prior to rolling out further Blackwell/Rubin, as well as MTIA capacity (see also note from Steven Ju: link). As such, we see no impact on HBM procurement.

Pullback in memory semis stocks likely temporary

Memory stocks are on average down 17% from their June peak, after outperforming Semis, Tech, and GEM YTD. Some of this could be over-crowding. Yet, fundamentals remain strong, with the memory industry set to generate close to US$1.2tn of FCF in 2027E. We believe this will ultimately lead to a step-up in returns to shareholders. We remain positive on the group, with Samsung Key Call Buy (PT Won550k), and Buy ratings on SK Hynix (PT 3.20m from 3.00m), MU (PT US$1,625), Kioxia (PT ¥132,000) and Nanya Tech (PT NT$495).

This report has been prepared by UBS Securities Pte. Ltd. (Reg. No. 198500648C) **ANALYST CERTIFICATION AND REQUIRED DISCLOSURES, INCLUDING INFORMATION ON THE QUANTITATIVE RESEARCH REVIEW PUBLISHED BY UBS, BEGIN ON PAGE 16.**

KEY CHARTS

Figure 1: AI server GPU/accelerator unit forecasts ('000 units)

	HBM Gen.	HBM Content (GB)			2025	1Q26	2Q26E	3Q26E	4Q26E	2026E	1Q27E	2Q27E	3Q27E	4Q27E	2027E
NVIDIA		**2025E**	**2026E**	**2027E**											
L40S	GDDR6	48			38.1										
H200	HBM3E	141			592.7										
H20 / H20E	HBM3 / 3E	96	96		441.0										
B200 (8Hi)	HBM3E	192	192		1,440.9										
GB200 (2x GPU - 8Hi)	HBM3E	384	384		1,080.4	102.9				102.9					
B300 (12Hi)	HBM3E	288	288	288	587.4	267.0	300.0	250.0	170.0	987.0	100.0				100.0
GB300 (2x GPU - 12Hi)	HBM3E	576	576	576	778.2	658.0	670.0	600.0	520.0	2,448.0	280.0	180.0	110.0	60.0	630.0
R200 (12Hi)	HBM4	288	288	288			20.0	200.0	380.0	600.0	360.0	400.0	300.0	210.0	1,270.0
RV200 (2x GPU - 12Hi)	HBM4	576	576	576			40.0	250.0	480.0	770.0	570.0	700.0	670.0	520.0	2,460.0
R300 (12Hi)	HBM4E		384	384									130.0	270.0	400.0
RV300 (4x GPU - 12Hi)	HBM4E		768	768									200.0	500.0	700.0
*Other GPU/Accel	HBM3 / 3E	288	384	576	106.9	60.0	80.0	80.0	80.0	300.0	70.0	60.0	60.0	50.0	240.0
Total Units					**5,065.6**	**1,087.9**	**1,110.0**	**1,380.0**	**1,630.0**	**5,207.9**	**1,380.0**	**1,340.0**	**1,470.0**	**1,610.0**	**5,800.0**
% YoY					*3.2%*	*-17.2%*	*0.0%*	*8.2%*	*19.4%*	*2.8%*	*26.9%*	*20.7%*	*6.5%*	*-1.2%*	*11.4%*
% QoQ						*-20.3%*	*2.0%*	*24.3%*	*18.1%*		*-15.3%*	*-2.9%*	*9.7%*	*9.5%*	
Total GPUs					**6,924.3**	**1,848.8**	**1,820.0**	**2,230.0**	**2,630.0**	**8,528.8**	**2,230.0**	**2,220.0**	**2,850.0**	**3,690.0**	**10,990.0**
% YoY					*37.9%*	*27.2%*	*22.9%*	*19.6%*	*23.7%*	*23.2%*	*20.6%*	*22.0%*	*27.8%*	*40.3%*	*28.9%*
% QoQ						*-13.0%*	*-1.6%*	*22.5%*	*17.9%*		*-15.2%*	*-0.4%*	*28.4%*	*29.5%*	
AMD															
MI300	HBM3	192	192		71.3										
MI325X (12Hi)	HBM3E	256	256		223.8	18.0				18.0					
MI355X (12Hi)	HBM3E	288	288	288	220.7	170.0	150.0	80.0	70.0	470.0					
MI308X	HBM3	192	192	192	95.8	29.0	28.0	5.0		62.0					
MI450 (12Hi)	HBM4		432	432				45.0	230.0	275.0	350.0	450.0	470.0	380.0	1,650.0
MI5XX (16Hi)	HBM4E			1024									60.0	160.0	220.0
*Other GPU/Accel	HBM3	192	192	288	4.2	1.4	1.5	1.5	1.5	5.8	2.0	2.0	2.0	2.0	8.0
Total Units					**615.8**	**218.4**	**179.5**	**131.5**	**301.5**	**830.8**	**352.0**	**452.0**	**532.0**	**542.0**	**1,878.0**
% YoY					*41.1%*	*81.0%*	*86.4%*	*-26.5%*	*37.0%*	*34.9%*	*61.2%*	*151.8%*	*304.7%*	*79.8%*	*126.0%*
% QoQ						*-0.7%*	*-17.8%*	*-26.8%*	*129.3%*		*16.8%*	*28.4%*	*17.7%*	*1.9%*	
Google															
TPU v5e	HBM2E	32	32		134										
TPU v5p	HBM2E	96	96		1,916										
TPU v6e	HBM3E	32	32	32	426	205	224	141	70	640					
TPU v7	HBM3E	192	192	192	90	520	720	800	750	2,790	640	420	300	180	1,540
TPU v8i (Dual die AX)	HBM3E		288	288				25	225	250	740	940	980	840	3,500
TPU v8t (Single die X)	HBM3E		216	216				70	380	450	850	1,040	1,160	950	4,000
*Other TPU/Accel	HBM3	96	144	144	77	7	9	10	10	37	15	15	15	15	60
Total Units					**2,642.5**	**732.0**	**953.4**	**1,046.2**	**1,435.4**	**4,167.0**	**2,245.0**	**2,415.0**	**2,455.0**	**1,985.0**	**9,100.0**
% YoY					*18.6%*	*14.3%*	*66.1%*	*82.4%*	*68.0%*	*57.7%*	*206.7%*	*153.3%*	*134.7%*	*38.3%*	*118.4%*
% QoQ						*-14.3%*	*30.2%*	*9.7%*	*37.2%*		*56.4%*	*7.6%*	*1.7%*	*-19.1%*	
Amazon															
Inferentia 2	HBM2E	32	32		88										
Trainium 2 / 2.5	HBM3E	96	144	144	496	130	220	140	100	590	50	10			60
Inferentia 3	HBM3	96	96	96	162	30	28	20	18	96	15	10			25
Trainium 3	HBM3E	144	144	144			320	620	840	1,780	840	780	640	540	2,800
Trainium 4	HBM4		256	256									40	240	280
*Other Accel	HBM3	144	144	144	37	5	6	8	10	28	8	8	7	7	30
Total Units					**783.2**	**164.8**	**573.7**	**787.8**	**967.6**	**2,493.9**	**913.0**	**808.0**	**687.0**	**787.0**	**3,195.0**
% YoY					*-7.7%*	*-16.5%*	*179.8%*	*301.7%*	*423.9%*	*218.4%*	*454.0%*	*40.8%*	*-12.8%*	*-18.7%*	*28.1%*
% QoQ						*-10.8%*	*248.1%*	*37.3%*	*22.8%*		*-5.6%*	*-11.5%*	*-15.0%*	*14.6%*	
Intel / Habana															
Gaudi 3	HBM2 / 3E	288	288	288	188	30	18	8	0	56					
Gaudi 4	HBM3E	288	288	288				10	25	35	25	20	15	10	70
*Others	HBM2 / 3E	192	192	192	25	6	4	4	5	18	4	4	4	4	16
Total Units					**213.2**	**36.0**	**21.6**	**21.6**	**30.0**	**109.2**	**29.0**	**24.0**	**19.0**	**14.0**	**86.0**
% YoY					*-32.1%*	*-20.3%*	*-60.1%*	*-62.7%*	*-46.3%*	*-48.8%*	*-19.4%*	*11.1%*	*-12.0%*	*-53.3%*	*-21.2%*
% QoQ						*-35.6%*	*-40.0%*	*0.0%*	*38.9%*		*-3.3%*	*-17.2%*	*-20.8%*	*-26.3%*	
Microsoft															
Maia 100	HBM3	120	120	120	34	3	1			4					
Maia 200	HBM3E		288	288		2	6	10	14	33	14	10	7	4	35
Maia 300	HBM4			288									8	14	22
*Others	HBM3	120	192	192	8	2	2	2	2	8	2	2	2	2	8
Total Units					**41.8**	**7.3**	**8.9**	**12.5**	**16.1**	**44.7**	**16.0**	**12.0**	**17.0**	**20.0**	**65.0**
% YoY					*22.3%*	*-27.1%*	*-19.2%*	*3.9%*	*83.6%*	*7.1%*	*119.5%*	*35.0%*	*36.3%*	*24.4%*	*45.3%*
% QoQ						*-16.7%*	*21.9%*	*40.3%*	*28.9%*		*-0.4%*	*-25.0%*	*41.7%*	*17.6%*	
Meta															
MTIA v1	LPDDR5	64	64		421	20	5			25					
MTIA v2	LPDDR5	128	128		30	20	8	2		30					
MTIA v3	HBM3E	192	192	192	5	15	20	35	40	110	40	30	20	15	105
MTIA v4	HBM4		432	432							40	80	100	120	340
*Others	LPDDR5	64	128	128	28	3	1	1	1	6	5	5	5	5	20
Total Units					**483.9**	**57.8**	**34.3**	**38.1**	**41.2**	**171.4**	**85.0**	**115.0**	**125.0**	**140.0**	**465.0**
% YoY					*19.3%*	*-43.2%*	*-71.1%*	*-71.4%*	*-68.3%*	*-64.6%*	*47.2%*	*235.1%*	*228.0%*	*239.8%*	*171.3%*
% QoQ						*-55.6%*	*-40.6%*	*11.0%*	*8.1%*		*106.3%*	*35.3%*	*8.7%*	*12.0%*	
OpenAI															
Titan v1	HBM3E		216	216				20	150	170	160	170	130	100	560
Titan v2	HBM4E		576	576									50	130	180
Total Units								**20.0**	**150.0**	**170.0**	**160.0**	**170.0**	**180.0**	**230.0**	**740.0**
% YoY													*800.0%*	*53.3%*	*335.3%*
% QoQ									*650.0%*		*6.7%*	*6.3%*	*5.9%*	*27.8%*	
Tesla															
Dojo	HBM3	64	64	64	62	17	18	15	14	64	15	15	18	15	63
*Others	HBM3	64	64	64	44	7	7	6	6	26	6	6	5	5	22
Total Units					**105.9**	**23.8**	**25.2**	**21.0**	**19.6**	**89.6**	**21.0**	**21.0**	**23.0**	**20.0**	**85.0**
% YoY					*-39.1%*	*-12.4%*	*-9.3%*	*-24.1%*	*-15.9%*	*-15.4%*	*-11.8%*	*-16.7%*	*9.5%*	*2.0%*	*-5.2%*
% QoQ						*2.0%*	*5.9%*	*-16.7%*	*-6.6%*		*7.1%*	*0.0%*	*9.5%*	*-13.0%*	
Others															
Startups	HBM3	192	288	288	657	150	150	155	155	610	170	180	185	190	725
Others	HBM2E /3	192	288	288	361	30	30	39	39	138	60	63	65	67	254
Total Units					**1,018.5**	**180.0**	**180.0**	**193.8**	**193.8**	**747.5**	**229.5**	**243.0**	**249.8**	**256.5**	**978.8**
% YoY					*58.8%*	*-28.3%*	*-31.6%*	*-25.7%*	*-20.4%*	*-26.6%*	*27.5%*	*35.0%*	*28.9%*	*32.4%*	*30.9%*
% QoQ						*-26.1%*	*0.0%*	*7.6%*	*0.0%*		*18.5%*	*5.9%*	*2.8%*	*2.7%*	
Total GPU / Accelerator Units ('000)					**12,829.1**	**3,268.9**	**3,796.6**	**4,502.4**	**5,785.1**	**17,352.9**	**6,280.5**	**6,480.0**	**7,137.8**	**7,684.5**	**27,582.8**
% YoY					*27.0%*	*14.8%*	*34.1%*	*36.3%*	*50.4%*	*35.3%*	*92.1%*	*70.7%*	*58.5%*	*32.8%*	*59.0%*
% QoQ						*-15.0%*	*16.1%*	*18.6%*	*28.5%*		*8.6%*	*3.2%*	*10.2%*	*7.7%*	

