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Greater China Semiconductors | Asia Pacific

Old Memory: No LTAs Is Not Necessarily Bad

Divergence continues between old and mainstream memory. Strong pricing power to sustain into 4Q26, and likely even 1Q27.

Key Takeaways

- Recent investor debates focused on the lack of LTAs and concerns over cycle sustainability, yet we believe legacy memory fundamentals continue to improve.
- DDR4 demand is broadening, while SLC NAND and NOR remain undersupplied, supporting further earnings upside for old memory suppliers.
- We raise earnings estimates for Macronix, Winbond, GigaDevice and PSMC. GigaDevice PT reduced on multiples derating post CXMT's IPO.
- Top Pick remains AP Memory, mainly due to its SiCap business.

DDR4 pricing continues to surprise on the upside into 2H26. While investors largely associate DDR4 strength with server demand, we increasingly see demand emerging from consumer-related applications as well. Importantly, the absence of fixed-pricing LTAs is not necessarily bad. We also believe the global mainstream vendors continues to phase out the DDR4 supply and supply availability tightening. We believe DDR4 pricing trend can remain stronger than mainstream memory through 2H26. We see a 50% pricing hike in 3Q, and another double digit hike in 4Q.

SLC NAND remains our highest-conviction pricing call. We continue to expect 50%+ price increases in 3Q26 and 4Q26, driven by ongoing capacity constraints and limited supplier willingness to allocate wafer starts to legacy products. As well, industry discussions increasingly point to tighter supply conditions extending into 2027, suggesting the current cycle could prove longer than investors expect. MLC demand migration to SLC also suggests pricing could still show some upside in 1H27.

NOR flash fundamentals also continue to improve. Following the recent round of price increases, we believe another round of price hikes is likely in 4Q26, with momentum potentially extending into 1H27. Supply growth remains constrained, while demand is supported by industrial, automotive, networking and edge-AI applications; demand from AI servers also continue strong.

Stock implications - Significant earnings upsides: We stick to our call that there could be divergent trends for old memory stocks. **Winbond:** PT unchanged; 2026-28e EPS raised by 17%, 30% and 34%, respectively. **Macronix:** Base-case and PT unchanged, but bear case cut to NT$100.00 from NT$130.00; 2026-28e EPS raised by 139%, 144% and 147%, respectively. **GigaDevice:** Bull, base and bear values cut to Rmb1,300, Rmb750 and Rmb324, respectively, from Rmb1,542, Rmb888 and 648; 2026-28e EPS raised by 108%,49% and 48%, respectively. **PSMC:** PT unchanged; 2026-28e EPS raised by 18%, 17% and 13%, respectively.

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GREATER CHINA TECHNOLOGY SEMICONDUCTORS	
Asia Pacific	
Industry View	**Attractive**

WHAT'S CHANGED		
GigaDevice Semiconductor Beijing Inc (603986.SS) Price Target	From Rmb888.00	To **Rmb750.00**

Key Charts and Exhibits

Exhibit 1: What's changed

Company	EPS Changes	Reason for EPS changes	PT Changes	Reason for PT Changes
Winbond	• 2026/27/28 EPS raised by 17%/30%/34%	• Benefiting from strong DDR4/SLC NAND/ NOR flash pricing outlook	• Unchanged	• PT unchanged despite stronger earnings; reduced multiples due to higher equity risk premium, caused by the higher sector-wide volatility
PSMC	• 2026/27/28 EPS raised by 18%/17%/13%	• Benefiting from strong DDR3/4 pricing outlook	• Unchanged	• PT unchanged despite stronger earnings; reduced multiples due to higher equity risk premium, caused by the higher sector-wide volatility
GigaDevice	• 2026/27/28 EPS raised by 108%/49%/48%	• Benefiting from strong DDR4/SLC NAND/ NOR flash pricing outlook	• Bull case cut to Rmb1,300 from Rmb1,542 • Base case cut to Rmb750 from Rmb888 • Bear case cut to Rmb324 from Rmb648	• Intermediate growth cut to 11.3% from 16.4%, terminal growth cut to 2.5% from 3.0%, to reflect stronger changes in the supply environment compared to the end market demand over the mid- to long-term • Equity risk premium raised to 6.5% from 6.0%, resulting in the cost of equity raising to 9.4% from 8.9%, to reflect the higher sector-wide volatility • Other key RI assumptions remain unchanged, including beta of 1.1, risk-free rate of 2%, and payout ratio of 40%
Macronix	• 2026/27/28 EPS raised by 139%/144%/147%	• Benefiting from strong SLC NAND/ MLC NAND/ NOR flash pricing outlook	• Base case unchanged • Bear case cut to NT$100 from NT$130	• Base case PT unchanged despite stronger earnings; reduced multiples due to higher equity risk premium, caused by the sector-wide volatility • Bear case PT revised down; we make the risk reward skew more towards the bear case, to reflect the higher sector-wide volatility

