Memory Semis Monthly

June '26 Edition: Near-term pullback an opportunity

Equities

Global

Semiconductors

Nicolas Gaudois
Analyst
nicolas.gaudois@ubs.com
+65-6495 5148

Timothy Arcuri
Analyst
timothy.arcuri@ubs.com
+1-415-352 5676

Kenji Yasui
Analyst
kenji.yasui@ubs.com
+81-3-5208 6211

Jimmy Yoon
Analyst
jimmy.yoon@ubs.com
+65-6495 4617

Luke Yoo
Analyst
luke.yoo@ubs.com
+65-6495 6743

Gianmarco Vella
Associate Analyst
gianmarco.vella@ubs.com
+1-415-352 4555

Jimmy Yu
Analyst
S1460517080002
jimmy.yu@ubs.com
+86-21-3866 8880

Randy Abrams
Analyst
randy.abrams@ubs.com
+886-2-8722 7338

Francois-Xavier Bouvignies
Analyst
francois.bouvignies@ubs.com
+44-20-7568 7105

Sunny Lin
Analyst
sunny.lin@ubs.com
+886-2-8722 7346

Vera CPU SOCAMM2 content lower, but orders trending higher

Based on our checks, we believe Nvidia may have recently finalized the decision to lower the Small Outline Compression Attached Memory Module (SOCAMM2) specs associated with the coming Vera CPU to 768GB from 1.5TB prior (96GB modules vs 192GB). We believe the decision to adjust specs may have been made to: 1) balance tight S/D for DRAM on the back of upside to both HBM + server DDR5 and to ensure SOCAMM2 doesn't potentially bottleneck the rollout of VR200; but also 2) address demand upside for stand-alone Vera CPU units/racks, with agentic AI workloads increasingly relying on CPUs. We believe Nvidia's recent US$20bn revenue opportunity announcement for standalone Vera CPU units (for FY27) implies an incremental addition of c. >1.0m Vera CPU units in CY26 on top of our assumption for Vera CPU units tied with Rubin GPU for VR200 (UBSe c. 1.0m units assuming 28k VR200 NVL72 racks on a memory procurement basis in 2026E). On aggregate, this would suggest an uplift in Vera CPU units to c. >2.0m for 2026E (assuming inventory build ahead of UBSe CoWoS output of 1.6m) with 768GB SOCAMM2 content vs c. 1.0m units with 1.5TB SOCAMM2, representing a net neutral to slight accretion in SOCAMM2 demand for 2026E. We believe Vera CPU used for Rubin Ultra in 2H27 could end up using 1.5TB (192GB modules) from 3.0TB, with demand upside potentially coming from SOCAMM2 replacements for RV200 later to 1.5TB. As we incorporate in our forecasts procurement for 4.5k/13.5k stand-alone Vera server racks (assuming 256x CPUs per rack; 1.2m/3.5m CPU units) in 2026 and 2027, our overall server DDR demand forecast moves to 145.3bn Gb from 144.4bn Gb in 2026 (+1%), and 252.0bn Gb from 246.0bn Gb in 2027 (+2%).

Increasing DDR/NAND contract pricing forecasts, LTA negotiations continuing

We now forecast ex LTA DDR contract pricing up +67% QoQ in 2Q26 (was +65%), +17% QoQ in 3Q26 (was +10%) and +12% QoQ in 4Q26 (was +7%). The fixed portion of LTAs may slightly lower those sequentials depending upon mix. For NAND, we move to +70% QoQ in 2Q (was +65%), +17% in 3Q (was +10%) and +12% in 4Q (+7%). This is on the back of demand continuing to far outstrip supply. Meanwhile, enhanced LTA negotiations continue. We believe so far, those remain more centered on hyperscalers, with OEM ones mostly still being negotiated, and only for the largest ones. Memory vendors target to have 50% to 60% of server DDR5 volumes under revised LTAs (of which 60-70% volumes/pricing fixed), lower for OEMs.

HBM ASPs likely to rise significantly in 2027E

We now forecast blended industry HBM ASPs up 66% YoY in 2027 (was +60%). Our checks indicate momentum is gathering, as DDR5 pricing keeps getting revised up. We believe HBM4E pricing for 2027 is moving closer to US$3.5 per Gb, and HBM4 US$3.0 (from US$2.1 in 2026). This implies HBM4E up 64% YoY vs HBM4 (2026 base), and HBM4 up 41% YoY in 2027. We now also forecast server DDR5 pricing close to US$2.7 per Gb (US$2.6 incl LTA) by 4Q27, which suggests upside to HBM pricing is possible.

Increasing forecasts and PTs

Memory stocks pulled back last week post a strong rally, rising US treasury yields, AVGO results and the SOCAMM2 concerns. Fundamentally though, our checks point to continuing upside in demand, not downside, which is likely to persist on agentic AI demand (link). We continue to prefer Samsung (Key Call Buy; PT from Won400k to Won550k) and also like Buy-rated SK Hynix (PT from Won2.25m to Won3.00m), MU (PT US$1,625), Kioxia (PT ¥79,000), and Nanya Tech (PT NT$345 to 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 15.**