Source: Company data, UBS estimates

Figure 2: HBM demand forecasts by GPU/accelerator

	HBM Gen.	HBM Content (GB)			2025	1Q26E	2Q26E	3Q26E	4Q26E	2026E	1Q27E	2Q27E	3Q27E	4Q27E	2027E
NVIDIA		**2025E**	**2026E**	**2027E**											
H200	HBM3E	141			83,571										
H20 / H20E	HBM3 / 3E	96	96		42,336										
B200 (8Hi)	HBM3E	192	192		276,649										
GB200 (2x GPU - 8Hi)	HBM3E	384	384		414,872	39,504				39,504					
B300 (12Hi)	HBM3E	288	288	288	169,176	76,896	86,400	72,000	48,960	284,256	28,800				28,800
GB300 (2x GPU - 12Hi)	HBM3E	576	576	576	448,259	379,008	385,920	345,600	299,520	1,410,048	161,280	103,680	63,360	34,560	362,880
R200 (12Hi)	HBM4	288	288	288			5,760	57,600	109,440	172,800	103,680	115,200	86,400	60,480	365,760
RV200 (2x GPU - 12Hi)	HBM4	576	576	576			23,040	144,000	276,480	443,520	328,320	403,200	385,920	299,520	1,416,960
RV200 (2x GPU - 12Hi)	HBM4	576	576	576									49,920	103,680	153,600
Rubin Ultra (16Hi)	HBM4E		768	768									153,600	384,000	537,600
*Other GPU/Accel	HBM3 / 3E	288	384	576	30,787	23,040	30,720	30,720	30,720	115,200	40,320	34,560	34,560	28,800	138,240
Total ('000 GB)					**1,465,650**	**518,448**	**531,840**	**649,920**	**765,120**	**2,465,328**	**662,400**	**656,640**	**773,760**	**911,040**	**3,003,840**
Total (bn Gb)					**11.73**	**4.15**	**4.25**	**5.20**	**6.12**	**19.72**	**5.30**	**5.25**	**6.19**	**7.29**	**24.03**
AMD															
MI300	HBM3	192	192		13,685										
MI325X (12Hi)	HBM3E	256	256		57,294	4,608				4,608					
MI355X (12Hi)	HBM3E	288	288	288	63,569	48,960	43,200	23,040	20,160	135,360					
MI308X	HBM3	192	192	192	18,394	5,568	5,376	960		11,904					
MI450 (12Hi)	HBM4		432	432				19,440	99,360	118,800	151,200	194,400	203,040	164,160	712,800
MI5XX (16Hi)	HBM4E			1,024									61,440	163,840	225,280
*Other GPU/Accel	HBM3	192	192	288	812	274	285	282	281	1,123	576	576	576	576	2,304
Total ('000 GB)					**153,754**	**59,410**	**48,861**	**43,722**	**119,801**	**271,795**	**151,776**	**194,976**	**265,056**	**328,576**	**940,384**
Total (bn Gb)					**1.23**	**0.48**	**0.39**	**0.35**	**0.96**	**2.17**	**1.21**	**1.56**	**2.12**	**2.63**	**7.52**
Google															
TPU v5e	HBM2E	32	32		4,282										
TPU v5p	HBM2E	96	96		183,913										
TPU v6e	HBM3E	32	32	32	13,632	6,554	7,168	4,506	2,253	20,480					
TPU v7	HBM3E	192	192	192	17,280	99,840	138,240	153,600	144,000	535,680	122,880	80,640	57,600	34,560	295,680
TPU v8i (Dual die AX)	HBM3E		288	288				7,200	64,800	72,000	213,120	270,720	282,240	241,920	1,008,000
TPU v8t (Single die X)	HBM3E		216	216				15,120	82,080	97,200	183,600	224,640	250,560	205,200	864,000
TPU v9AX	HBM4E		768	768										0	0
TPU v9X	HBM4E		384	384										0	0
*Other TPU/Accel	HBM3	96	144	144	7,389	1,044	1,359	1,492	1,440	5,335	2,160	2,160	2,160	2,160	8,640
Total ('000 GB)					**226,495**	**107,437**	**146,767**	**181,917**	**294,573**	**730,695**	**521,760**	**578,160**	**592,560**	**483,840**	**2,176,320**
Total (bn Gb)					**1.81**	**0.86**	**1.17**	**1.46**	**2.36**	**5.85**	**4.17**	**4.63**	**4.74**	**3.87**	**17.41**
Amazon															
Inferentia 2	HBM2E	32	32		2,823										
Trainium 2 / 2.5	HBM3E	96	144	144	47,574	18,720	31,680	20,160	14,400	84,960	7,200	1,440			8,640
Inferentia 3	HBM3	96	96	96	15,563	2,880	2,688	1,920	1,728	9,216	1,440	960			2,400
Trainium 3	HBM3E	144	144	144			46,080	89,280	120,960	256,320	120,960	112,320	92,160	77,760	403,200
Trainium 4	HBM4		256	256									10,240	61,440	71,680
*Other Accel	HBM3	144	144	144	5,375	691	818	1,123	1,380	4,012	1,152	1,152	1,008	1,008	4,320
Total ('000 GB)					**71,336**	**22,291**	**81,266**	**112,483**	**138,468**	**354,508**	**130,752**	**115,872**	**103,408**	**140,208**	**490,240**
Total (bn Gb)					**0.57**	**0.18**	**0.65**	**0.90**	**1.11**	**2.84**	**1.05**	**0.93**	**0.83**	**1.12**	**3.92**
Intel															
Gaudi 3	HBM2 / 3E	288	288	288	54,212	8,640	5,184	2,304		16,128					
Gaudi 4	HBM3E	288	288	288				2,880	7,200	10,080	7,200	5,760	4,320	2,880	20,160
*Others	HBM2 / 3E	192	192	192	4,789	1,152	691	691	960	3,494	768	768	768	768	3,072
Total ('000 GB)					**59,001**	**9,792**	**5,875**	**5,875**	**8,160**	**29,702**	**7,968**	**6,528**	**5,088**	**3,648**	**23,232**
Total (bn Gb)					**0.47**	**0.08**	**0.05**	**0.05**	**0.07**	**0.24**	**0.06**	**0.05**	**0.04**	**0.03**	**0.19**
Microsoft															
Maia 100	HBM3	120	120	120	4,050	360	120			480					
Maia 200	HBM3E		288	288		660	1,696	3,016	4,052	9,424	4,032	2,880	2,016	1,152	10,080
Maia 300	HBM4			288									2,304	4,032	6,336
*Others	HBM3	120	192	192	960	384	384	384	384	1,536	384	384	384	384	1,536
Total ('000 GB)					**5,010**	**1,404**	**2,200**	**3,400**	**4,436**	**11,440**	**4,416**	**3,264**	**4,704**	**5,568**	**17,952**
Total (bn Gb)					**0.04**	**0.01**	**0.02**	**0.03**	**0.04**	**0.09**	**0.04**	**0.03**	**0.04**	**0.04**	**0.14**
Meta															
MTIA v3	HBM3E	192	192	192	960	2,880	3,840	6,720	7,680	21,120	7,680	5,760	3,840	2,880	20,160
MTIA v4	HBM4		432	432							17,280	34,560	43,200	51,840	146,880
Total ('000 GB)					**960**	**2,880**	**3,840**	**6,720**	**7,680**	**21,120**	**24,960**	**40,320**	**47,040**	**54,720**	**167,040**
Total (bn Gb)					**0.01**	**0.02**	**0.03**	**0.05**	**0.06**	**0.17**	**0.20**	**0.32**	**0.38**	**0.44**	**1.34**
OpenAI															
Titan v1	HBM3E		216	216				4,320	32,400	36,720	34,560	36,720	28,080	21,600	120,960
Titan v2	HBM4E		576	576									28,800	74,880	103,680
Total ('000 GB)								**4,320**	**32,400**	**36,720**	**34,560**	**36,720**	**56,880**	**96,480**	**224,640**
Total (bn Gb)								**0.03**	**0.26**	**0.29**	**0.28**	**0.29**	**0.46**	**0.77**	**1.80**
Others															
Tesla	HBM3	64	64		6,780	1,523	1,613	1,344	1,255	5,735	1,344	1,344	1,472	1,280	5,440
Startups / Etc.	HBM2E / 3	192	288		195,559	51,840	51,840	55,800	55,800	215,280	66,096	69,984	71,928	73,872	281,880
Total ('000 GB)					**202,339**	**53,363**	**53,453**	**57,144**	**57,055**	**221,015**	**67,440**	**71,328**	**73,400**	**75,152**	**287,320**
Total (bn Gb)					**1.62**	**0.43**	**0.43**	**0.46**	**0.46**	**1.77**	**0.54**	**0.57**	**0.59**	**0.60**	**2.30**
Total HBM Demand ('000 GB)					**2,184,545**	**775,025**	**874,103**	**1,065,502**	**1,427,694**	**4,142,324**	**1,606,032**	**1,703,808**	**1,921,896**	**2,099,232**	**7,330,968**
Total HBM Demand (bn Gb)					**17.48**	**6.20**	**6.99**	**8.52**	**11.42**	**33.14**	**12.85**	**13.63**	**15.38**	**16.79**	**58.65**
% YoY					*103.0%*	*96.5%*	*103.1%*	*76.1%*	*89.4%*	*89.6%*	*107.2%*	*94.9%*	*80.4%*	*47.0%*	*77.0%*
% QoQ						*2.8%*	*12.8%*	*21.9%*	*34.0%*		*12.5%*	*6.1%*	*12.8%*	*9.2%*	

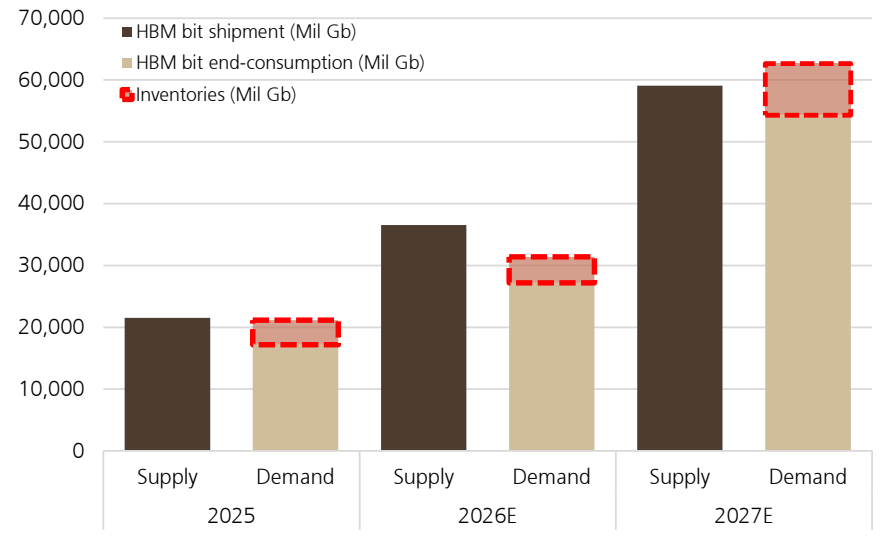
Source: Company data, UBS estimates

Figure 3: HBM vendors' bit shipments

(M 1Gb)		2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
SK Hynix		**12,628**	**3,803**	**4,297**	**4,654**	**4,958**	**17,711**	**5,041**	**5,336**	**6,002**	**6,705**	**23,084**
	% YoY	*86%*	*31%*	*36%*	*44%*	*49%*	*40%*	*33%*	*24%*	*29%*	*35%*	*30%*
	% QoQ		*15%*	*13%*	*8%*	*7%*		*2%*	*6%*	*12%*	*12%*	
Samsung		**4,327**	**1,519**	**1,949**	**3,028**	**4,537**	**11,034**	**4,825**	**5,251**	**6,592**	**7,372**	**24,039**
	% YoY	*-15%*	*161%*	*155%*	*115%*	*189%*	*155%*	*218%*	*169%*	*118%*	*62%*	*118%*
	% QoQ		*-3%*	*28%*	*55%*	*50%*		*6%*	*9%*	*26%*	*12%*	
Micron		**4,584**	**1,612**	**1,821**	**2,040**	**2,305**	**7,778**	**2,536**	**2,840**	**3,152**	**3,436**	**11,964**
	% YoY	*417%*	*106%*	*60%*	*62%*	*64%*	*70%*	*57%*	*56%*	*55%*	*49%*	*54%*
	% QoQ		*15%*	*13%*	*12%*	*13%*		*10%*	*12%*	*11%*	*9%*	
Total Supply		**21,539**	**6,934**	**8,068**	**9,722**	**11,800**	**36,523**	**12,402**	**13,427**	**15,746**	**17,512**	**59,087**
	% YoY	*69%*	*62%*	*59%*	*64%*	*88%*	*70%*	*79%*	*66%*	*62%*	*48%*	*62%*
	% QoQ		*10%*	*16%*	*21%*	*21%*		*5%*	*8%*	*17%*	*11%*	