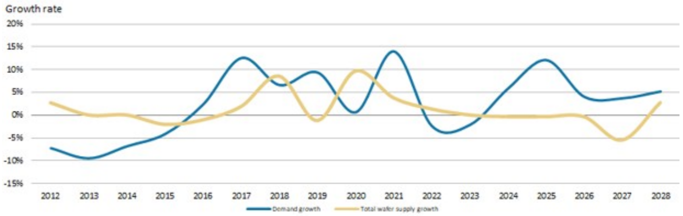
Source: Morgan Stanley Research

Exhibit 2: Order of preference: GC memory

	AP Memory 6531.TW	GigaDevice 603986.SS	Macronix 2337.TW	Winbond 2344.TW	PSMC 6770.TW	Nanya Tech 2408.TW
Rating	Overweight	Overweight	Overweight	Overweight	Overweight	Overweight
Trading Currency	TWD	CNY	TWD	TWD	TWD	TWD
Price Target	**1,666.0**	**750.0**	**220.0**	**288.0**	**111.0**	**580.0**
Current Price (as of 2026/8/14)	932.0	417.5	137.0	183.5	78.4	512.0
Upside/(Downside) (%)	79%	80%	61%	57%	42%	13%
Market Cap (in USD mm)	4,694.5	41,326.2	7,696.2	23,874.9	10,219.8	49,118.6
Avg Daily Traded Vol (in USD mm)	91.2	2,017.6	355.8	659.9	346.6	860.4
Street View: Ratings						
Buy/Overweight	75%	100%	100%	100%	100%	100%
Hold/Equal-weight	25%	0%	0%	0%	0%	0%
Sell/Underweight	0%	0%	0%	0%	0%	0%
Bull Case Value	1,966.0	1,300.0	355.0	342.0	177.0	1,230.0
Upside (%)	111%	211%	159%	86%	126%	140%
Bear Case Value	666.0	324.0	100.0	118.0	55.0	320.0
Downside (%)	-29%	-22%	-27%	-36%	-30%	-38%
Risk/Reward Skew	3.9	9.4	5.9	2.4	4.2	3.7
Morgan Stanley Estimates						
FY26e	TWD	CNY	TWD	TWD	TWD	TWD
Sales	9,601	38,638	99,611	298,818	77,163	348,048
EBITDA	3,029	27,157	61,530	153,844	15,758	267,364
EBIT	2,969	26,907	54,052	138,233	8,193	255,102
EPS	17.69	34.72	23.54	24.89	5.66	62.13
FY27e						
Sales	19,356	66,329	198,217	495,128	107,846	638,966
EBITDA	6,768	34,789	147,476	299,912	40,443	496,607
EBIT	6,705	34,539	141,065	279,735	32,978	473,137
EPS	35.37	45.09	60.99	49.83	6.54	112.32
FY26 MSe vs. Consensus Mean						
Sales	-9.0%	67.5%	16.5%	9.2%	2.7%	-0.1%
EBITDA	-7.9%	174.2%	56.8%	-2.6%	-61.7%	-0.2%
EBIT	-5.9%	126.0%	60.4%	-3.0%	-74.4%	2.1%
EPS	-5.6%	168.2%	54.4%	-1.5%	-10.0%	1.2%
FY27 MSe vs. Consensus Mean						
Sales	7.3%	130.0%	40.0%	8.0%	-2.7%	19.5%
EBITDA	10.6%	139.0%	96.1%	-0.6%	-17.9%	20.8%
EBIT	15.9%	122.1%	77.5%	2.7%	-22.6%	14.2%
EPS	15.2%	180.2%	78.8%	-1.4%	-20.1%	15.3%
Valuation Multiples at Last Close						
FY26e						
P/E	52.7x	12.0x	5.8x	7.4x	13.9x	8.2x
EV/EBIT	86.8x	17.4x	7.6x	8.9x	33.8x	7.8x
EV/EBITDA	45.9x	9.1x	4.3x	5.1x	12.1x	6.7x
EV/Sales	14.5x	6.4x	2.6x	2.6x	2.5x	5.1x
FCF Yield	1.4%	8.3%	-1.5%	2.8%	31.5%	-15.3%
FY27e						
P/E	26.4x	9.3x	2.2x	3.7x	12.0x	4.6x
EV/EBIT	20.5x	6.7x	1.0x	2.1x	4.1x	3.3x
EV/EBITDA	20.3x	6.6x	1.0x	2.0x	3.3x	3.2x
EV/Sales	7.1x	3.5x	0.7x	1.2x	1.2x	2.5x
FCF Yield	2.5%	8.7%	50.7%	25.6%	18.2%	13.5%
Implied Multiples on MS Price Target						
FY26e						
P/E	94.2x	21.6x	9.3x	11.6x	19.6x	9.3x
EV/EBIT	86.8x	17.4x	7.6x	8.9x	33.8x	7.8x
EV/EBITDA	85.1x	17.3x	6.7x	8.0x	17.6x	7.4x
EV/Sales	26.8x	12.1x	4.1x	4.1x	3.6x	5.7x
FY27e						
P/E	47.1x	16.6x	3.6x	5.8x	17.0x	5.2x
EV/EBIT	40.9x	15.7x	2.9x	4.4x	14.4x	3.9x
EV/EBITDA	40.5x	15.6x	2.7x	4.1x	11.8x	3.7x
EV/Sales	14.2x	8.2x	2.0x	2.5x	4.4x	2.9x