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	270.0	217.0	116.0	870.0	50.0				50.0
GB300 (2x GPU - 12Hi)	HBM3E	576	576	576	778.2	658.0	700.0	560.0	420.0	2,338.0	350.0	200.0	150.0	100.0	800.0
R200 (12Hi)	HBM4	288	288	288			20.0	200.0	320.0	540.0	350.0	380.0	250.0	200.0	1,180.0
RV200 (2x GPU - 12Hi)	HBM4	576	576	576			40.0	370.0	590.0	1,000.0	740.0	890.0	870.0	720.0	3,220.0
Rubin Ultra (16Hi)	HBM4E		768	768									280.0	670.0	950.0
*Other GPU/Accel	HBM3 / 3E	288	384	576	106.9	60.0	80.0	80.0	80.0	300.0	60.0	50.0	40.0	40.0	190.0
Total Units					**5,065.6**	**1,087.9**	**1,110.0**	**1,427.0**	**1,526.0**	**5,150.9**	**1,550.0**	**1,520.0**	**1,590.0**	**1,730.0**	**6,390.0**
% YoY					*3.2%*	*-17.2%*	*0.0%*	*11.9%*	*11.8%*	*1.7%*	*42.5%*	*36.9%*	*11.4%*	*13.4%*	*24.1%*
% QoQ						*-20.3%*	*2.0%*	*28.6%*	*6.9%*		*1.6%*	*-1.9%*	*4.6%*	*8.8%*	
Total GPUs					**6,924.3**	**1,848.8**	**1,850.0**	**2,357.0**	**2,536.0**	**8,591.8**	**2,640.0**	**2,610.0**	**3,450.0**	**4,560.0**	**13,260.0**
% YoY					*37.9%*	*27.2%*	*24.9%*	*26.5%*	*19.3%*	*24.1%*	*42.8%*	*41.1%*	*46.4%*	*79.8%*	*54.3%*
% QoQ						*-13.0%*	*0.1%*	*27.4%*	*7.6%*		*4.1%*	*-1.1%*	*32.2%*	*32.2%*	
AMD															
MI300	HBM3	192	192		71.3										
MI325X (12Hi)	HBM3E	256	256		223.8	21.4				21.4					
MI355X (12Hi)	HBM3E	288	288	288	220.7	203.3	176.3	83.0		462.6					
MI308X	HBM3	192	192	192	95.8	29.0	33.0	5.0		67.0					
MI450 (12Hi)	HBM4		432	432				80.0	180.0	260.0	200.0	320.0	290.0	220.0	1,030.0
MI5XX (16Hi)	HBM4E			1024									60.0	200.0	260.0
*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**	**255.2**	**210.8**	**169.4**	**181.5**	**816.9**	**202.0**	**322.0**	**352.0**	**422.0**	**1,298.0**
% YoY					*41.1%*	*111.4%*	*119.0%*	*-5.3%*	*-17.5%*	*32.6%*	*-20.8%*	*52.7%*	*107.7%*	*132.6%*	*58.9%*
% QoQ						*16.0%*	*-17.4%*	*-19.6%*	*7.1%*		*11.3%*	*59.4%*	*9.3%*	*19.9%*	
Google															
TPU v5e	HBM2E	32	32		134										
TPU v5p	HBM2E	96	96		1,916										
TPU v6e	HBM3E	32	32	32	426	269	294	185	92	840					
TPU v7	HBM3E	192	192	192	90	420	650	720	730	2,520	660	480	320	210	1,670
TPU v8i (Dual die AX)	HBM3E		288	288				125	375	500	690	800	850	740	3,080
TPU v8t (Single die X)	HBM3E		216	216				110	340	450	670	770	820	720	2,980
TPU v9AX	HBM4E		768	768										90	90
TPU v9X	HBM4E		384	384										70	70
*Other TPU/Accel	HBM3	96	144	144	77	14	19	17	23	73	15	15	15	15	60
Total Units					**2,642.5**	**702.6**	**962.9**	**1,156.9**	**1,560.5**	**4,382.8**	**2,035.0**	**2,065.0**	**2,005.0**	**1,845.0**	**7,950.0**
% YoY					*18.6%*	*9.7%*	*67.7%*	*101.7%*	*82.6%*	*65.9%*	*189.6%*	*114.5%*	*73.3%*	*18.2%*	*81.4%*
% QoQ						*-17.8%*	*37.0%*	*20.1%*	*34.9%*		*30.4%*	*1.5%*	*-2.9%*	*-8.0%*	
Amazon															
Inferentia 2	HBM2E	32	32		88										
Trainium 2 / 2.5	HBM3E	96	144	144	496	180	250	180	140	750	80	40			120
Inferentia 3	HBM3	96	96	96	162	38	32	20	15	105	15	10			25
Trainium 3	HBM3E	144	144	144				350	553	903	500	430	200	150	1,280
Trainium 4	HBM4		256	256									250	490	740
*Other Accel	HBM3	144	144	144	37	7	8	11	14	40	9	9	9	9	36
Total Units					**783.2**	**224.5**	**290.5**	**561.0**	**722.4**	**1,798.4**	**604.0**	**489.0**	**459.0**	**649.0**	**2,201.0**
% YoY					*-7.7%*	*13.8%*	*41.6%*	*186.1%*	*291.1%*	*129.6%*	*169.0%*	*68.4%*	*-18.2%*	*-10.2%*	*22.4%*
% QoQ						*21.6%*	*29.4%*	*93.1%*	*28.8%*		*-16.4%*	*-19.0%*	*-6.1%*	*41.4%*	
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	60	80	120	300
*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**	**95.0**	**105.0**	**140.0**	**425.0**
% YoY					*19.3%*	*-43.2%*	*-71.1%*	*-71.4%*	*-68.3%*	*-64.6%*	*47.2%*	*176.8%*	*175.5%*	*239.8%*	*148.0%*
% QoQ						*-55.6%*	*-40.6%*	*11.0%*	*8.1%*		*106.3%*	*11.8%*	*10.5%*	*33.3%*	
OpenAI															
Titan v1	HBM3E		216	216				20	150	170	160	170	130	100	560
Titan v2	HBM4E		576	576									50	120	170
Total Units								**20.0**	**150.0**	**170.0**	**160.0**	**170.0**	**180.0**	**220.0**	**730.0**
% YoY													*800.0%*	*46.7%*	*329.4%*
% QoQ									*650.0%*		*6.7%*	*6.3%*	*5.9%*	*22.2%*	
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	165	160	160	160	645	160	165	165	165	655
Others	HBM2E /3	192	288	288	361	50	48	48	48	194	56	58	58	58	229
Total Units					**1,018.5**	**214.5**	**208.0**	**208.0**	**208.0**	**838.5**	**216.0**	**222.8**	**222.8**	**222.8**	**884.3**
% YoY					*58.8%*	*-14.5%*	*-21.0%*	*-20.3%*	*-14.6%*	*-17.7%*	*0.7%*	*7.1%*	*7.1%*	*7.1%*	*5.5%*
% QoQ						*-11.9%*	*-3.0%*	*0.0%*	*0.0%*		*3.8%*	*3.1%*	*0.0%*	*0.0%*	
Total GPU / Accelerator Units ('000)					**12,829.1**	**3,370.4**	**3,612.2**	**4,565.5**	**5,465.2**	**17,013.2**	**6,008.0**	**6,030.8**	**6,832.8**	**8,112.8**	**26,984.3**
% YoY					*27.0%*	*18.4%*	*27.5%*	*38.2%*	*42.1%*	*32.6%*	*78.3%*	*67.0%*	*49.7%*	*48.4%*	*58.6%*
% QoQ						*-12.4%*	*7.2%*	*26.4%*	*19.7%*		*9.9%*	*0.4%*	*13.3%*	*18.7%*	