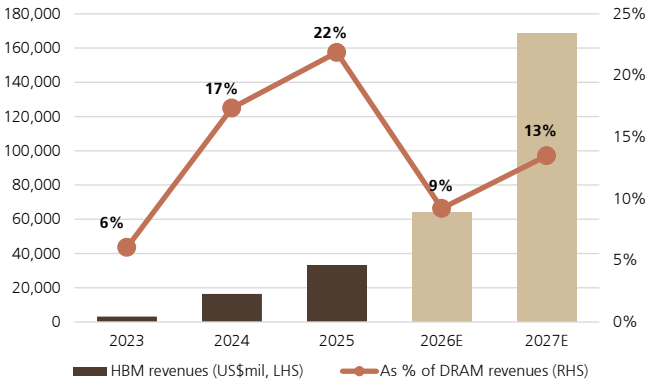
Source: Company data, UBS estimates

Figure 4: Adjusted HBM supply vs demand



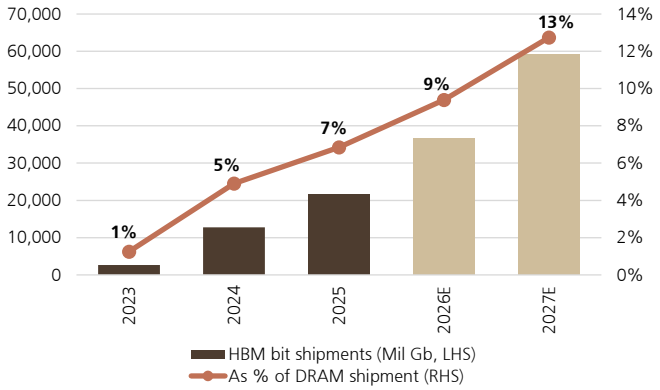
Source: Company data, UBS estimates

Figure 5: HBM as % of total DRAM revenues



Source: UBS estimates

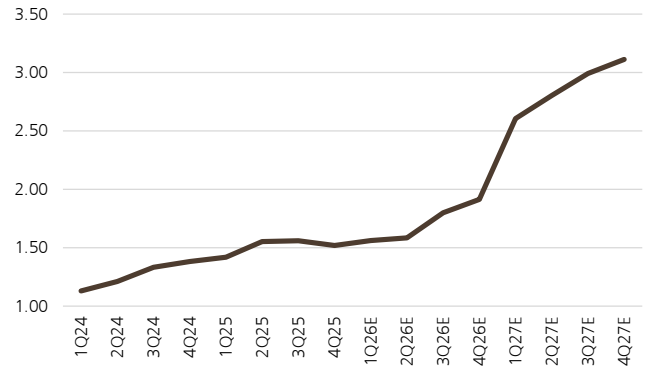
Figure 6: HBM as % of total DRAM bits



Source: UBS estimates

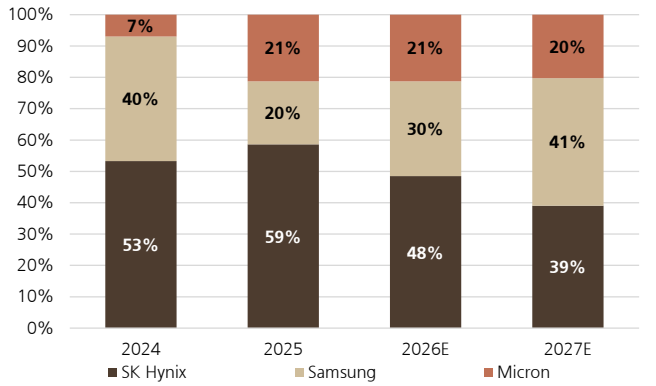
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Figure 7: HBM ASP forecasts (US$/1Gb)



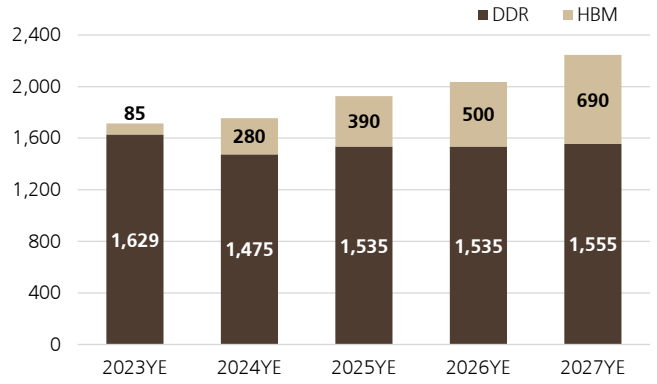
Source: UBS estimates

Figure 8: HBM bit share by vendor



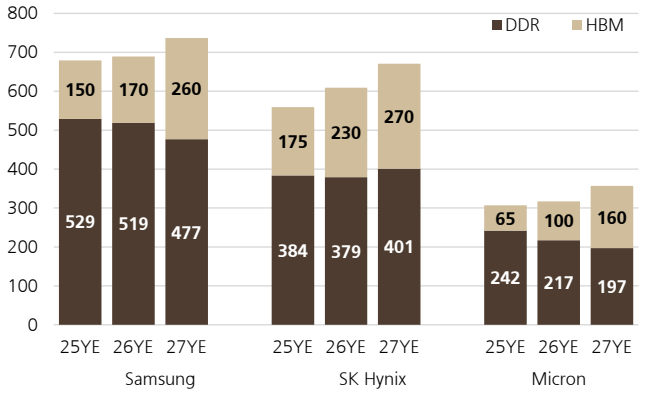
Source: Company data, UBS estimates

Figure 9: DRAM industry capacity (k wpm) breakdown between DDR and HBM



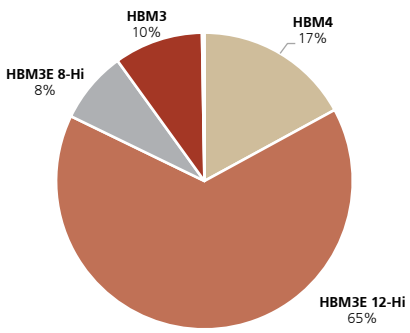
Source: Company data, UBS estimates

Figure 10: DRAM capacity (k wpm) breakdown between DDR and HBM by supplier



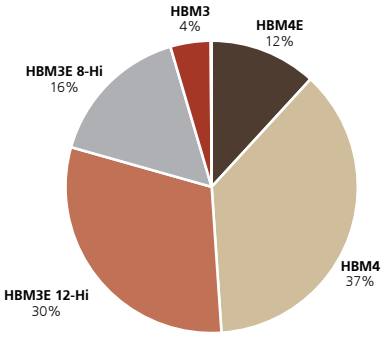
Source: Company data, UBS estimates

Figure 11: HBM demand by type (2026E)



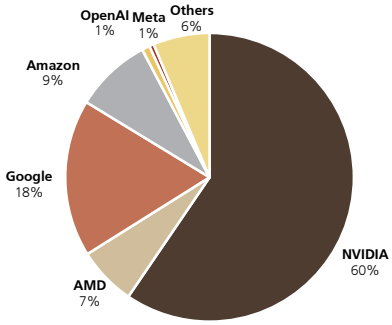
Source: UBS estimates

Figure 12: HBM demand by type (2027E)



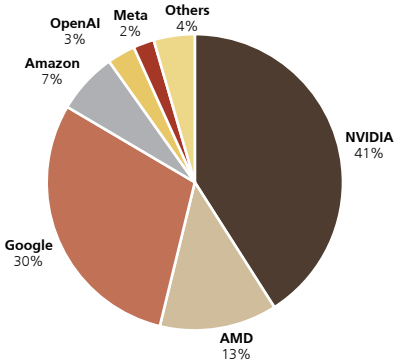
Source: UBS estimates

Figure 13: HBM demand by customer (2026E)



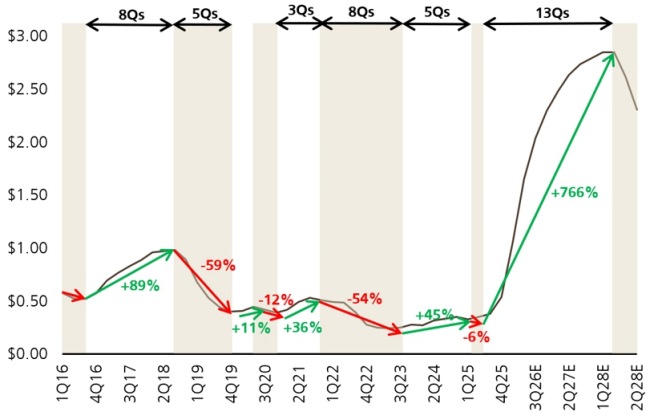
Source: UBS estimates

Figure 14: HBM demand by customer (2027E)



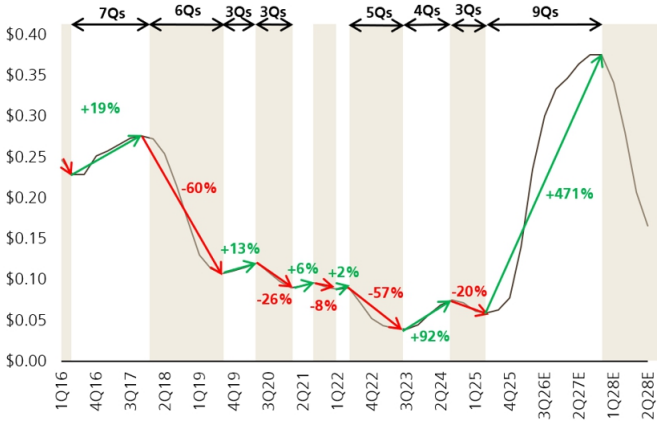
Source: UBS estimates

Figure 15: DDR cycles in context



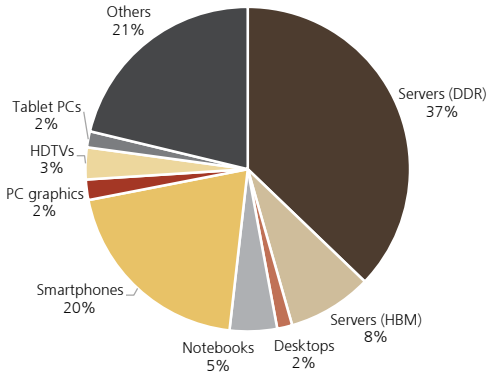
Source: Company data, UBS estimates

Figure 16: NAND cycles in context



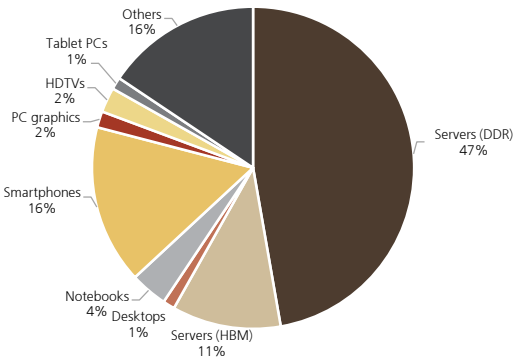
Source: Company data, UBS estimates

Figure 17: DRAM bit demand per application (2026E)



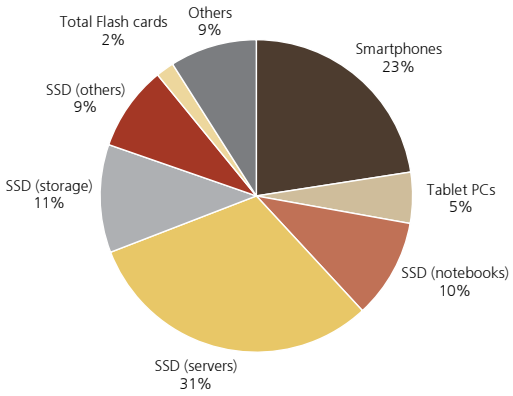
Source: Gartner, UBS estimates

Figure 18: DRAM bit demand per application (2027E)