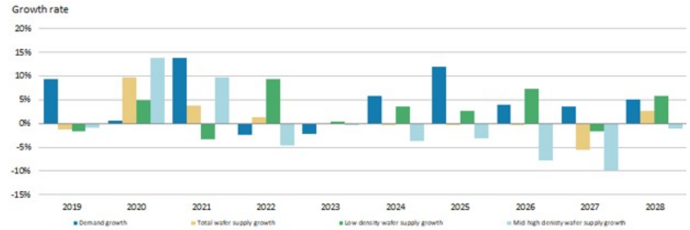
Source: FactSet (consensus mean), Morgan Stanley Research (e) estimates.

Exhibit 3: NOR flash demand and supply growth rates



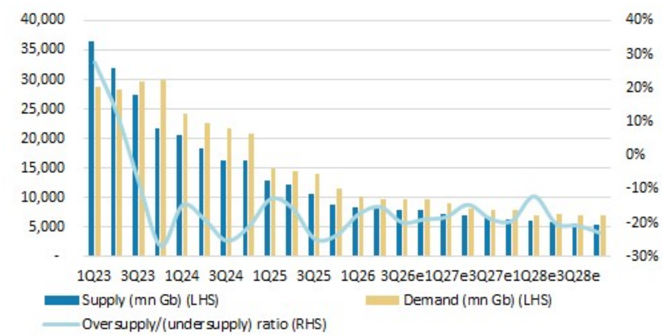
Source: Company data, Morgan Stanley Research

Exhibit 4: NOR flash demand growth and supply growth by density



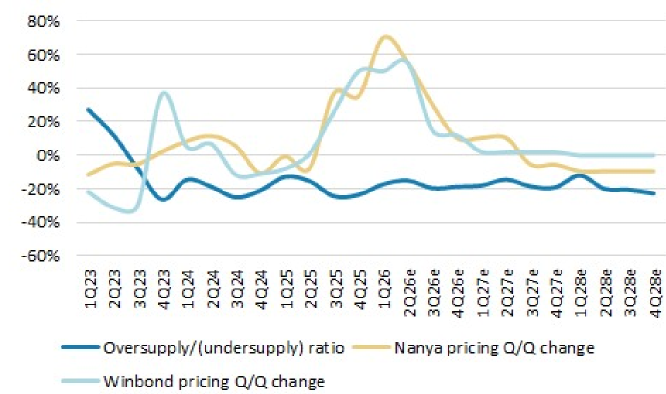
Source: Company data, Morgan Stanley Research