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	77,760	62,496	33,408	250,560	14,400				14,400
GB300 (2x GPU - 12Hi)	HBM3E	576	576	576	448,259	379,008	403,200	322,560	241,920	1,346,688	201,600	115,200	86,400	57,600	460,800
R200 (12Hi)	HBM4	288	288	288			5,760	57,600	92,160	155,520	100,800	109,440	72,000	57,600	339,840
RV200 (2x GPU - 12Hi)	HBM4	576	576	576			23,040	213,120	339,840	576,000	426,240	512,640	501,120	414,720	1,854,720
Rubin Ultra (16Hi)	HBM4E		768	768									215,040	514,560	729,600
*Other GPU/Accel	HBM3 / 3E	288	384	576	30,787	23,040	30,720	30,720	30,720	115,200	34,560	28,800	23,040	23,040	109,440
Total ('000 GB)					**1,465,650**	**518,448**	**540,480**	**686,496**	**738,048**	**2,483,472**	**777,600**	**766,080**	**897,600**	**1,067,520**	**3,508,800**
Total (bn Gb)					**11.73**	**4.15**	**4.32**	**5.49**	**5.90**	**19.87**	**6.22**	**6.13**	**7.18**	**8.54**	**28.07**
AMD															
MI300	HBM3	192	192		13,685										
MI325X (12Hi)	HBM3E	256	256		57,294	5,479				5,479					
MI355X (12Hi)	HBM3E	288	288	288	63,569	58,556	50,782	23,897		133,236					
MI308X	HBM3	192	192	192	18,394	5,568	6,336	960		12,864					
MI450 (12Hi)	HBM4		432	432				34,560	77,760	112,320	86,400	138,240	125,280	95,040	444,960
MI5XX (16Hi)	HBM4E			1,024									61,440	204,800	266,240
*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**	**69,877**	**57,403**	**59,700**	**78,041**	**265,022**	**86,976**	**138,816**	**187,296**	**300,416**	**713,504**
Total (bn Gb)					**1.23**	**0.56**	**0.46**	**0.48**	**0.62**	**2.12**	**0.70**	**1.11**	**1.50**	**2.40**	**5.71**
Google															
TPU v5e	HBM2E	32	32		4,282										
TPU v5p	HBM2E	96	96		183,913										
TPU v6e	HBM3E	32	32	32	13,632	8,602	9,408	5,914	2,957	26,880					
TPU v7	HBM3E	192	192	192	17,280	80,640	124,800	138,240	140,160	483,840	126,720	92,160	61,440	40,320	320,640
TPU v8i (Dual die AX)	HBM3E		288	288				36,000	108,000	144,000	198,720	230,400	244,800	213,120	887,040
TPU v8t (Single die X)	HBM3E		216	216				23,760	73,440	97,200	144,720	166,320	177,120	155,520	643,680
TPU v9AX	HBM4E		768	768										69,120	69,120
TPU v9X	HBM4E		384	384										26,880	26,880
*Other TPU/Accel	HBM3	96	144	144	7,389	1,984	2,719	2,462	3,321	10,485	2,160	2,160	2,160	2,160	8,640
Total ('000 GB)					**226,495**	**91,225**	**136,927**	**206,376**	**327,878**	**762,405**	**472,320**	**491,040**	**485,520**	**507,120**	**1,956,000**
Total (bn Gb)					**1.81**	**0.73**	**1.10**	**1.65**	**2.62**	**6.10**	**3.78**	**3.93**	**3.88**	**4.06**	**15.65**
Amazon															
Inferentia 2	HBM2E	32	32		2,823										
Trainium 2 / 2.5	HBM3E	96	144	144	47,574	25,920	36,000	25,920	20,160	108,000	11,520	5,760			17,280
Inferentia 3	HBM3	96	96	96	15,563	3,648	3,072	1,920	1,440	10,080	1,440	960			2,400
Trainium 3	HBM3E	144	144	144				50,400	79,660	130,060	72,000	61,920	28,800	21,600	184,320
Trainium 4	HBM4		256	256									64,000	125,440	189,440
*Other Accel	HBM3	144	144	144	5,375	942	1,218	1,584	2,040	5,784	1,296	1,296	1,296	1,296	5,184
Total ('000 GB)					**71,336**	**30,510**	**40,290**	**79,824**	**103,300**	**253,924**	**86,256**	**69,936**	**94,096**	**148,336**	**398,624**
Total (bn Gb)					**0.57**	**0.24**	**0.32**	**0.64**	**0.83**	**2.03**	**0.69**	**0.56**	**0.75**	**1.19**	**3.19**
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	25,920	34,560	51,840	129,600
Total ('000 GB)					**960**	**2,880**	**3,840**	**6,720**	**7,680**	**21,120**	**24,960**	**31,680**	**38,400**	**54,720**	**149,760**
Total (bn Gb)					**0.01**	**0.02**	**0.03**	**0.05**	**0.06**	**0.17**	**0.20**	**0.25**	**0.31**	**0.44**	**1.20**
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	69,120	97,920
Total ('000 GB)								**4,320**	**32,400**	**36,720**	**34,560**	**36,720**	**56,880**	**90,720**	**218,880**
Total (bn Gb)								**0.03**	**0.26**	**0.29**	**0.28**	**0.29**	**0.46**	**0.73**	**1.75**
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	61,776	59,904	59,904	59,904	241,488	62,208	64,152	64,152	64,152	254,664
Total ('000 GB)					**202,339**	**63,299**	**61,517**	**61,248**	**61,159**	**247,223**	**63,552**	**65,496**	**65,624**	**65,432**	**260,104**
Total (bn Gb)					**1.62**	**0.51**	**0.49**	**0.49**	**0.49**	**1.98**	**0.51**	**0.52**	**0.52**	**0.52**	**2.08**
Total HBM Demand ('000 GB)					**2,184,545**	**787,435**	**848,532**	**1,113,958**	**1,361,103**	**4,111,029**	**1,558,608**	**1,609,560**	**1,835,208**	**2,243,480**	**7,246,856**
Total HBM Demand (bn Gb)					**17.48**	**6.30**	**6.79**	**8.91**	**10.89**	**32.89**	**12.47**	**12.88**	**14.68**	**17.95**	**57.97**
% YoY					*103.0%*	*99.7%*	*97.2%*	*84.1%*	*80.6%*	*88.2%*	*97.9%*	*89.7%*	*64.7%*	*64.8%*	*76.3%*
% QoQ						*4.5%*	*7.8%*	*31.3%*	*22.2%*		*14.5%*	*3.3%*	*14.0%*	*22.2%*	

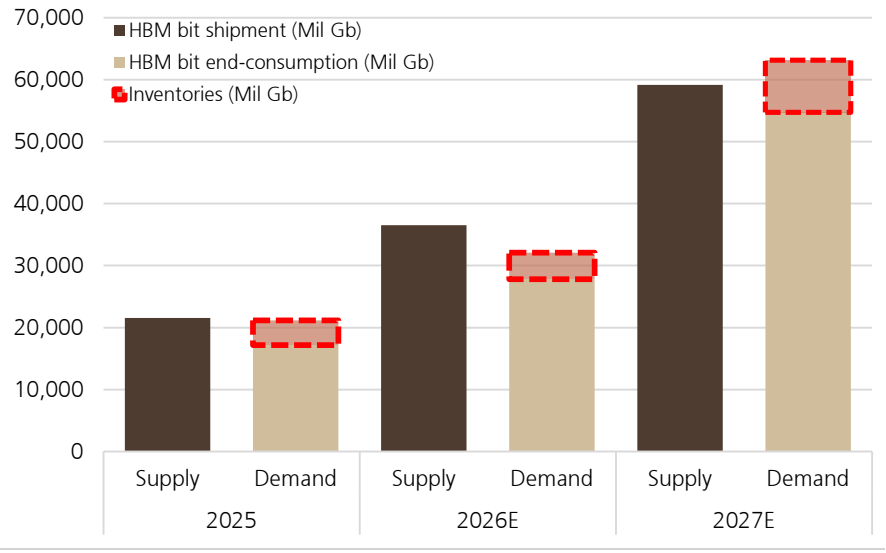
Source: Company data, UBS estimates

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**	**2,559**	**2,840**	**3,181**	**3,467**	**12,047**
	% YoY	*417%*	*106%*	*60%*	*62%*	*64%*	*70%*	*59%*	*56%*	*56%*	*50%*	*55%*
	% QoQ		*15%*	*13%*	*12%*	*13%*		*11%*	*11%*	*12%*	*9%*	
Total Supply		**21,539**	**6,934**	**8,068**	**9,722**	**11,800**	**36,523**	**12,425**	**13,427**	**15,775**	**17,543**	**59,170**
	% YoY	*69%*	*62%*	*59%*	*64%*	*88%*	*70%*	*79%*	*66%*	*62%*	*49%*	*62%*
	% QoQ		*10%*	*16%*	*21%*	*21%*		*5%*	*8%*	*17%*	*11%*	