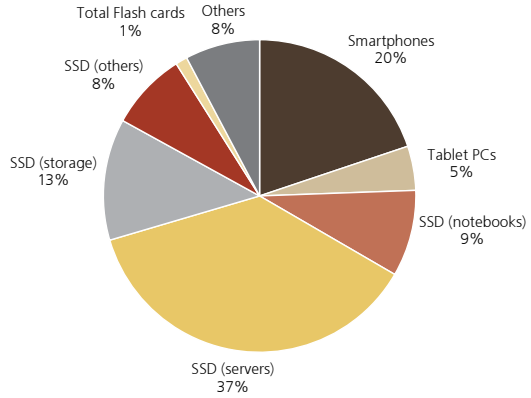
Source: Gartner, UBS estimates

Figure 19: NAND bit demand per application (2026E)



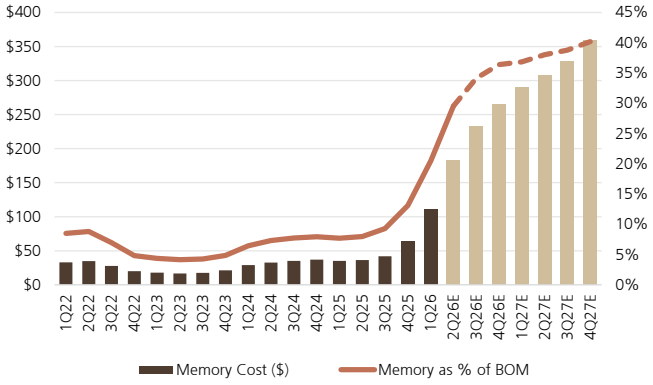
Source: Gartner, UBS estimates

Figure 20: NAND bit demand per application (2027E)



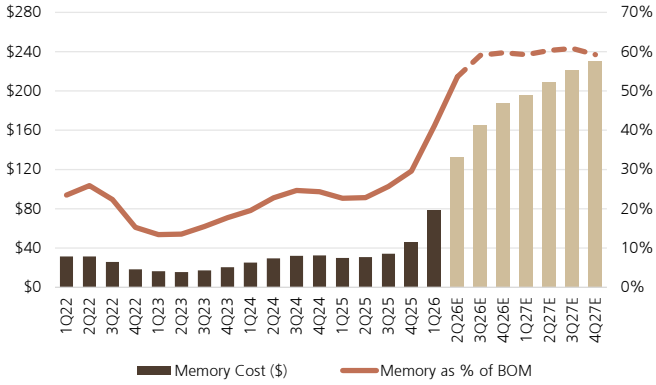
Source: Gartner, UBS estimates

Figure 21: Memory as % of flagship/premium smartphone BOM costs, 1Q22-4Q27E



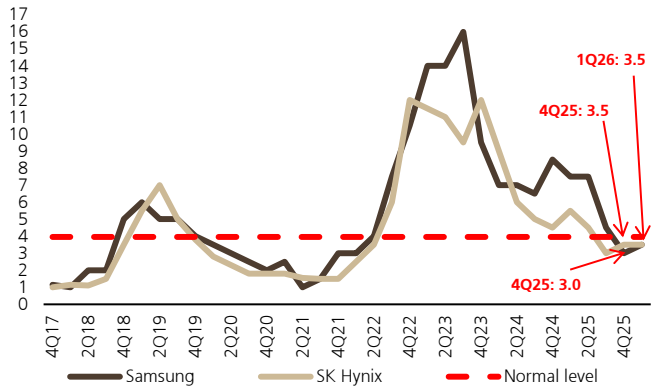
Source: Counterpoint, Fomalhaut, UBS estimates

Figure 22: Memory as % of mid-range/lower-end smartphones, 1Q22-4Q27E



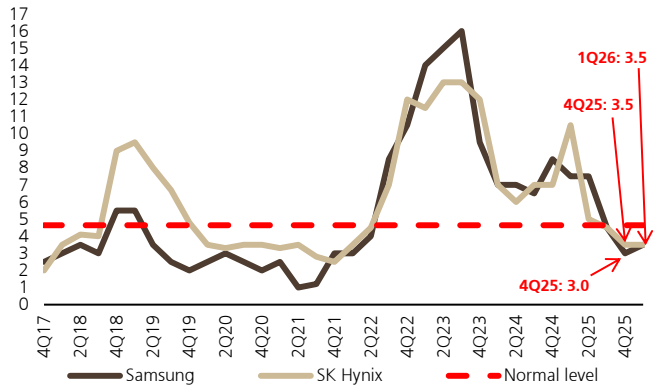
Source: UBS estimates

Figure 23: Samsung and SK Hynix – DRAM finished wafers and dies inventories



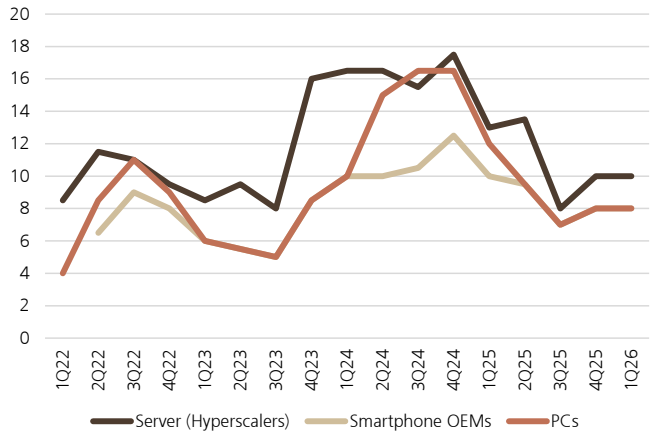
Source: Company data, UBS estimates

Figure 24: Samsung and SK Hynix – NAND finished wafers and dies inventories



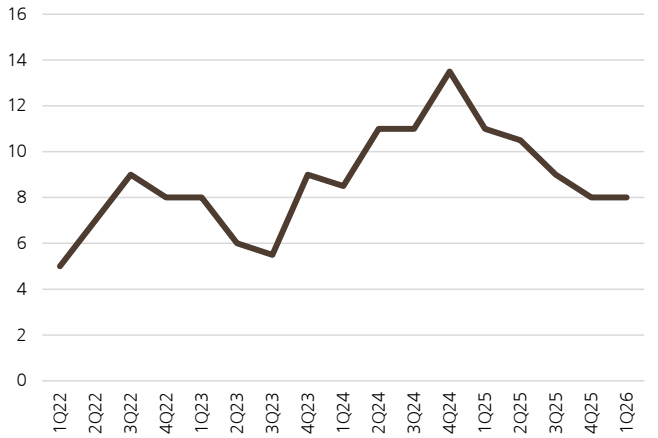
Source: Company data, UBS estimates

Figure 25: DRAM customer inventories (weeks)



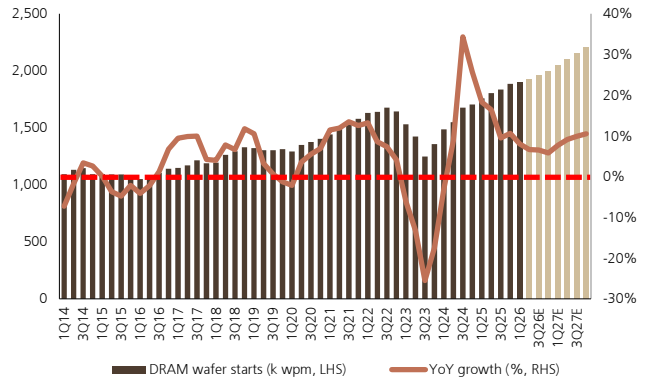
Source: Company data, UBS estimates

Figure 26: NAND customer inventories (weeks)