Exhibit 5: DDR4 quarterly supply and demand summary



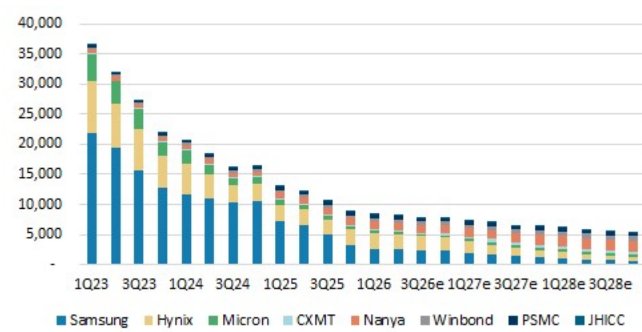
Source: Company data, IDC, Morgan Stanley Research (e) estimates

Exhibit 6: Quarterly oversupply/undersupply ratio vs. Nanya and Winbond pricing Q/Q change



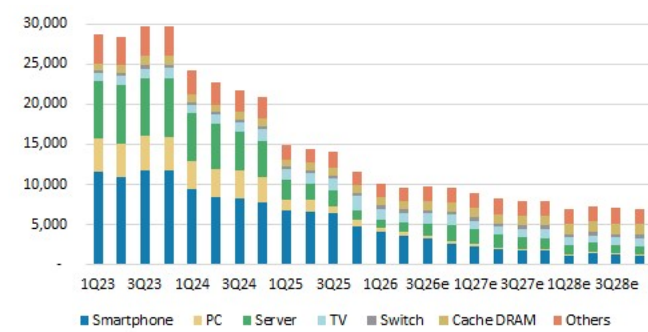
Source: Company data, IDC, Morgan Stanley Research (e) estimates

Exhibit 7: Quarterly supply breakdown (mn Gb)



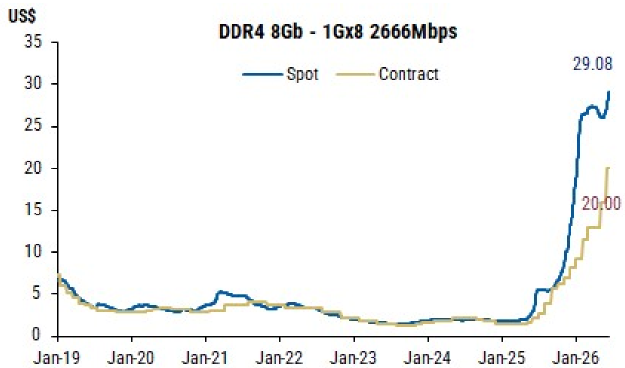
Source: Company data, Morgan Stanley Research (e) estimates

Exhibit 8: Quarterly demand breakdown by product (mn Gb)



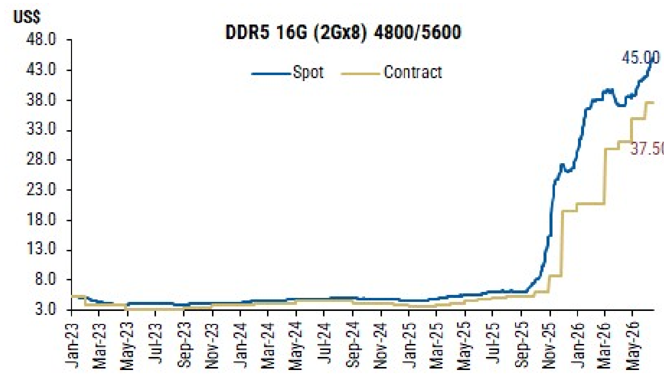
Source: IDC, Morgan Stanley Research (e) estimates

Exhibit 9: DDR4 8Gb (1Gx8) pricing chart



Source: DRAMeXchange, Morgan Stanley Research. Data as of Jun 2026.