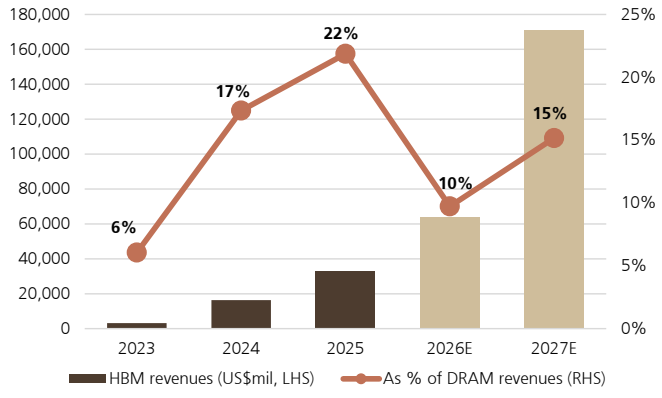
Source: Company data, UBS estimates

Figure 4: Adjusted HBM supply vs demand



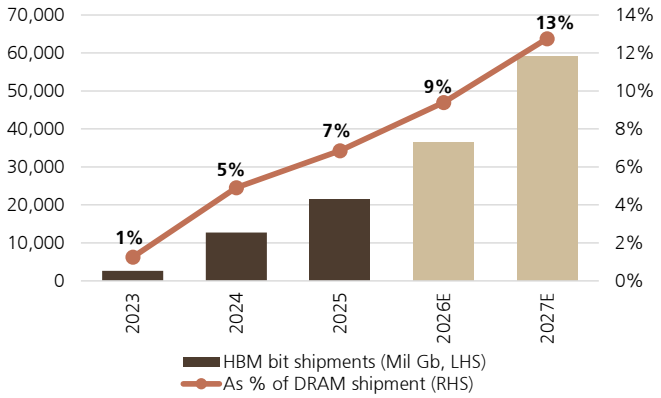
Source: Company data, UBS estimates

Figure 5: HBM as % of total DRAM revenues



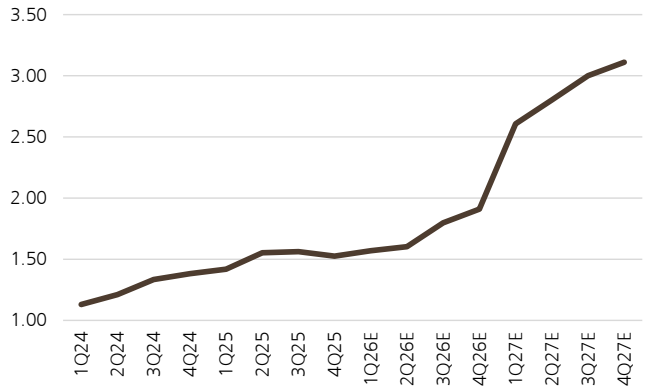
Source: UBS estimates

Figure 6: HBM as % of total DRAM bits



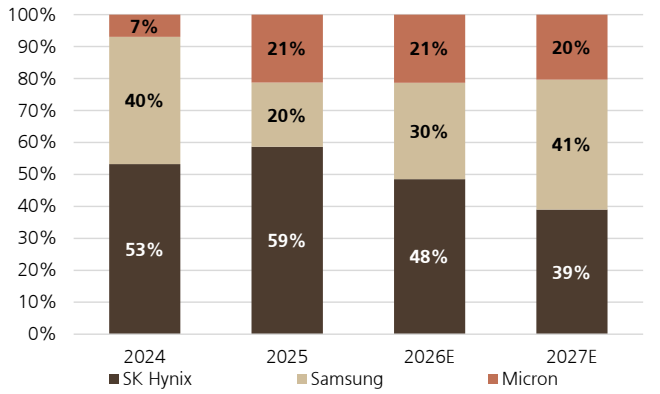
Source: UBS estimates

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



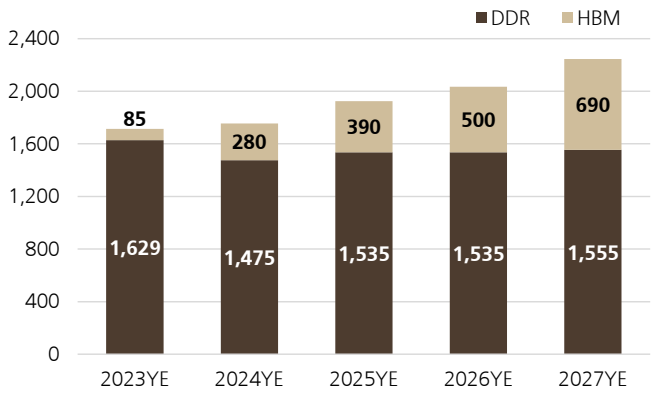
Source: UBS estimates

Figure 8: HBM bit share by vendor



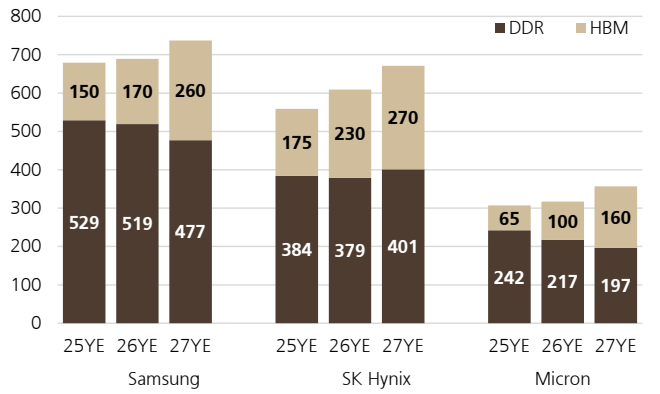
Source: Company data, UBS estimates

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



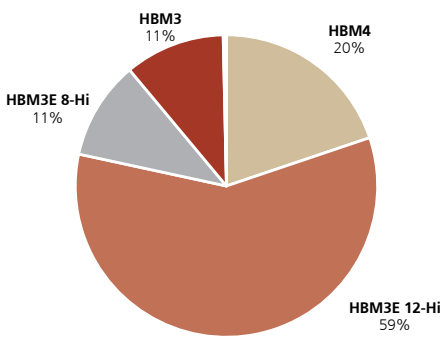
Source: Company data, UBS estimates

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



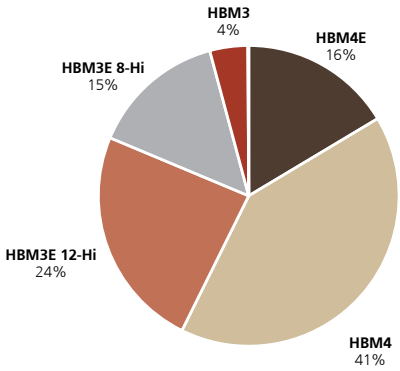
Source: Company data, UBS estimates

Figure 11: HBM demand by type (2026E)



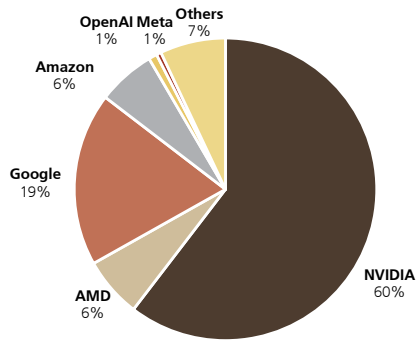
Source: UBS estimates

Figure 12: HBM demand by type (2027E)



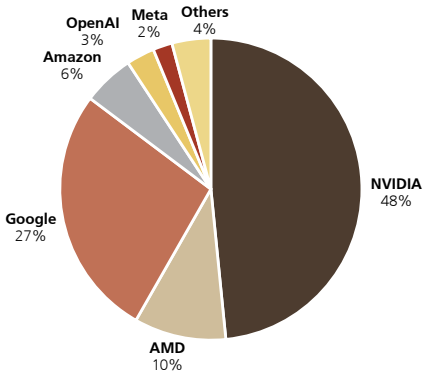
Source: UBS estimates

Figure 13: HBM demand by customer (2026E)



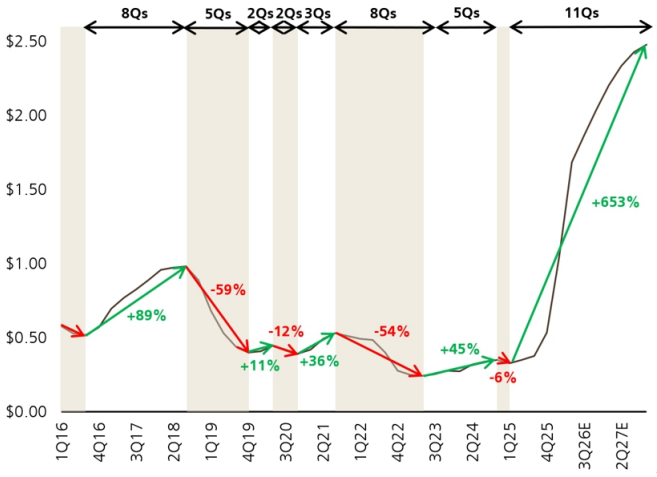
Source: UBS estimates

Figure 14: HBM demand by customer (2027E)