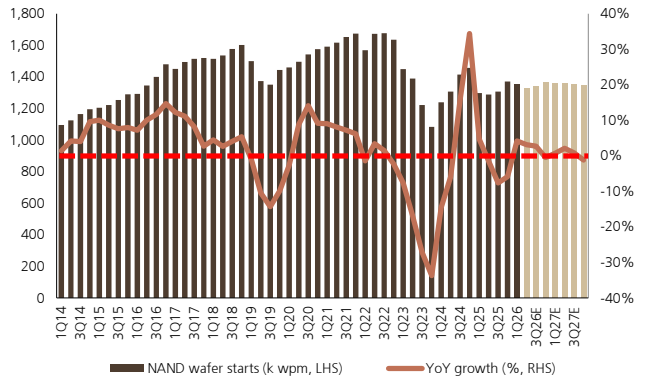
Source: Company data, UBS estimates

Figure 27: DRAM industry wafer starts and YoY growth



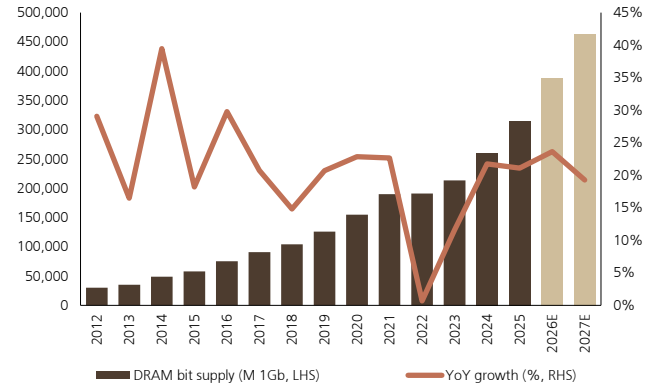
Source: Company data, UBS estimates

Figure 28: NAND industry wafer starts and YoY growth



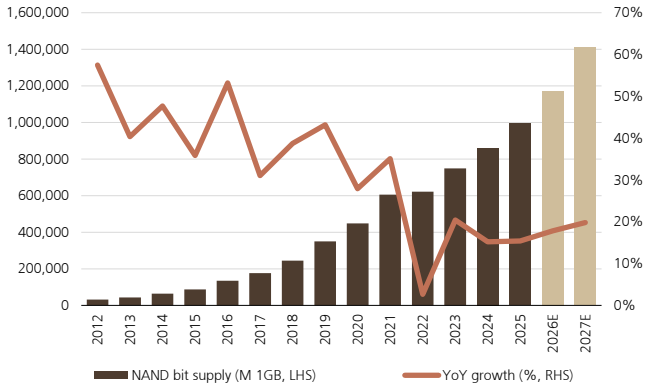
Source: Company data, UBS estimates

Figure 29: DRAM industry bit supply and YoY growth



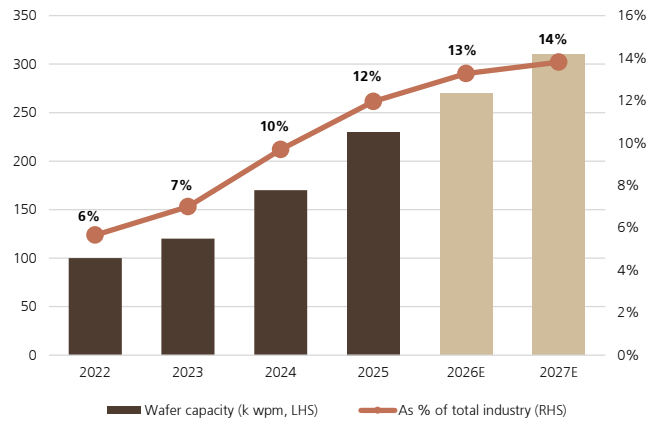
Source: Company data, UBS estimates

Figure 30: NAND industry bit supply and YoY growth



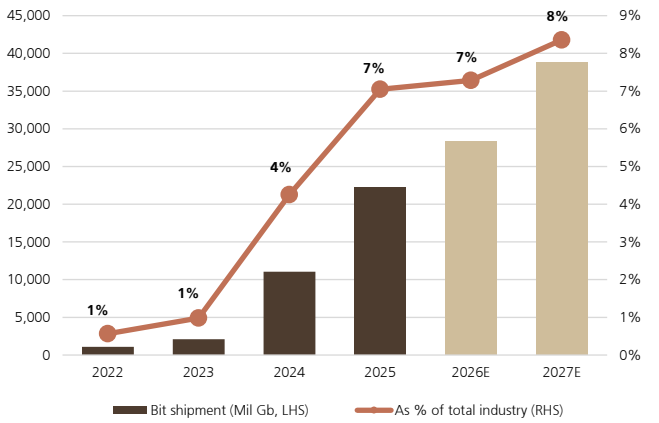
Source: Company data, UBS estimates

Figure 31: CXMT wafer capacity and as % of DRAM industry



Source: UBS estimates

Figure 32: CXMT bit shipments and as % of DRAM industry



Source: UBS estimates

Figure 33: UBS DRAM supply/demand summary

	Q125	Q225	Q325	Q425	2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
Revenues ($ mil)	**26,683**	**31,996**	**39,350**	**52,865**	**150,894**	**97,020**	**153,791**	**202,404**	**238,379**	**691,595**	**265,507**	**297,562**	**332,492**	**352,577**	**1,248,138**
% QoQ	*-6.7%*	*19.9%*	*23.0%*	*34.3%*		*83.5%*	*58.5%*	*31.6%*	*17.8%*		*11.4%*	*12.1%*	*11.7%*	*6.0%*	
% YoY	*49.9%*	*41.1%*	*55.3%*	*84.9%*	*59.8%*	*263.6%*	*380.7%*	*414.4%*	*350.9%*	*358.3%*	*173.7%*	*93.5%*	*64.3%*	*47.9%*	*80.5%*
Supply (Shipments Based) (M 1Gb)	**64,968**	**76,461**	**85,829**	**87,246**	**314,505**	**88,812**	**93,489**	**100,732**	**105,801**	**388,834**	**106,695**	**112,460**	**120,097**	**124,562**	**463,814**
% QoQ	*-1.9%*	*17.7%*	*12.3%*	*1.7%*		*1.8%*	*5.3%*	*7.7%*	*5.0%*		*0.8%*	*5.4%*	*6.8%*	*3.7%*	
% YoY	*5.9%*	*15.9%*	*29.7%*	*31.7%*	*21.1%*	*36.7%*	*22.3%*	*17.4%*	*21.3%*	*23.6%*	*20.1%*	*20.3%*	*19.2%*	*17.7%*	*19.3%*
Demand (End Consumption) (M 1Gb)	**69,879**	**73,066**	**87,229**	**94,090**	**324,264**	**89,574**	**91,832**	**101,863**	**110,767**	**394,034**	**113,879**	**123,806**	**140,679**	**158,302**	**536,666**
% QoQ	*0.2%*	*4.6%*	*19.4%*	*7.9%*		*-4.8%*	*2.5%*	*10.9%*	*8.7%*		*2.8%*	*8.7%*	*13.6%*	*12.5%*	
% YoY	*17.5%*	*21.0%*	*35.1%*	*34.9%*	*27.6%*	*28.2%*	*25.7%*	*16.8%*	*17.7%*	*21.5%*	*27.1%*	*34.8%*	*38.1%*	*42.9%*	*36.2%*
DDR Demand (M 1Gb)					**324,263**					**394,034**					**536,665**
% YoY					*27.6%*					*21.5%*					*36.2%*
Inventory adjustment	-5,500	3,800	400	-900	-2,200	16,100	12,000	3,500	-2,400	29,200	-5,000	-10,000	-19,200	-33,000	-67,200
Inventory Adj. Demand (M 1Gb)	**64,379**	**76,866**	**87,629**	**93,190**	**322,064**	**105,674**	**103,832**	**105,363**	**108,367**	**423,234**	**108,879**	**113,806**	**121,479**	**125,302**	**469,466**
% QoQ	*-5.1%*	*19.4%*	*14.0%*	*6.3%*		*13.4%*	*-1.7%*	*1.5%*	*2.9%*		*0.5%*	*4.5%*	*6.7%*	*3.1%*	
% YoY	*4.0%*	*12.2%*	*29.5%*	*37.3%*	*21.1%*	*64.1%*	*35.1%*	*20.2%*	*16.3%*	*31.4%*	*3.0%*	*9.6%*	*15.3%*	*15.6%*	*10.9%*
Wafer out (k wpm, 12" equi.)	**1,722**	**1,772**	**1,816**	**1,857**	**1,792**	**1,887**	**1,907**	**1,935**	**1,966**	**1,924**	**2,010**	**2,063**	**2,115**	**2,168**	**2,089**
% QoQ	*2.4%*	*2.9%*	*2.5%*	*2.2%*		*1.6%*	*1.0%*	*1.5%*	*1.6%*		*2.3%*	*2.6%*	*2.5%*	*2.5%*	
% YoY	*22.4%*	*17.8%*	*13.7%*	*10.4%*	*15.8%*	*9.6%*	*7.6%*	*6.6%*	*5.9%*	*7.4%*	*6.5%*	*8.2%*	*9.3%*	*10.3%*	*8.6%*
% Sufficiency Ratio	***0.9%***	***-0.5%***	***-2.1%***	***-6.4%***	***-2.3%***	***-16.0%***	***-10.0%***	***-4.4%***	***-2.4%***	***-8.1%***	***-2.0%***	***-1.2%***	***-1.1%***	***-0.6%***	***-1.2%***
Blended ASP incl. HBM ($/Gb)	**0.41**	**0.42**	**0.46**	**0.61**	**0.48**	**1.09**	**1.65**	**2.01**	**2.25**	**1.78**	**2.49**	**2.65**	**2.77**	**2.83**	**2.69**
% QoQ	*-4.8%*	*1.9%*	*9.6%*	*32.2%*		*80.3%*	*50.6%*	*22.1%*	*12.1%*		*10.4%*	*6.3%*	*4.6%*	*2.2%*	
% YoY	*41.5%*	*21.8%*	*19.7%*	*40.4%*	*32.0%*	*166.0%*	*293.1%*	*338.3%*	*271.8%*	*270.7%*	*127.8%*	*60.8%*	*37.8%*	*25.6%*	*51.3%*
DDR ASP ($/Gb)	**0.33**	**0.35**	**0.38**	**0.53**	**0.40**	**1.05**	**1.65**	**2.03**	**2.30**	**1.78**	**2.48**	**2.63**	**2.74**	**2.79**	**2.67**
% QoQ	*-6.2%*	*7.0%*	*7.0%*	*42.0%*		*97.0%*	*57.0%*	*23.0%*	*13.0%*		*8.0%*	*6.0%*	*4.0%*	*2.0%*	
% YoY	*20.3%*	*10.6%*	*11.8%*	*52.5%*	*26.3%*	*220.3%*	*369.9%*	*440.2%*	*329.9%*	*341.4%*	*135.7%*	*59.1%*	*34.5%*	*21.4%*	*49.4%*
HBM ASP ($/Gb)	**1.42**	**1.55**	**1.56**	**1.52**	**1.52**	**1.55**	**1.56**	**1.79**	**1.89**	**1.72**	**2.54**	**2.76**	**2.98**	**3.08**	**2.86**
% QoQ	*2.7%*	*9.4%*	*0.4%*	*-2.5%*		*2.0%*	*0.4%*	*14.7%*	*5.7%*		*34.5%*	*8.7%*	*8.2%*	*3.1%*	
% YoY	*25.6%*	*28.3%*	*16.9%*	*10.0%*	*15.6%*	*9.2%*	*0.2%*	*14.5%*	*24.1%*	*13.4%*	*63.7%*	*77.2%*	*67.1%*	*63.0%*	*66.4%*

Source: Company data, UBS estimates

Figure 34: DRAM vendors' market share in bit shipments

	Q125	Q225	Q325	Q425	2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
Samsung	39.3%	37.3%	38.2%	38.3%	38.2%	38.0%	37.9%	37.6%	37.3%	37.7%	37.7%	37.4%	37.9%	37.0%	37.5%
SK Hynix	28.9%	30.6%	29.5%	29.3%	29.6%	28.7%	29.3%	30.8%	31.2%	30.1%	29.5%	29.7%	29.4%	29.9%	29.6%
Micron	22.8%	23.3%	23.8%	23.6%	23.4%	24.3%	23.8%	22.9%	22.7%	23.4%	23.4%	23.3%	22.9%	22.9%	23.1%
Nanya Tech	1.0%	1.4%	1.6%	1.8%	1.5%	1.6%	1.5%	1.3%	1.1%	1.4%	1.2%	1.2%	1.3%	1.4%	1.3%
CXMT	7.7%	7.1%	6.6%	6.9%	7.0%	7.1%	7.3%	7.2%	7.5%	7.3%	8.1%	8.4%	8.4%	8.6%	8.4%
Others	0.3%	0.3%	0.2%	0.2%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Total Supply	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Gartner, Company data, UBS estimates

Figure 35: DRAM vendors' bit shipments QoQ and YoY growth

	Q125 QoQ	Q225 QoQ	Q325 QoQ	Q425 QoQ	2025 YoY	Q126 QoQ	Q226E QoQ	Q326E QoQ	Q426E QoQ	2026E YoY	Q127E QoQ	Q226E QoQ	Q327E QoQ	Q427E QoQ	2027E YoY
Samsung	1.5%	11.5%	15.0%	2.0%	9.7%	1.0%	5.0%	6.8%	4.2%	21.8%	1.9%	4.5%	8.2%	1.3%	18.6%
SK Hynix	-7.0%	25.0%	8.0%	0.8%	24.3%	-0.3%	7.5%	13.4%	6.5%	25.7%	-4.7%	5.8%	5.9%	5.5%	17.5%
Micron	-8.0%	20.3%	15.0%	0.5%	21.8%	5.1%	3.2%	3.4%	4.0%	23.5%	4.0%	5.0%	5.0%	4.0%	17.9%
Nanya Tech	8.4%	68.0%	26.4%	11.9%	54.3%	-6.2%	-3.0%	-6.7%	-6.9%	15.3%	2.5%	5.6%	17.6%	14.9%	9.7%
CXMT	24.8%	8.3%	4.8%	5.1%	100.6%	6.0%	6.8%	7.6%	8.3%	27.8%	8.9%	9.4%	7.3%	5.8%	36.9%
Others	-4.8%	2.5%	2.4%	2.4%	3.1%	-2.3%	0.0%	2.4%	0.0%	2.4%	-2.3%	0.0%	2.4%	0.0%	0.0%
Bit supply Growth	**-1.9%**	**17.7%**	**12.3%**	**1.7%**	**21.1%**	**1.8%**	**5.3%**	**7.7%**	**5.0%**	**23.6%**	**0.8%**	**5.4%**	**6.8%**	**3.7%**	**19.3%**

Source: Gartner, Company data, UBS estimates

Figure 36: DRAM vendors' wafers out (k wpm, 12" equivalent)

	Q125	Q225	Q325	Q425	2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
Samsung	663	667	668	674	668	676	678	685	689	682	695	707	719	731	713
SK Hynix	475	499	519	544	509	564	572	583	600	580	618	636	649	662	641
Micron	315	313	311	309	312	307	307	307	307	307	317	327	337	347	332
Nanya Tech	49	53	59	60	57	60	60	60	60	60	60	63	70	78	70
CXMT	170	190	210	220	198	230	240	250	260	245	270	280	290	300	285
Other	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Total	**1,722**	**1,772**	**1,816**	**1,857**	**1,792**	**1,887**	**1,907**	**1,935**	**1,966**	**1,924**	**2,010**	**2,063**	**2,115**	**2,168**	**2,089**
% YoY	*22.4%*	*17.8%*	*13.7%*	*10.4%*	*15.8%*	*9.6%*	*7.6%*	*6.6%*	*5.9%*	*7.4%*	*6.5%*	*8.2%*	*9.3%*	*10.3%*	*8.6%*