Exhibit 10: DDR5 16Gb (2Gx8) pricing chart



Source: DRAMeXchange, Morgan Stanley Research. Data as of Jun 2026.

Winbond: Estimate Revisions and Quarterly Financials

We raise our 2026-28 EPS estimates by 17%, 30% and 34%, respectively. This reflects stronger-than-previously expected memory pricing strength across DDR4, NOR flash and SLC NAND. We now expect DDR4 pricing to rise further into 4Q, post the double-digit monthly pricing uptrend. SLC NAND pricing uptrend is highly likely to continue into 4Q, post 50-60% hike in 3Q. NOR pricing could be raised by 30-40% in 3Q and even into 4Q. We also reflect stronger gross margin as a result of the strong price hike.

Exhibit 11: Winbond: Estimate revisions

NT$ mn	New '26E	Old '26E	Diff.	New '27E	Old '27E	Diff.	New '28E	Old '28E	Diff.
Net sales	298,818	269,908	11%	495,128	432,740	14%	558,647	493,598	13%
COGS	(119,579)	(117,684)		(169,180)	(182,017)		(180,294)	(211,407)	
Gross profit	179,239	152,224	18%	325,948	250,723	30%	378,352	282,192	34%
Operating expenses	(41,006)	(33,230)		(46,213)	(36,088)		(47,577)	(37,465)	
Operating profit	138,233	118,994	16%	279,735	214,635	30%	330,775	244,727	35%
Non-op. income (exp)	1,150	715		(33)	776		(53)	756	
Pretax Income	139,383	119,709	16%	279,701	215,411	30%	330,722	245,483	35%
Taxes	(27,726)	(23,975)		(55,940)	(43,082)		(67,331)	(50,284)	
Net income	112,009	95,721	17%	224,234	172,315	30%	263,863	195,186	35%
Reported EPS	**24.89**	**21.27**	**17%**	**49.83**	**38.29**	**30%**	**59.96**	**44.69**	**34%**
Margins									
Gross margin	60.0%	56.4%	3.6 ppt	65.8%	57.9%	7.9 ppt	67.7%	57.2%	10.6 ppt
Operating margin	46.3%	44.1%	2.2 ppt	56.5%	49.6%	6.9 ppt	59.2%	49.6%	9.6 ppt
Pretax margin	46.6%	44.4%	2.3 ppt	56.5%	49.8%	6.7 ppt	59.2%	49.7%	9.5 ppt
Net margin	37.5%	35.5%	2.0 ppt	45.3%	39.8%	5.5 ppt	47.2%	39.5%	7.7 ppt
Opex %	13.7%	12.3%	1.4 ppt	9.3%	8.3%	1.0 ppt	8.5%	7.6%	0.9 ppt

NT$	New '26E	Old '26E	Diff.	New '27E	Old '27E	Diff.	New '28E	Old '28E	Diff.
BVPS	**50.30**	**46.68**	**8%**	**100.18**	**85.02**	**18%**	**160.19**	**129.77**	**23%**