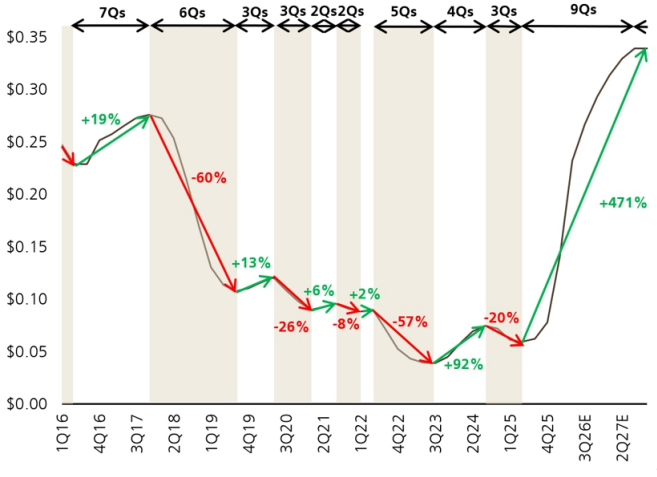
Source: UBS estimates

Figure 15: DDR cycles in context



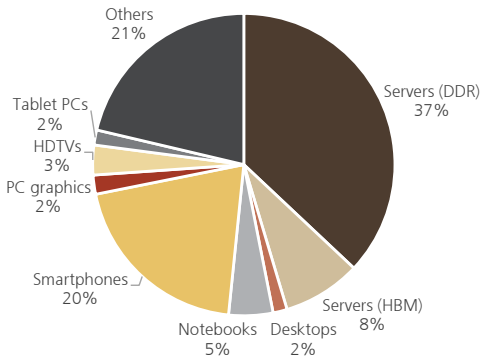
Source: Company data, UBS estimates

Figure 16: NAND cycles in context



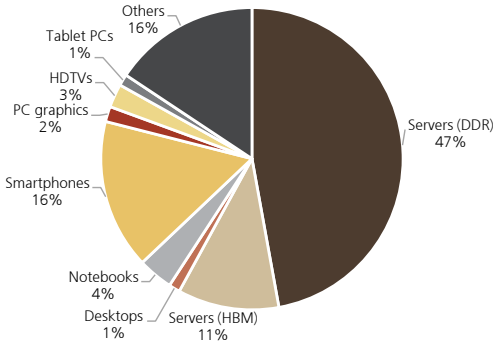
Source: Company data, UBS estimates

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



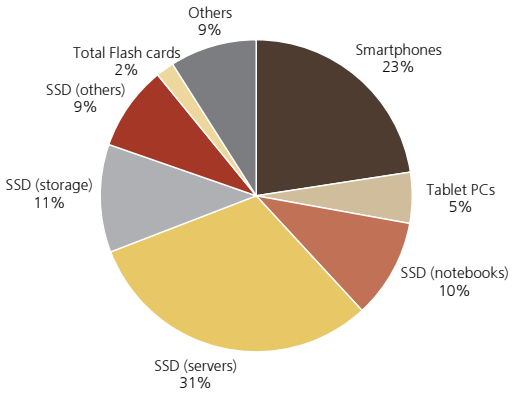
Source: Gartner, UBS estimates

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



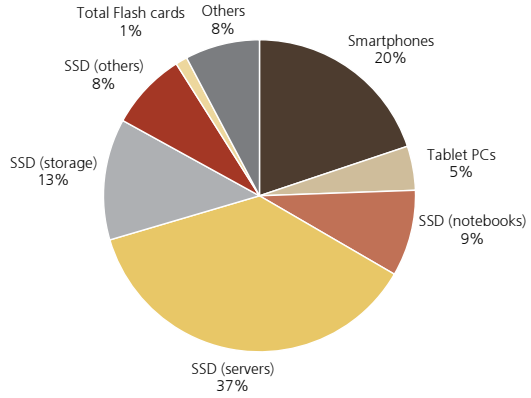
Source: Gartner, UBS estimates

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



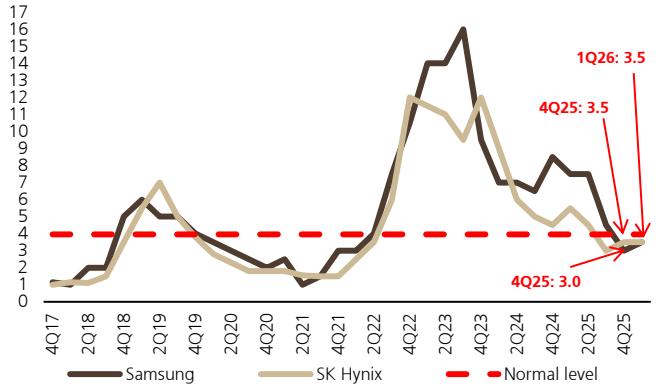
Source: Gartner, UBS estimates

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



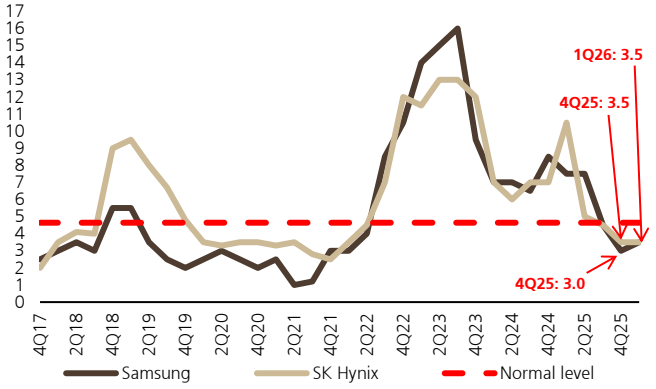
Source: Gartner, UBS estimates

Figure 21: Samsung and SK Hynix – DRAM finished wafers and dies inventories



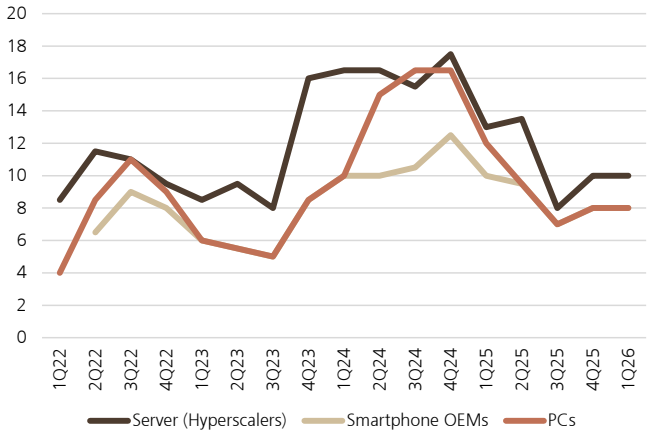
Source: Company data, UBS estimates

Figure 22: Samsung and SK Hynix – NAND finished wafers and dies inventories



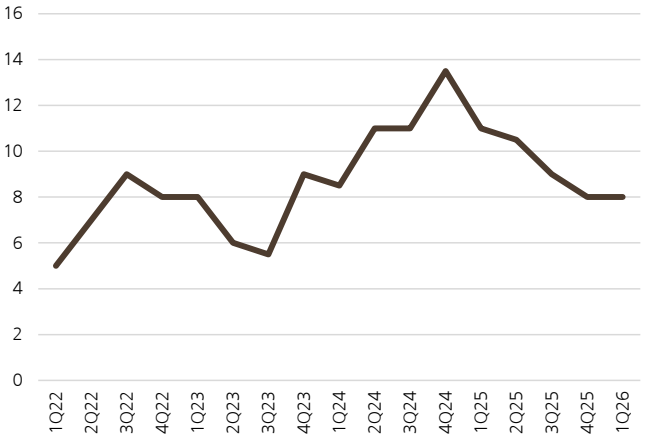
Source: Company data, UBS estimates

Figure 23: DRAM customer inventories (weeks)



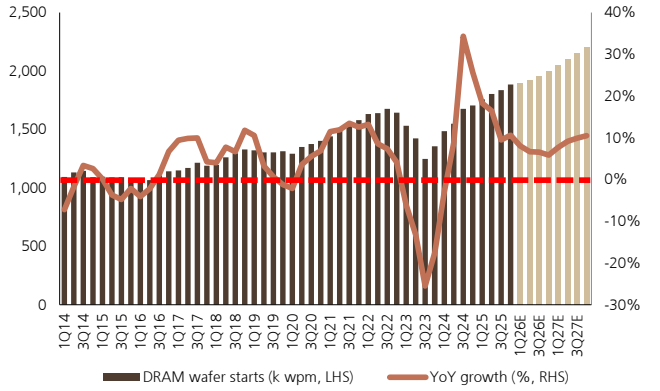
Source: Company data, UBS estimates

Figure 24: NAND customer inventories (weeks)