Source: Gartner, Company data, UBS estimates

Figure 37: DRAM bit demand growth by application

	Q125 QoQ	Q225 QoQ	Q325 QoQ	Q425 QoQ	2025 YoY	Q126 QoQ	Q226E QoQ	Q326E QoQ	Q426E QoQ	2026E YoY	Q127E QoQ	Q226E QoQ	Q327E QoQ	Q427E QoQ	2027E YoY
Total PC DRAM	**-6.1%**	**13.8%**	**18.5%**	**3.0%**	**20.2%**	**-15.2%**	**-2.0%**	**1.2%**	**-1.4%**	**-4.6%**	**-10.3%**	**8.8%**	**17.1%**	**7.1%**	**5.0%**
Desktops	0.4%	10.8%	9.3%	5.6%	22.8%	-12.9%	-5.4%	-6.1%	0.2%	-9.7%	-3.9%	8.4%	15.2%	10.7%	8.3%
Notebooks	-8.1%	14.6%	20.7%	2.2%	24.3%	-15.3%	-0.2%	2.5%	-1.1%	-2.3%	-10.3%	9.6%	18.3%	7.7%	7.9%
Upgrade Modules	-8.1%	17.3%	27.5%	1.9%	-10.9%	-20.0%	-8.3%	12.1%	-8.3%	-8.7%	-30.0%	0.0%	10.0%	-18.6%	-32.2%
Servers	**5.4%**	**7.2%**	**35.8%**	**11.0%**	**57.2%**	**0.9%**	**8.2%**	**19.8%**	**9.5%**	**52.1%**	**16.5%**	**15.0%**	**17.7%**	**13.6%**	**73.8%**
Graphics	13.2%	13.4%	17.5%	-1.0%	26.8%	-9.7%	5.3%	13.4%	0.0%	10.5%	-8.4%	4.9%	13.1%	-0.2%	8.8%
Game Consoles	22.7%	4.2%	4.0%	1.9%	18.3%	0.3%	2.3%	4.2%	-8.5%	6.5%	2.3%	2.7%	4.3%	-3.4%	1.5%
HDTVs	-17.5%	1.8%	21.2%	5.8%	9.7%	-21.5%	1.3%	16.2%	14.5%	2.0%	-21.1%	3.4%	15.7%	12.2%	7.2%
Total Mobile DRAM	**-5.6%**	**-1.0%**	**14.1%**	**10.2%**	**15.6%**	**-13.2%**	**-6.2%**	**4.1%**	**12.7%**	**-0.6%**	**-7.5%**	**-2.9%**	**8.1%**	**16.0%**	**7.5%**
Smartphones	**-4.8%**	**-1.4%**	**14.6%**	**10.1%**	**16.7%**	**-13.2%**	**-7.0%**	**4.1%**	**12.9%**	**-1.2%**	**-6.8%**	**-3.5%**	**8.0%**	**16.6%**	**7.8%**
Apple	-31.8%	-5.6%	29.4%	80.5%	31.3%	-32.6%	-5.8%	4.7%	74.7%	28.6%	-32.1%	-5.8%	1.1%	87.0%	17.5%
Samsung	26.2%	-7.0%	11.5%	-2.8%	17.6%	8.3%	-1.4%	7.7%	-10.4%	9.9%	17.3%	-10.4%	13.3%	-11.1%	-17.8%
Non-Apple/Samsung	-3.0%	1.7%	11.8%	-6.1%	12.0%	-9.7%	-9.7%	2.2%	-3.7%	-15.2%	3.1%	1.2%	9.2%	-3.0%	14.0%
Tablet PCs	-16.0%	5.0%	8.9%	10.2%	3.2%	-13.1%	4.0%	5.0%	10.4%	6.7%	-16.2%	5.3%	8.4%	8.9%	3.3%
Others	4.3%	4.0%	2.8%	2.9%	12.2%	3.0%	2.6%	1.8%	7.3%	12.8%	-11.2%	2.7%	3.6%	8.8%	0.8%
Total Bit Demand	**0.2%**	**4.6%**	**19.4%**	**7.9%**	**27.6%**	**-4.8%**	**2.5%**	**10.9%**	**8.7%**	**21.5%**	**2.8%**	**8.7%**	**13.6%**	**12.5%**	**36.2%**

Source: Gartner, Company data, UBS estimates

Figure 38: DRAM content assumptions (MB/unit) by application

	Q125	Q225	Q325	Q425	2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
Total PC	**12,038**	**12,569**	**12,982**	**13,302**	**12,766**	**13,312**	**13,548**	**13,745**	**13,965**	**13,637**	**14,008**	**14,214**	**14,697**	**15,231**	**14,579**
% YoY	*9%*	*12%*	*15%*	*16%*	*13%*	*11%*	*8%*	*6%*	*5%*	*7%*	*5%*	*5%*	*7%*	*9%*	*7%*
Desktops	11,860	12,370	12,422	12,422	12,283	12,422	12,622	12,822	13,022	12,708	13,022	13,222	13,722	14,222	13,589
Notebooks	12,401	13,001	13,601	14,081	13,328	14,081	14,281	14,481	14,681	14,379	14,681	14,881	15,381	15,881	15,252
Upgrade Modules	9,900	10,100	10,300	10,500	10,232	10,500	10,700	10,900	11,100	10,794	11,100	11,100	11,100	11,300	11,144
Servers	**667,847**	**707,847**	**770,462**	**835,999**	**752,630**	**870,999**	**925,999**	**985,999**	**1,050,874**	**963,025**	**1,200,874**	**1,350,874**	**1,500,874**	**1,659,431**	**1,435,222**
% YoY	*17%*	*20%*	*26%*	*34%*	*25%*	*30%*	*31%*	*28%*	*26%*	*28%*	*38%*	*46%*	*52%*	*58%*	*49%*
Smartphones	**7,739**	**7,829**	**8,255**	**8,611**	**8,126**	**8,664**	**8,707**	**8,977**	**9,327**	**8,923**	**9,239**	**9,105**	**9,313**	**10,007**	**9,434**
% YoY	*11%*	*11%*	*13%*	*15%*	*13%*	*12%*	*11%*	*9%*	*8%*	*10%*	*7%*	*5%*	*4%*	*7%*	*6%*
Apple	7,600	7,700	8,940	9,590	8,652	9,690	9,690	10,400	10,800	10,227	11,000	11,000	11,400	12,800	11,711
Samsung	8,619	8,359	8,866	8,764	8,655	9,573	9,357	9,674	9,624	9,557	10,085	9,653	10,161	9,972	7,699
Non-Apple/Samsung	7,500	7,700	7,900	8,100	7,801	8,000	8,100	8,200	8,300	8,144	8,200	8,200	8,300	8,400	8,277

Source: Gartner, Company data, UBS estimates

Figure 39: UBS server DRAM bottom-up model

	2020	2021	2022	2023	2024	2025	2026E	2027E
Total Server shipments (K unit)	**13,550**	**13,967**	**14,943**	**14,087**	**16,025**	**20,078**	**23,874**	**27,844**
% YoY	***7.5%***	***3.1%***	***7.0%***	***-5.7%***	***13.8%***	***25.3%***	***18.9%***	***16.6%***
Traditional enterprise	**5,403**	**5,147**	**5,028**	**4,217**	**4,283**	**4,214**	**4,298**	**4,384**
% YoY	*-5.9%*	*-4.7%*	*-2.3%*	*-16.1%*	*1.6%*	*-1.6%*	*2.0%*	*2.0%*
% of total	*39.9%*	*36.8%*	*33.6%*	*29.9%*	*26.7%*	*21.0%*	*18.0%*	*15.7%*
Hyperscalers	**8,147**	**8,822**	**9,915**	**9,883**	**11,102**	**15,864**	**19,576**	**23,460**
% YoY	*25.2%*	*8.3%*	*12.4%*	*-0.3%*	*12.3%*	*42.9%*	*23.4%*	*19.8%*
% of total	*60.1%*	*63.2%*	*66.4%*	*70.2%*	*69.3%*	*79.0%*	*82.0%*	*84.3%*
Standard servers	**7,355**	**7,914**	**8,916**	**8,841**	**9,265**	**14,363**	**18,138**	**21,501**
% YoY	*23.8%*	*7.6%*	*12.7%*	*-0.8%*	*4.8%*	*55.0%*	*26.3%*	*18.5%*
% of total hyperscalers	*90.3%*	*89.7%*	*89.9%*	*89.5%*	*83.5%*	*90.5%*	*92.7%*	*91.6%*
% of total servers	*54.3%*	*56.7%*	*59.7%*	*62.8%*	*57.8%*	*71.5%*	*76.0%*	*77.2%*
AI Servers	**520**	**630**	**730**	**783**	**1,591**	**1,243**	**1,172**	**1,685**
% YoY	*73.3%*	*21.2%*	*15.9%*	*7.3%*	*103.1%*	*-21.8%*	*-5.7%*	*43.8%*
% of total hyperscalers	*6.4%*	*7.1%*	*7.4%*	*7.9%*	*14.3%*	*7.8%*	*6.0%*	*7.2%*
% of total servers	*3.8%*	*4.5%*	*4.9%*	*5.6%*	*9.9%*	*6.2%*	*4.9%*	*6.1%*
Database servers	**272**	**278**	**270**	**259**	**246**	**258**	**266**	**274**
% YoY	*2.0%*	*2.0%*	*-3.0%*	*-4.0%*	*-5.0%*	*5.0%*	*3.0%*	*3.0%*
% of total hyperscalers	*3.3%*	*3.1%*	*2.7%*	*2.6%*	*2.2%*	*1.6%*	*1.4%*	*1.2%*
% of total servers	*2.0%*	*2.0%*	*1.8%*	*1.8%*	*1.5%*	*1.3%*	*1.1%*	*1.0%*
Avg. DRAM content (GB)	**392**	**457**	**461**	**524**	**576**	**735**	**940**	**1,402**
% YoY	***32.5%***	***16.7%***	***0.9%***	***13.5%***	***9.9%***	***27.7%***	***27.9%***	***49.0%***
Traditional enterprise	**356**	**417**	**420**	**464**	**470**	**480**	**500**	**520**
% YoY	*27.4%*	*17.3%*	*0.7%*	*10.3%*	*1.4%*	*2.1%*	*4.2%*	*4.0%*
Hyperscalers Blended	**416**	**480**	**482**	**549**	**650**	**803**	**1,037**	**1,566**
% YoY	*27.3%*	*15.5%*	*0.4%*	*13.8%*	*18.4%*	*23.5%*	*29.2%*	*51.0%*
Standard servers	**385**	**430**	**432**	**459**	**464**	**480**	**515**	**555**
% YoY	*28.3%*	*11.7%*	*0.5%*	*6.3%*	*1.1%*	*3.4%*	*7.3%*	*7.8%*
AI servers	**600**	**840**	**860**	**1,348**	**1,647**	**4,435**	**9,048**	**14,493**
% YoY	*7.1%*	*40.0%*	*2.4%*	*56.8%*	*22.1%*	*169.3%*	*104.0%*	*60.2%*
Database Servers	**900**	**1,100**	**1,120**	**1,200**	**1,210**	**1,280**	**1,340**	**1,420**
% YoY	*36.4%*	*22.2%*	*1.8%*	*7.1%*	*0.8%*	*5.8%*	*4.7%*	*6.0%*
Total DRAM Demand (mn Gb)	**42,491**	**51,095**	**55,158**	**59,039**	**73,831**	**118,088**	**179,621**	**312,207**
% YoY	***42.3%***	***20.2%***	***8.0%***	***7.0%***	***25.1%***	***59.9%***	***52.1%***	***73.8%***
Total DDR Demand (mn Gb)	**42,491**	**51,095**	**55,158**	**56,355**	**65,224**	**100,602**	**146,482**	**253,560**
% YoY	***42.3%***	***20.2%***	***8.0%***	***2.2%***	***15.7%***	***54.2%***	***45.6%***	***73.1%***
Traditional enterprise	**15,382**	**17,191**	**16,908**	**15,641**	**16,106**	**16,181**	**17,193**	**18,238**
% YoY	*19.8%*	*11.8%*	*-1.6%*	*-7.5%*	*3.0%*	*0.5%*	*6.3%*	*6.1%*
Hyperscalers	**27,110**	**33,904**	**38,250**	**43,398**	**57,725**	**101,907**	**162,428**	**293,969**
% YoY	*59.3%*	*25.1%*	*12.8%*	*13.5%*	*33.0%*	*76.5%*	*59.4%*	*81.0%*
Standard servers	**22,652**	**27,225**	**30,813**	**32,465**	**34,393**	**55,152**	**74,728**	**95,464**
% YoY	*58.9%*	*20.2%*	*13.2%*	*5.4%*	*5.9%*	*60.4%*	*35.5%*	*27.7%*
AI servers	**2,496**	**4,234**	**5,022**	**8,448**	**20,952**	**44,111**	**84,850**	**195,394**
% YoY	*85.7%*	*69.6%*	*18.6%*	*68.2%*	*148.0%*	*110.5%*	*92.4%*	*130.3%*
HBM DRAM Demand				***2,684***	***8,607***	***17,486***	***33,139***	***58,648***
% YoY					*220.7%*	*103.2%*	*89.5%*	*77.0%*
DDR DRAM Demand				***6,081***	***12,345***	***26,625***	***51,711***	***136,746***
% YoY					*103.0%*	*115.7%*	*94.2%*	*164.4%*
LPDDR / SOCAMM Demand					***468***	***7,613***	***15,179***	***33,798***
% YoY						*1527.9%*	*99.4%*	*122.7%*
Database Servers	**1,962**	**2,445**	**2,415**	**2,484**	**2,380**	**2,643**	**2,850**	**3,111**
% YoY	*39.1%*	*24.7%*	*-1.2%*	*2.9%*	*-4.2%*	*11.1%*	*7.8%*	*9.1%*