Source: Morgan Stanley Research (E) estimates

Exhibit 12: Winbond: Quarterly financials

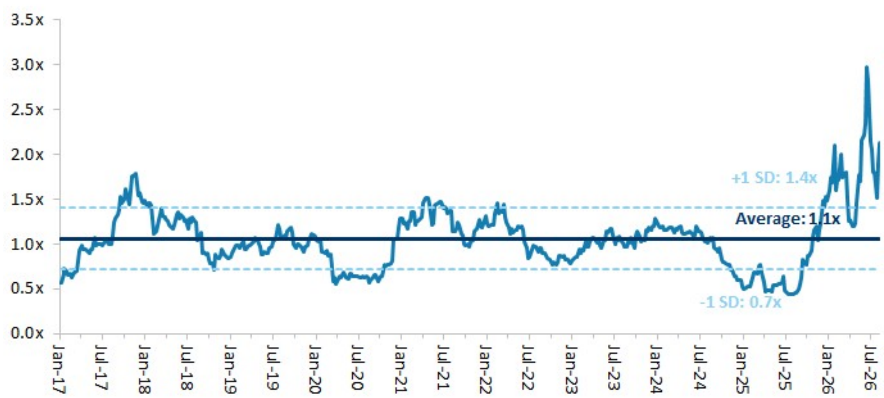
NT$ in million	1Q25	2Q25	3Q25	4Q25	1Q26	2Q26	3Q26E	4Q26E	1Q27E	2Q27E	3Q27E	4Q27E	1Q28E	2Q28E	3Q28E	4Q28E	2025	2026E	2027E	2028E
Total Revenues	19,993	21,018	21,771	26,625	38,253	59,843	89,052	#######	#######	#######	#######	#######	#######	#######	#######	#######	89,406	298,818	495,128	558,647
Sequential Change	7.0%	5.1%	3.6%	22.3%	43.7%	56.4%	48.8%	25.4%	4.1%	3.8%	4.3%	5.1%	2.7%	2.2%	1.4%	1.4%				
Change vs Year Ago	-0.6%	-2.2%	2.1%	42.4%	91.3%	184.7%	309.0%	319.4%	203.9%	101.6%	41.3%	18.5%	17.0%	15.1%	11.9%	8.0%	9.6%	234.2%	65.7%	12.8%
Cost of Sales	(14,871)	(16,255)	(11,605)	(15,479)	(17,838)	(20,198)	(37,320)	(44,223)	(42,897)	(42,286)	(42,094)	(41,903)	(41,809)	(42,950)	(44,253)	(45,346)	(58,210)	(119,579)	(169,180)	(180,294)
Percent of Revenues	74.4%	77.3%	53.3%	58.1%	46.6%	33.8%	41.9%	39.6%	36.9%	35.0%	33.4%	31.7%	30.8%	30.9%	31.4%	31.7%	65.1%	40.0%	34.2%	32.3%
Gross Margin	5,122	4,763	10,166	11,146	20,415	39,645	51,732	67,447	73,351	78,385	83,778	90,435	94,145	95,967	96,633	97,544	31,196	179,239	325,948	378,352
Percent of Revenues	25.6%	22.7%	46.7%	41.9%	53.4%	66.2%	58.1%	60.4%	63.1%	65.0%	66.6%	68.3%	69.2%	69.1%	68.6%	68.3%	34.9%	60.0%	65.8%	67.7%
Total Opex	(6,087)	(6,058)	(6,463)	(7,054)	(7,865)	(10,666)	(11,013)	(11,462)	(11,251)	(11,402)	(11,680)	(11,881)	(11,897)	(11,903)	(11,893)	(11,884)	(25,662)	(41,006)	(46,213)	(47,577)
Percent of Revenues	30.4%	28.8%	29.7%	26.5%	20.6%	17.8%	12.4%	10.3%	9.7%	9.4%	9.3%	9.0%	8.8%	8.6%	8.4%	8.3%	28.7%	13.7%	9.3%	8.5%
Operating Income	(965)	(1,295)	3,703	4,092	12,550	28,979	40,718	55,985	62,100	66,983	72,098	78,554	82,248	84,064	84,739	85,660	5,534	138,233	279,735	330,775
Percent of Revenues	-4.8%	-6.2%	17.0%	15.4%	32.8%	48.4%	45.7%	50.1%	53.4%	55.5%	57.3%	59.4%	60.5%	60.5%	60.1%	59.9%	6.2%	46.3%	56.5%	59.2%
Total Non-operating Income(Loss)	(180)	(524)	(145)	(75)	138	1,039	(13)	(13)	(3)	(3)	(13)	(13)	(13)	(13)	(13)	(13)	(924)	1,150	(33)	(53)
Profit Before Taxes	(1,146)	(1,819)	3,558	4,017	12,688	30,018	40,705	55,971	62,097	66,979	72,085	78,541	82,234	84,050	84,726	85,647	4,610	139,383	279,701	330,722
Percent of Revenues	-5.7%	-8.7%	16.3%	15.1%	33.2%	50.2%	45.7%	50.1%	53.4%	55.5%	57.3%	59.3%	60.5%	60.5%	60.1%	59.9%	5.2%	46.6%	56.5%	59.2%
Taxes	159	188	(857)	(922)	(2,571)	(5,820)	(8,141)	(11,194)	(12,419)	(13,396)	(14,417)	(15,708)	(16,447)	(16,810)	(16,945)	(17,129)	(1,433)	(27,726)	(55,940)	(67,331)
Tax Rate	13.9%	10.3%	24.1%	23.0%	20.3%	19.4%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	31.1%	19.9%	20.0%	20.4%
Reported Income (TW GAAP)	**(1,091)**	**(1,312)**	**2,943**	**3,422**	**10,114**	**24,317**	**32,682**	**44,895**	**49,795**	**53,702**	**57,786**	**62,951**	**65,906**	**67,358**	**67,899**	**68,635**	**3,962**	**112,009**	**224,234**	**263,863**
Percent of Revenues	-5.5%	-6.2%	13.5%	12.9%	26.4%	40.6%	36.7%	40.2%	42.8%	44.5%	45.9%	47.6%	48.5%	48.5%	48.2%	48.0%	4.4%	37.5%	45.3%	47.2%
Change vs Year Ago	135.0%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	392.3%	120.8%	76.8%	40.2%	32.4%	25.4%	17.5%	9.0%	559.2%	2727.1%	100.2%	17.7%
Reported EPS (NT$, TW GAAP)	**(0.24)**	**(0.29)**	**0.65**	**0.76**	**2.25**	**5.40**	**7.26**	**9.98**	**11.07**	**11.93**	**12.84**	**13.99**	**14.65**	**14.97**	**15.09**	**15.25**	**0.88**	**24.89**	**49.83**	**59.96**
Sequential Change	61%	20%	-324%	16%	196%	140%	34%	37%	11%	8%	8%	9%	5%	2%	1%	1%	493.9%	2727.1%	100.2%	20.3%
Change vs Year Ago	118%	N.A.	N.A.	N.A.	N.A.	N.A.	1010%	1212%	392%	121%	77%	40%	32%	25%	18%	9%				
Book value per share	21.8	21.0	22.5	25.4	27.6	33.0	40.3	50.3	61.4	73.3	86.2	100.2	114.8	0.0	13.8	13.4	25.4	50.3	100.2	160.2