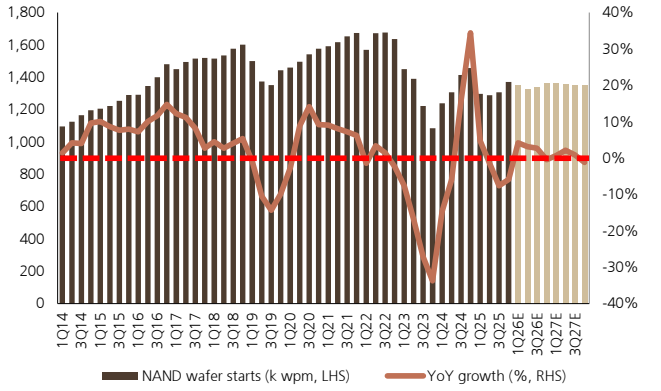
Source: Company data, UBS estimates

Figure 25: DRAM industry wafer starts and YoY growth



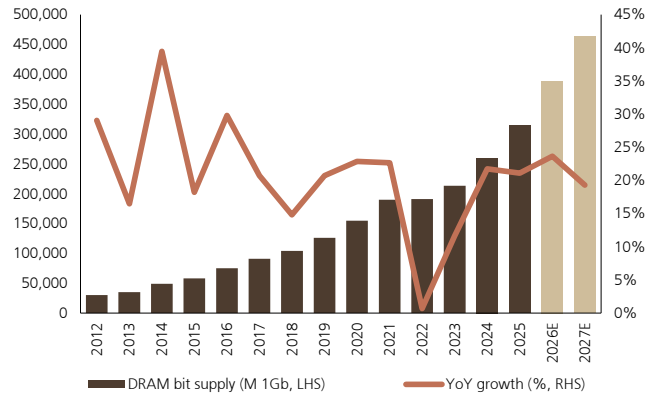
Source: Company data, UBS estimates

Figure 26: NAND industry wafer starts and YoY growth



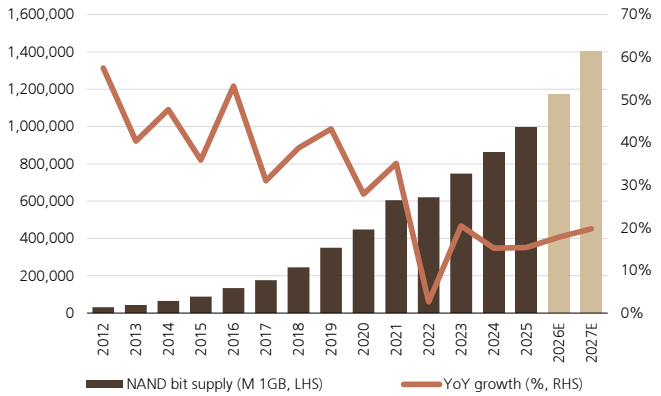
Source: Company data, UBS estimates

Figure 27: DRAM industry bit supply and YoY growth



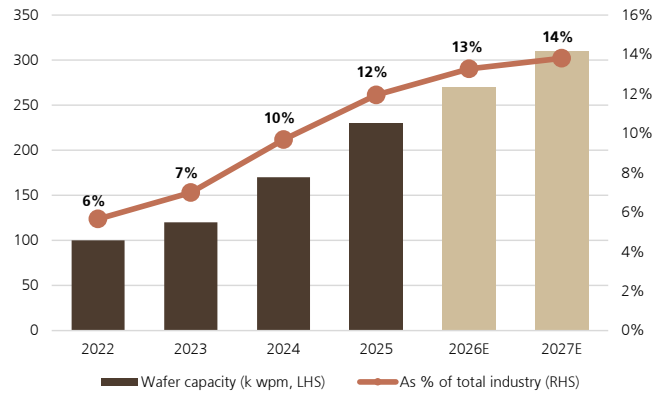
Source: Company data, UBS estimates

Figure 28: NAND industry bit supply and YoY growth



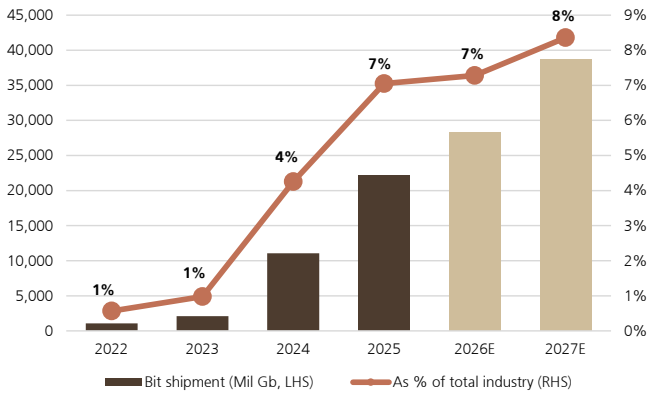
Source: Company data, UBS estimates

Figure 29: CXMT wafer capacity and as % of DRAM industry



Source: UBS estimates

Figure 30: CXMT bit shipments and as % of DRAM industry



Source: UBS estimates

Figure 31: 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**	**97,111**	**156,861**	**187,698**	**214,177**	**655,847**	**239,993**	**268,760**	**300,582**	**319,521**	**1,128,857**
% QoQ	*-6.7%*	*19.9%*	*23.0%*	*34.3%*		*83.7%*	*61.5%*	*19.7%*	*14.1%*		*12.1%*	*12.0%*	*11.8%*	*6.3%*	
% YoY	*49.9%*	*41.1%*	*55.3%*	*84.9%*	*59.8%*	*263.9%*	*390.3%*	*377.0%*	*305.1%*	*334.6%*	*147.1%*	*71.3%*	*60.1%*	*49.2%*	*72.1%*
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**	**88,306**	**90,602**	**102,399**	**111,420**	**392,727**	**111,701**	**122,091**	**141,496**	**159,172**	**534,461**
% QoQ	*0.2%*	*4.6%*	*19.4%*	*7.9%*		*-6.1%*	*2.6%*	*13.0%*	*8.8%*		*0.3%*	*9.3%*	*15.9%*	*12.5%*	
% YoY	*17.5%*	*21.0%*	*35.1%*	*34.9%*	*27.6%*	*26.4%*	*24.0%*	*17.4%*	*18.4%*	*21.1%*	*26.5%*	*34.8%*	*38.2%*	*42.9%*	*36.1%*
DDR Demand (M 1Gb)					**324,263**					**392,726**					**534,460**
% YoY					*27.6%*					*21.1%*					*36.1%*
Inventory adjustment	-5,500	3,800	400	-900	-2,200	17,400	14,000	600	-3,500	28,500	-2,700	-8,300	-20,200	-34,200	-65,400
Inventory Adj. Demand (M 1Gb)	**64,379**	**76,866**	**87,629**	**93,190**	**322,064**	**105,706**	**104,602**	**102,999**	**107,920**	**421,227**	**109,001**	**113,791**	**121,296**	**124,972**	**469,061**
% QoQ	*-5.1%*	*19.4%*	*14.0%*	*6.3%*		*13.4%*	*-1.0%*	*-1.5%*	*4.8%*		*1.0%*	*4.4%*	*6.6%*	*3.0%*	
% YoY	*4.0%*	*12.2%*	*29.5%*	*37.3%*	*21.1%*	*64.2%*	*36.1%*	*17.5%*	*15.8%*	*30.8%*	*3.1%*	*8.8%*	*17.8%*	*15.8%*	*11.4%*
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%***	***-10.6%***	***-2.2%***	***-2.0%***	***-7.7%***	***-2.1%***	***-1.2%***	***-1.0%***	***-0.3%***	***-1.1%***
Blended ASP incl. HBM ($/Gb)	**0.41**	**0.42**	**0.46**	**0.61**	**0.48**	**1.09**	**1.68**	**1.86**	**2.02**	**1.69**	**2.25**	**2.39**	**2.50**	**2.57**	**2.43**
% QoQ	*-4.8%*	*1.9%*	*9.6%*	*32.2%*		*80.5%*	*53.4%*	*11.1%*	*8.6%*		*11.1%*	*6.2%*	*4.7%*	*2.5%*	
% YoY	*41.5%*	*21.8%*	*19.7%*	*40.4%*	*32.0%*	*166.2%*	*301.0%*	*306.4%*	*234.1%*	*251.6%*	*105.7%*	*42.4%*	*34.3%*	*26.7%*	*44.3%*
DDR ASP ($/Gb)	**0.33**	**0.35**	**0.38**	**0.53**	**0.40**	**1.05**	**1.68**	**1.87**	**2.04**	**1.68**	**2.20**	**2.33**	**2.43**	**2.48**	**2.36**
% QoQ	*-6.2%*	*7.0%*	*7.0%*	*42.0%*		*97.0%*	*60.0%*	*11.0%*	*9.0%*		*8.0%*	*6.0%*	*4.0%*	*2.0%*	
% YoY	*20.3%*	*10.6%*	*11.8%*	*52.5%*	*26.3%*	*220.3%*	*378.9%*	*396.8%*	*281.4%*	*315.7%*	*109.1%*	*38.5%*	*29.8%*	*21.4%*	*40.7%*
HBM ASP ($/Gb)	**1.42**	**1.55**	**1.56**	**1.53**	**1.52**	**1.57**	**1.60**	**1.80**	**1.91**	**1.75**	**2.61**	**2.80**	**3.00**	**3.11**	**2.90**
% QoQ	*2.7%*	*9.5%*	*0.6%*	*-2.4%*		*2.9%*	*2.1%*	*12.2%*	*6.2%*		*36.5%*	*7.5%*	*7.1%*	*3.6%*	
% YoY	*25.6%*	*28.3%*	*17.2%*	*10.4%*	*15.8%*	*10.6%*	*3.1%*	*15.1%*	*25.2%*	*14.9%*	*66.1%*	*74.9%*	*66.9%*	*62.8%*	*66.2%*