Source: Dell'Oro Group, Gartner, Company data, UBS estimates

Figure 40: UBS bottom-up server procurement model (k units)

(K Units)	2022	2023	2024	2025	1Q26	2Q26E	3Q26E	4Q26E	2026E	1Q27E	2Q27E	3Q27E	4Q27E	2027E
Quarterly														
Alphabet	1,039	1,085	1,247	1,845	530	600	580	640	2,350	720	720	760	750	2,950
AWS	2,237	2,131	2,276	3,087	940	960	1,020	1,000	3,920	1,150	1,180	1,250	1,240	4,820
Microsoft	1,056	1,274	1,468	2,457	680	760	830	820	3,090	850	920	1,000	970	3,740
Meta	2,192	2,027	2,188	3,409	950	1,080	1,100	1,050	4,180	1,200	1,280	1,250	1,260	4,990
Baidu	71	70	37	30	10	10	11	10	41	13	14	13	12	52
Alibaba	376	188	305	456	135	145	155	160	595	158	167	175	180	680
Tencent	118	149	303	268	75	82	88	82	327	82	92	100	95	369
ByteDance	358	550	770	1,306	360	420	430	440	1,650	450	480	520	490	1,940
Total Top 8	**7,448**	**7,473**	**8,594**	**12,858**	**3,680**	**4,057**	**4,214**	**4,202**	**16,153**	**4,623**	**4,853**	**5,068**	**4,997**	**19,541**
% YoY	*13.5%*	*0.3%*	*15.0%*	*49.6%*	*28.2%*	*31.7%*	*25.0%*	*18.8%*	*25.6%*	*25.6%*	*19.6%*	*20.3%*	*18.9%*	*21.0%*
% QoQ					*4.1%*	*10.2%*	*3.9%*	*-0.3%*		*10.0%*	*5.0%*	*4.4%*	*-1.4%*	
Others	2,468	2,410	2,901	1,879	787	839	889	908	3,423	922	999	1,021	977	3,919
Total hyperscale	**9,915**	**9,883**	**11,494**	**14,737**	**4,467**	**4,896**	**5,103**	**5,110**	**19,576**	**5,545**	**5,852**	**6,089**	**5,974**	**23,460**
% YoY	*12.4%*	*-0.3%*	*16.3%*	*28.2%*	*38.8%*	*51.2%*	*26.5%*	*20.3%*	*32.8%*	*24.1%*	*19.5%*	*19.3%*	*16.9%*	*19.8%*
% QoQ					*5.2%*	*9.6%*	*4.2%*	*0.1%*		*8.5%*	*5.5%*	*4.0%*	*-1.9%*	
YoY (%)														
Alphabet	*24.0%*	*4.4%*	*15.0%*	*48.0%*	*51.8%*	*6.8%*	*26.9%*	*34.1%*	*27.3%*	*35.8%*	*20.0%*	*31.0%*	*17.2%*	*25.5%*
AWS	*24.5%*	*-4.7%*	*6.8%*	*35.6%*	*40.0%*	*63.4%*	*20.0%*	*2.3%*	*27.0%*	*22.3%*	*22.9%*	*22.5%*	*24.0%*	*23.0%*
Microsoft	*-2.9%*	*20.6%*	*15.3%*	*67.4%*	*17.9%*	*29.3%*	*20.4%*	*35.9%*	*25.7%*	*25.0%*	*21.1%*	*20.5%*	*18.3%*	*21.0%*
Meta	*20.7%*	*-7.5%*	*8.0%*	*55.8%*	*23.0%*	*21.3%*	*23.9%*	*22.4%*	*22.6%*	*26.3%*	*18.5%*	*13.6%*	*20.0%*	*19.4%*
Baidu	*-34.0%*	*-1.6%*	*-47.9%*	*-16.5%*	*44.8%*	*42.5%*	*3.4%*	*68.6%*	*34.5%*	*30.0%*	*40.0%*	*18.2%*	*20.0%*	*26.8%*
Alibaba	*-10.6%*	*-50.2%*	*62.5%*	*49.6%*	*81.9%*	*10.3%*	*41.3%*	*13.8%*	*30.5%*	*17.0%*	*15.2%*	*12.9%*	*12.5%*	*14.3%*
Tencent	*-56.1%*	*25.9%*	*103.3%*	*-11.6%*	*2.3%*	*42.6%*	*103.2%*	*-12.2%*	*22.2%*	*9.3%*	*12.2%*	*13.6%*	*15.9%*	*12.8%*
ByteDance	*60.6%*	*53.8%*	*39.9%*	*69.7%*	*4.0%*	*63.3%*	*32.9%*	*16.0%*	*26.3%*	*25.0%*	*14.3%*	*20.9%*	*11.4%*	*17.6%*

Source: Dell'Oro Group, company data, UBS estimates

Figure 41: UBS NAND Flash supply/demand summary

	Q125	Q225	Q325	Q425	2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
Revenues ($ mil)	**12,302**	**14,726**	**16,969**	**21,320**	**65,317**	**37,952**	**66,964**	**90,474**	**104,858**	**300,248**	**114,673**	**123,798**	**135,805**	**140,845**	**515,120**
% QoQ	*-20.1%*	*19.7%*	*15.2%*	*25.6%*		*78.0%*	*76.4%*	*35.1%*	*15.9%*		*9.4%*	*8.0%*	*9.7%*	*3.7%*	
% YoY	*-1.0%*	*-1.1%*	*4.9%*	*38.5%*	*10.9%*	*208.5%*	*354.7%*	*433.2%*	*391.8%*	*359.7%*	*202.2%*	*84.9%*	*50.1%*	*34.3%*	*71.6%*
Supply (Shipments Based) (M 1GB)	**201,828**	**247,795**	**271,936**	**273,324**	**994,882**	**270,305**	**285,595**	**301,455**	**314,758**	**1,172,113**	**330,982**	**340,303**	**362,436**	**375,886**	**1,409,606**
% QoQ	*-6.0%*	*22.8%*	*9.7%*	*0.5%*		*-1.1%*	*5.7%*	*5.6%*	*4.4%*		*5.2%*	*2.8%*	*6.5%*	*3.7%*	
% YoY	*-6.3%*	*15.1%*	*25.6%*	*27.3%*	*15.4%*	*33.9%*	*15.3%*	*10.9%*	*15.2%*	*17.8%*	*22.4%*	*19.2%*	*20.2%*	*19.4%*	*20.3%*
Demand (End Consumption) (M 1GB)	**235,552**	**242,791**	**280,969**	**321,309**	**1,080,621**	**298,176**	**303,627**	**327,635**	**367,018**	**1,296,456**	**354,680**	**371,823**	**408,221**	**460,507**	**1,595,232**
% QoQ	*-8.1%*	*3.1%*	*15.7%*	*14.4%*		*-7.2%*	*1.8%*	*7.9%*	*12.0%*		*-3.4%*	*4.8%*	*9.8%*	*12.8%*	
% YoY	*11.4%*	*13.0%*	*20.1%*	*25.4%*	*17.9%*	*26.6%*	*25.1%*	*16.6%*	*14.2%*	*20.0%*	*18.9%*	*22.5%*	*24.6%*	*25.5%*	*23.0%*
Inventory adjustment	-39,600	3,700	-6,200	-33,500	-75,600	23,500	26,500	-8,000	-45,500	-3,500	-20,500	-28,000	-43,200	-84,500	-176,200
Inventory Adj. Demand (M 1GB)	**195,952**	**246,491**	**274,769**	**287,809**	**1,005,021**	**321,676**	**330,127**	**319,635**	**321,518**	**1,292,956**	**334,180**	**343,823**	**365,021**	**376,007**	**1,419,032**
% QoQ	*-8.0%*	*25.8%*	*11.5%*	*4.7%*		*11.8%*	*2.6%*	*-3.2%*	*0.6%*		*3.9%*	*2.9%*	*6.2%*	*3.0%*	
% YoY	*-14.3%*	*9.9%*	*24.6%*	*35.1%*	*13.4%*	*64.2%*	*33.9%*	*16.3%*	*11.7%*	*28.6%*	*3.9%*	*4.1%*	*14.2%*	*16.9%*	*9.8%*
Wafer out (k wpm, 12" equi.)	**1,418**	**1,288**	**1,268**	**1,313**	**1,322**	**1,366**	**1,343**	**1,338**	**1,351**	**1,349**	**1,361**	**1,357**	**1,353**	**1,349**	**1,355**
% QoQ	*-0.4%*	*-9.2%*	*-1.5%*	*3.5%*		*4.1%*	*-1.7%*	*-0.4%*	*1.0%*		*0.7%*	*-0.3%*	*-0.3%*	*-0.3%*	
% YoY	*23.7%*	*2.5%*	*-5.8%*	*-7.8%*	*2.2%*	*-3.6%*	*4.3%*	*5.5%*	*2.9%*	*2.1%*	*-0.4%*	*1.0%*	*1.1%*	*-0.2%*	*0.4%*
% Sufficiency Ratio	***3.0%***	***0.5%***	***-1.0%***	***-5.0%***	***-1.0%***	***-16.0%***	***-13.5%***	***-5.7%***	***-2.1%***	***-9.3%***	***-1.0%***	***-1.0%***	***-0.7%***	***0.0%***	***-0.7%***
NAND ASP ($/1GB)	**0.06**	**0.06**	**0.06**	**0.08**	**0.07**	**0.14**	**0.23**	**0.30**	**0.33**	**0.26**	**0.35**	**0.36**	**0.37**	**0.37**	**0.37**
% QoQ	*-15.0%*	*-2.5%*	*5.0%*	*25.0%*		*80.0%*	*67.0%*	*28.0%*	*11.0%*		*4.0%*	*5.0%*	*3.0%*	*0.0%*	
% YoY	*5.8%*	*-14.1%*	*-16.5%*	*8.8%*	*-3.9%*	*130.3%*	*294.5%*	*381.0%*	*327.1%*	*290.2%*	*146.8%*	*55.2%*	*24.8%*	*12.5%*	*42.7%*

Source: Company data, UBS estimates

Figure 42: NAND Flash vendors' market share in bit shipments

	Q125	Q225	Q325	Q425	2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
Samsung	31.0%	31.8%	31.8%	28.5%	30.7%	31.0%	29.9%	29.0%	29.0%	29.7%	29.1%	29.1%	28.8%	28.2%	28.8%
Kioxia	15.3%	12.5%	15.5%	16.2%	14.9%	14.7%	14.6%	14.9%	15.0%	14.8%	16.0%	14.8%	14.5%	14.7%	15.0%
SanDisk	13.2%	11.2%	11.7%	12.0%	12.0%	11.6%	11.5%	12.5%	12.0%	11.9%	10.8%	11.1%	11.9%	12.3%	11.6%
SK Hynix	12.8%	18.2%	15.7%	17.1%	16.1%	15.5%	16.9%	16.5%	16.7%	16.4%	16.2%	16.8%	16.7%	16.5%	16.6%
Micron	14.1%	14.3%	12.6%	13.1%	13.5%	13.7%	13.6%	13.7%	13.9%	13.8%	13.6%	13.7%	13.2%	13.2%	13.4%
YMTC	12.5%	11.3%	11.9%	12.2%	12.0%	12.7%	12.6%	12.6%	12.7%	12.7%	13.5%	14.0%	14.1%	14.4%	14.0%
Total Bit Supply	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Gartner, company data, UBS estimates