Source: Company data, UBS estimates

Figure 32: 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 33: 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 34: 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 35: 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%**	**5.9%**	**21.2%**	**10.6%**	**51.0%**	**12.6%**	**16.4%**	**21.2%**	**13.9%**	**73.9%**
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%**	**-18.3%**	**-2.0%**	**11.2%**	**10.5%**	**-0.5%**	**-10.4%**	**-3.0%**	**10.0%**	**14.6%**	**7.5%**
Smartphones	**-4.8%**	**-1.4%**	**14.6%**	**10.1%**	**16.7%**	**-18.8%**	**-2.5%**	**11.8%**	**10.5%**	**-1.1%**	**-10.0%**	**-3.6%**	**10.1%**	**15.1%**	**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%	-20.2%	-1.5%	16.8%	-6.6%	-15.0%	-4.5%	1.0%	13.2%	-5.4%	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%**	**-6.1%**	**2.6%**	**13.0%**	**8.8%**	**21.1%**	**0.3%**	**9.3%**	**15.9%**	**12.5%**	**36.1%**

Source: Gartner, Company data, UBS estimates

Figure 36: 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**	**905,999**	**975,999**	**1,050,515**	**955,597**	**1,160,515**	**1,320,515**	**1,510,515**	**1,674,598**	**1,424,772**
% YoY	*17%*	*20%*	*26%*	*34%*	*25%*	*30%*	*28%*	*27%*	*26%*	*27%*	*33%*	*46%*	*55%*	*59%*	*49%*
Smartphones	**7,739**	**7,829**	**8,255**	**8,611**	**8,126**	**8,713**	**8,720**	**8,934**	**9,292**	**8,928**	**9,245**	**9,110**	**9,298**	**10,007**	**9,434**
% YoY	*11%*	*11%*	*13%*	*15%*	*13%*	*13%*	*11%*	*8%*	*8%*	*10%*	*6%*	*4%*	*4%*	*8%*	*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	8,153	8,200	8,200	8,300	8,400	8,277

Source: Gartner, Company data, UBS estimates

人在草木间

Figure 37: 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**	**18,175**	**21,783**
% YoY	*23.8%*	*7.6%*	*12.7%*	*-0.8%*	*4.8%*	*55.0%*	*26.5%*	*19.9%*
% of total hyperscalers	*90.3%*	*89.7%*	*89.9%*	*89.5%*	*83.5%*	*90.5%*	*92.8%*	*92.8%*
% of total servers	*54.3%*	*56.7%*	*59.7%*	*62.8%*	*57.8%*	*71.5%*	*76.1%*	*78.2%*
AI Servers	**520**	**630**	**730**	**783**	**1,591**	**1,243**	**1,136**	**1,404**
% YoY	*73.3%*	*21.2%*	*15.9%*	*7.3%*	*103.1%*	*-21.8%*	*-8.7%*	*23.6%*
% of total hyperscalers	*6.4%*	*7.1%*	*7.4%*	*7.9%*	*14.3%*	*7.8%*	*5.8%*	*6.0%*
% of total servers	*3.8%*	*4.5%*	*4.9%*	*5.6%*	*9.9%*	*6.2%*	*4.8%*	*5.0%*
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**	**933**	**1,391**
% YoY	***32.5%***	***16.7%***	***0.9%***	***13.5%***	***9.9%***	***27.6%***	***27.0%***	***49.1%***
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**	**1,028**	**1,554**
% YoY	*27.3%*	*15.5%*	*0.4%*	*13.8%*	*18.4%*	*23.5%*	*28.1%*	*51.1%*
Standard servers	**385**	**430**	**432**	**459**	**464**	**480**	**510**	**540**
% YoY	*28.3%*	*11.7%*	*0.5%*	*6.3%*	*1.1%*	*3.4%*	*6.3%*	*5.9%*
AI servers	**600**	**840**	**860**	**1,348**	**1,647**	**4,431**	**9,251**	**17,326**
% YoY	*7.1%*	*40.0%*	*2.4%*	*56.8%*	*22.1%*	*169.1%*	*108.8%*	*87.3%*
Database Servers	**900**	**1,100**	**1,120**	**1,200**	**1,210**	**1,280**	**1,340**	**1,390**
% YoY	*36.4%*	*22.2%*	*1.8%*	*7.1%*	*0.8%*	*5.8%*	*4.7%*	*3.7%*
Total DRAM Demand (mn Gb)	**42,491**	**51,095**	**55,158**	**59,039**	**73,831**	**118,057**	**178,235**	**309,934**
% YoY	***42.3%***	***20.2%***	***8.0%***	***7.0%***	***25.1%***	***59.9%***	***51.0%***	***73.9%***
Total DDR Demand (mn Gb)	**42,491**	**51,095**	**55,158**	**56,355**	**65,224**	**100,571**	**145,347**	**251,959**
% YoY	***42.3%***	***20.2%***	***8.0%***	***2.2%***	***15.7%***	***54.2%***	***44.5%***	***73.4%***
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**	**101,876**	**161,042**	**291,696**
% YoY	*59.3%*	*25.1%*	*12.8%*	*13.5%*	*33.0%*	*76.5%*	*58.1%*	*81.1%*
Standard servers	**22,652**	**27,225**	**30,813**	**32,465**	**34,393**	**55,152**	**74,152**	**94,101**
% YoY	*58.9%*	*20.2%*	*13.2%*	*5.4%*	*5.9%*	*60.4%*	*34.4%*	*26.9%*
AI servers	**2,496**	**4,234**	**5,022**	**8,448**	**20,952**	**44,080**	**84,040**	**194,550**
% YoY	*85.7%*	*69.6%*	*18.6%*	*68.2%*	*148.0%*	*110.4%*	*90.7%*	*131.5%*
HBM DRAM Demand				***2,684***	***8,607***	***17,486***	***32,888***	***57,975***
% YoY					*220.7%*	*103.2%*	*88.1%*	*76.3%*
DDR DRAM Demand				***6,081***	***12,345***	***26,594***	***51,152***	***136,575***
% YoY					*103.0%*	*115.4%*	*92.3%*	*167.0%*
LPDDR / SOCAMM Demand					***468***	***7,613***	***16,142***	***44,836***
% YoY						*1527.9%*	*112.0%*	*177.8%*
Database Servers	**1,962**	**2,445**	**2,415**	**2,484**	**2,380**	**2,643**	**2,850**	**3,045**
% YoY	*39.1%*	*24.7%*	*-1.2%*	*2.9%*	*-4.2%*	*11.1%*	*7.8%*	*6.8%*

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

Figure 38: 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 39: 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**	**66,162**	**80,312**	**92,242**	**276,667**	**103,499**	**111,704**	**122,509**	**126,647**	**464,359**
% QoQ	*-20.1%*	*19.7%*	*15.2%*	*25.6%*		*78.0%*	*74.3%*	*21.4%*	*14.9%*		*12.2%*	*7.9%*	*9.7%*	*3.4%*	
% YoY	*-1.0%*	*-1.1%*	*4.9%*	*38.5%*	*10.9%*	*208.5%*	*349.3%*	*373.3%*	*332.7%*	*323.6%*	*172.7%*	*68.8%*	*52.5%*	*37.3%*	*67.8%*
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**	**330,068**	**339,271**	**361,249**	**373,453**	**1,404,041**
% QoQ	*-6.0%*	*22.8%*	*9.7%*	*0.5%*		*-1.1%*	*5.7%*	*5.6%*	*4.4%*		*4.9%*	*2.8%*	*6.5%*	*3.4%*	
% YoY	*-6.3%*	*15.1%*	*25.6%*	*27.3%*	*15.4%*	*33.9%*	*15.3%*	*10.9%*	*15.2%*	*17.8%*	*22.1%*	*18.8%*	*19.8%*	*18.6%*	*19.8%*
Demand (End Consumption) (M 1GB)	**235,552**	**242,791**	**280,969**	**321,309**	**1,080,621**	**295,527**	**302,868**	**329,889**	**368,521**	**1,296,806**	**354,477**	**371,572**	**408,846**	**460,507**	**1,595,402**
% QoQ	*-8.1%*	*3.1%*	*15.7%*	*14.4%*		*-8.0%*	*2.5%*	*8.9%*	*11.7%*		*-3.8%*	*4.8%*	*10.0%*	*12.6%*	
% YoY	*11.4%*	*13.0%*	*20.1%*	*25.4%*	*17.9%*	*25.5%*	*24.7%*	*17.4%*	*14.7%*	*20.0%*	*19.9%*	*22.7%*	*23.9%*	*25.0%*	*23.0%*
Inventory adjustment	-39,600	3,700	-6,200	-33,500	-75,600	26,200	25,500	-19,000	-47,200	-14,500	-20,000	-28,500	-45,000	-86,500	-180,000
Inventory Adj. Demand (M 1GB)	**195,952**	**246,491**	**274,769**	**287,809**	**1,005,021**	**321,727**	**328,368**	**310,889**	**321,321**	**1,282,306**	**334,477**	**343,072**	**363,846**	**374,007**	**1,415,402**
% QoQ	*-8.0%*	*25.8%*	*11.5%*	*4.7%*		*11.8%*	*2.1%*	*-5.3%*	*3.4%*		*4.1%*	*2.6%*	*6.1%*	*2.8%*	
% YoY	*-14.3%*	*9.9%*	*24.6%*	*35.1%*	*13.4%*	*64.2%*	*33.2%*	*13.1%*	*11.6%*	*27.6%*	*4.0%*	*4.5%*	*17.0%*	*16.4%*	*10.4%*
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%***	***-13.0%***	***-3.0%***	***-2.0%***	***-8.6%***	***-1.3%***	***-1.1%***	***-0.7%***	***-0.1%***	***-0.8%***
NAND ASP ($/1GB)	**0.06**	**0.06**	**0.06**	**0.08**	**0.07**	**0.14**	**0.23**	**0.27**	**0.29**	**0.24**	**0.31**	**0.33**	**0.34**	**0.34**	**0.33**
% QoQ	*-15.0%*	*-2.5%*	*5.0%*	*25.0%*		*80.0%*	*65.0%*	*15.0%*	*10.0%*		*7.0%*	*5.0%*	*3.0%*	*0.0%*	
% YoY	*5.8%*	*-14.1%*	*-16.5%*	*8.8%*	*-3.9%*	*130.3%*	*289.8%*	*326.9%*	*275.7%*	*259.5%*	*123.3%*	*42.1%*	*27.3%*	*15.7%*	*40.1%*

Source: Company data, UBS estimates

Figure 40: 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%	29.2%	29.1%	28.9%	28.4%	28.9%
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%	14.6%	14.8%	15.0%
SanDisk	13.2%	11.2%	11.7%	12.0%	12.0%	11.6%	11.5%	12.5%	12.0%	11.9%	10.9%	11.1%	12.0%	12.4%	11.6%
SK Hynix	12.8%	18.2%	15.7%	17.1%	16.1%	15.5%	16.9%	16.5%	16.7%	16.4%	16.0%	16.6%	16.5%	16.0%	16.2%
Micron	14.1%	14.3%	12.6%	13.1%	13.5%	13.7%	13.6%	13.7%	13.9%	13.8%	13.7%	13.7%	13.2%	13.3%	13.5%
YMTC	12.5%	11.3%	11.9%	12.2%	12.0%	12.7%	12.6%	12.6%	12.7%	12.7%	13.6%	14.0%	14.2%	14.5%	14.1%
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 41: NAND Flash 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	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%	0.5%	6.4%	5.8%	0.5%	18.6%
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%**	**4.9%**	**2.8%**	**6.5%**	**3.4%**	**19.8%**

Source: Gartner, company data, UBS estimates

Figure 42: 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 43: NAND Flash 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 Embedded	**-8.3%**	**3.1%**	**16.1%**	**14.8%**	**18.5%**	**-8.1%**	**2.6%**	**9.1%**	**12.0%**	**20.8%**	**-3.7%**	**5.0%**	**10.2%**	**12.9%**	**23.8%**
Smartphones	**-11.3%**	**-6.3%**	**17.3%**	**26.6%**	**16.9%**	**-24.5%**	**-3.7%**	**6.6%**	**28.6%**	**2.2%**	**-18.3%**	**-4.7%**	**7.5%**	**31.3%**	**8.2%**
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%	-25.0%	1.1%	19.7%	-4.4%	-16.3%	-10.0%	4.7%	15.9%	-3.3%	5.5%
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%**	**-6.5%**	**-1.9%**	**-0.3%**	**-3.2%**	**-9.8%**	**-8.8%**	**-6.9%**	**-3.9%**	**-11.0%**	**-20.0%**
Mobile Phones - Flash cards	-6.3%	-1.5%	5.3%	-1.6%	-0.8%	-11.4%	-1.1%	10.9%	-9.2%	-8.8%	1.7%	-0.4%	9.3%	-7.7%	1.5%
Total Bit Demand	**-8.1%**	**3.1%**	**15.7%**	**14.4%**	**17.9%**	**-8.0%**	**2.5%**	**8.9%**	**11.7%**	**20.0%**	**-3.8%**	**4.8%**	**10.0%**	**12.6%**	**23.0%**

Source: Gartner, company data, UBS estimates

Figure 44: 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**	**229**	**225**	**222**	**272**	**238**	**243**	**235**	**237**	**293**	**253**
% YoY	*14%*	*14%*	*11%*	*22%*	*15%*	*16%*	*17%*	*3%*	*8%*	*10%*	*6%*	*5%*	*7%*	*8%*	*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.