Figure 43: NAND Flash bit shipments QoQ and YoY growth

	Q125 QoQ	Q225 QoQ	Q325 QoQ	Q425 QoQ	2025 YoY	Q126 QoQ	Q226E QoQ	Q327E QoQ	Q428E QoQ	2026E YoY	Q127E QoQ	Q227E QoQ	Q327E QoQ	Q427E QoQ	2027E YoY
Samsung	-10.0%	25.9%	10.0%	-10.0%	3.0%	7.5%	2.0%	2.3%	4.2%	13.8%	5.8%	2.6%	5.6%	1.7%	16.7%
Kioxia	-10.0%	0.0%	36.0%	5.0%	13.5%	-10.0%	5.0%	8.0%	5.0%	17.4%	11.7%	-5.0%	5.0%	5.0%	21.4%
SanDisk	-6.0%	4.0%	15.0%	3.0%	17.7%	-5.0%	5.0%	15.0%	0.0%	17.0%	-5.0%	5.0%	15.0%	7.0%	16.9%
SK Hynix	-16.9%	73.6%	-5.0%	9.6%	11.8%	-10.4%	15.0%	2.7%	5.8%	19.8%	2.3%	6.5%	6.0%	2.5%	21.5%
Micron	3.5%	24.3%	-3.3%	5.0%	25.6%	3.4%	5.0%	6.0%	6.0%	20.4%	3.0%	3.0%	3.0%	3.4%	17.2%
YMTC	15.7%	10.6%	15.5%	3.5%	57.3%	2.3%	5.5%	5.3%	5.2%	24.5%	12.0%	6.2%	7.6%	5.5%	33.1%
Total Bit Supply	**-6.0%**	**22.8%**	**9.7%**	**0.5%**	**15.4%**	**-1.1%**	**5.7%**	**5.6%**	**4.4%**	**17.8%**	**5.2%**	**2.8%**	**6.5%**	**3.7%**	**20.3%**

Source: Gartner, company data, UBS estimates

Figure 44: NAND Flash vendors wafers out (k wpm, 12" equivalent)

	Q125	Q225	Q325	Q425	2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
Samsung	471	449	423	409	438	412	405	400	400	404	398	393	388	383	390
Kioxia / SanDisk	470	400	400	441	428	480	470	460	450	465	450	450	450	450	450
SK Hynix	216	189	185	186	194	185	178	183	201	186	208	204	200	196	202
Micron	132	111	111	117	118	130	130	130	130	130	130	130	130	130	130
YMTC	130	140	150	160	145	160	160	165	170	164	175	180	185	190	183
Total	**1,418**	**1,288**	**1,268**	**1,313**	**1,322**	**1,366**	**1,343**	**1,338**	**1,351**	**1,349**	**1,361**	**1,357**	**1,353**	**1,349**	**1,355**
% YoY	*23.7%*	*2.5%*	*-5.8%*	*-7.8%*	*2.2%*	*-3.6%*	*4.3%*	*5.5%*	*2.9%*	*2.1%*	*-0.4%*	*1.0%*	*1.1%*	*-0.2%*	*0.4%*

Source: Gartner, company data, UBS estimates

Figure 45: NAND Flash bit demand growth by application

	Q125 QoQ	Q225 QoQ	Q325 QoQ	Q425 QoQ	2025 YoY	Q126 QoQ	Q226E QoQ	Q327E QoQ	Q428E QoQ	2026E YoY	Q127E QoQ	Q227E QoQ	Q327E QoQ	Q427E QoQ	2027E YoY
Total Embedded	**-8.3%**	**3.1%**	**16.1%**	**14.8%**	**18.5%**	**-7.2%**	**1.9%**	**8.1%**	**12.3%**	**20.7%**	**-3.3%**	**5.0%**	**10.0%**	**13.1%**	**23.9%**
Smartphones	**-11.3%**	**-6.3%**	**17.3%**	**26.6%**	**16.9%**	**-21.7%**	**-6.2%**	**2.1%**	**30.7%**	**2.1%**	**-16.7%**	**-4.6%**	**6.2%**	**32.4%**	**8.3%**
iPhones	-29.0%	-7.7%	24.8%	69.7%	28.1%	-33.6%	-5.0%	-1.6%	70.4%	15.5%	-32.8%	-5.0%	1.3%	73.4%	9.5%
Samsung	42.2%	-13.4%	10.1%	-8.2%	15.0%	16.2%	-7.4%	7.5%	-12.7%	4.2%	32.6%	-15.9%	10.4%	-12.3%	8.9%
Non- iPhone/Samsung	-5.6%	-0.9%	13.2%	-5.0%	5.5%	-15.1%	-7.4%	4.7%	-1.4%	-16.6%	-2.8%	4.9%	11.7%	-0.8%	5.7%
Tablet PCs	-21.6%	10.0%	9.5%	17.2%	6.4%	-20.2%	12.0%	3.9%	17.5%	11.0%	-24.4%	13.1%	10.6%	14.3%	6.9%
SSD-Total	**-6.9%**	**7.5%**	**18.9%**	**11.2%**	**21.8%**	**-0.3%**	**4.0%**	**11.3%**	**6.9%**	**31.7%**	**3.8%**	**8.2%**	**12.1%**	**9.1%**	**33.7%**
SSD (notebooks)	-13.7%	9.3%	15.3%	-1.3%	9.0%	-14.1%	-0.3%	2.4%	0.0%	-6.2%	-10.2%	9.4%	15.7%	6.7%	6.9%
SSD (servers)	-4.0%	9.4%	36.0%	22.6%	45.1%	0.4%	5.5%	16.4%	8.3%	56.3%	9.2%	9.2%	12.8%	9.1%	47.0%
SSD (storage)	10.5%	7.9%	8.0%	10.1%	47.9%	15.2%	8.6%	8.2%	7.8%	47.7%	7.5%	9.7%	9.2%	8.8%	38.3%
SSD (others)	-14.6%	1.4%	-0.5%	0.2%	-12.8%	1.3%	-0.5%	8.8%	8.8%	8.0%	-6.0%	0.2%	9.4%	12.2%	12.5%
Total Flash cards	**-0.4%**	**1.6%**	**2.2%**	**-3.4%**	**-0.4%**	**-5.4%**	**-2.8%**	**-1.6%**	**-2.9%**	**-9.8%**	**-8.1%**	**-6.8%**	**-4.4%**	**-10.8%**	**-20.0%**
Mobile Phones - Flash cards	-6.3%	-1.5%	5.3%	-1.6%	-0.8%	-3.7%	-6.8%	1.5%	-7.4%	-8.8%	7.1%	-0.3%	6.7%	-6.1%	1.4%
Total Bit Demand	**-8.1%**	**3.1%**	**15.7%**	**14.4%**	**17.9%**	**-7.2%**	**1.8%**	**7.9%**	**12.0%**	**20.0%**	**-3.4%**	**4.8%**	**9.8%**	**12.8%**	**23.0%**

Source: Gartner, company data, UBS estimates

Figure 46: NAND Flash content assumptions (GB/unit) by application

	Q125	Q225	Q325	Q425	2025	Q126	Q226E	Q326E	Q426E	2026E	Q127E	Q227E	Q327E	Q427E	2027E
Smartphones - Blended	**198**	**193**	**216**	**251**	**216**	**223**	**224**	**227**	**276**	**238**	**243**	**235**	**238**	**293**	**253**
% YoY	*14%*	*14%*	*11%*	*22%*	*15%*	*12%*	*16%*	*5%*	*10%*	*10%*	*9%*	*5%*	*5%*	*6%*	*6%*
iPhones	517	512	573	579	538	576	581	586	594	572	599	604	627	653	610
Samsung	225	203	213	198	210	232	213	220	213	220	253	227	233	226	235
Non- iPhone/Samsung	127	127	132	137	131	127	132	137	142	134	132	137	142	146	139
SSD - Notebook PCs	**643**	**639**	**674**	**676**	**659**	**663**	**658**	**686**	**706**	**678**	**695**	**681**	**710**	**734**	**706**
% YoY	*2%*	*3%*	*2%*	*0%*	*2%*	*3%*	*3%*	*2%*	*4%*	*3%*	*5%*	*3%*	*4%*	*4%*	*4%*
SSD - Servers	**3,433**	**3,775**	**4,117**	**4,780**	**4,083**	**4,877**	**4,975**	**5,073**	**5,268**	**5,060**	**5,561**	**5,854**	**6,147**	**6,440**	**6,019**
% YoY	*12%*	*23%*	*34%*	*55%*	*33%*	*42%*	*32%*	*23%*	*10%*	*24%*	*14%*	*18%*	*21%*	*22%*	*19%*
SSD - Storage	**12,383**	**13,359**	**14,434**	**15,885**	**14,015**	**16,862**	**17,838**	**18,815**	**19,791**	**18,357**	**20,768**	**21,744**	**22,721**	**23,697**	**22,287**
% YoY	*57%*	*47%*	*41%*	*39%*	*45%*	*36%*	*34%*	*30%*	*25%*	*31%*	*23%*	*22%*	*21%*	*20%*	*21%*

Source: Gartner, company data, UBS estimates

Valuation Method and Risk Statement

Investing in the technology sector involves a high degree of risk. Rapid technological changes, increasing competition and exposure to macroeconomic cycles are among the many risks faced by investors in technology stocks. Moreover, it is extremely difficult to project the financial results of tech companies since their operating models are highly volatile and unpredictable. Finally, valuing technology stocks can prove challenging, as neither traditional nor non-traditional valuation measures have provided much insight into how these stocks trade.

Samsung: Some of Samsung's operating profit comes from mobile phones directly (and more indirectly for components) where we see revenue growth for the industry decelerating as the smartphone market starts to mature. The industry is characterized by product cycles, intense competition and requires significant scale and ongoing expenses for marketing/promotional activities. Some of its divisions (Memory and Display Panels) operate in industries which are cyclical and characterized by fluctuations in supply, demand and capital spending. Both industries have commodity-like features – although it is to be noted that the DRAM industry is now operating with significantly fewer players than before. Whilst overall cyclical risks have decreased longer term for DRAM (our "Goldilocks scenario"), cyclical corrections will likely occur. Consumer exposure overall at Samsung is universally high across products, although well balanced in terms of geographies. Strength in the Korean Won vs. major currencies can penalize earnings. Being a large component of the KOSPI, Samsung faces country risks as well indirectly. Corporate governance risks re the Samsung group center around some degree of opacity in decision-making, and limited consideration for shareholder returns (this may change). On the flipside, Samsung Electronics is the "crown jewel" of the group and its interests tend to supersede those of other Samsung companies. We value Samsung Electronics ordinary shares using a 12-month forward target P/BV multiple based on long-term average ROE and cost of equity. Our GDR price target comes from using a conversion ratio of 25 from Samsung ordinary shares (005930.KS) and the latest FX.

SK Hynix: Whilst overall cyclical risks have decreased longer term for DRAM (our "Goldilocks scenario"), amidst significant consolidation (3 players, from 15 in 1998) and lower growth, cyclical corrections will still occur as the sector retains commodity-like characteristics. The NAND flash industry structure has not changed as dramatically, but the coming rollout of 3D NAND flash manufacturing is restraining the players' willingness to add large increments of capacity at 2D. That being said, both segments are sensitive in particular to smartphones/tablets demand, mix within those segments, and to a lesser extent enterprise spend (enterprise solid state drives, servers). The industry also remains capital-intensive, and with contract prices negotiated every 2 weeks to 3 months, cash flows can change quickly – so adequate capitalization is required. Lastly, the industry may have to move to new memory technologies longer term to supplement, if not replace, current silicon-based Flash and RAM memory structures. We value SK Hynix shares using a 12-month forward target P/BV multiple based on long-term average ROE and cost of equity.

Micron: Memory industry is highly volatile. To arrive at our PT we use a SOTP valuation method. Memory has been fairly correlated to global GDP. Therefore from a macro perspective there could be potential downside to our PT should economic conditions worsen and leading to demand destruction. Should ASP declines be more severe than our expectations, there could be more downside in the stock. Scaling both DRAM and NAND is highly complex and risks on the Technology front abound. There could be further downside should technology migration be slower than we expect. On the upside, while we expect ASPs to decline on account of incremental supply addition, any delays to the timelines could moderate the growth of supply and create an upward bias to ASPs and MU. Other risks include a faster than expected adoption of AI driving up memory content in servers and cars.

Nanya Tech: Nanya Tech is a pure-play DRAM manufacturer based in Taiwan mainly focused on legacy DDR products for customers across various end applications. We think downside risks to our thesis could include a potential slowdown in end demand and hence the conventional memory cycle as well as Nanya's legacy-centric product portfolio. We value Nanya Tech shares using a 12-month forward target P/BV multiple based on long-term average ROE and cost of equity.

Kioxia: 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.