Source: Company data, Morgan Stanley Research (E) estimates

Winbond: Valuation Methodology

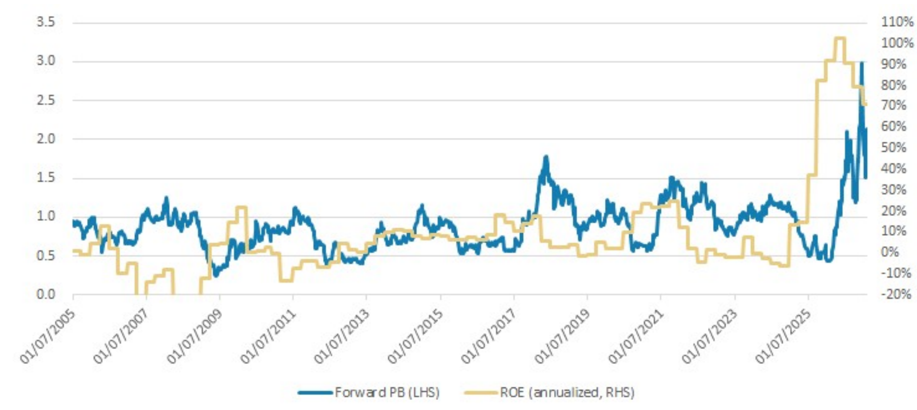
We keep our PT unchanged at NT$288: We continue to apply P/B multiple methodology to derive our price target, in line with our approach for Greater China memory IDM peers and in view of the industry's high earnings volatility. Our price target (base-case scenario value) implies 5.7x 2026e BVPS and 2.9x 2027e BVPS vs. our prior target multiples of 6.2x 2026e and 3.4x 2027e BVPS, to reflect the higher equity risk premium due to the volatility. Our bull- and bear-case scenario values are unchanged at NT$342.00 and NT $118.00, respectively, implying 3.4x and 1.2x 2027e BVPS, respectively.

Exhibit 13: Winbond: Historical forward P/B



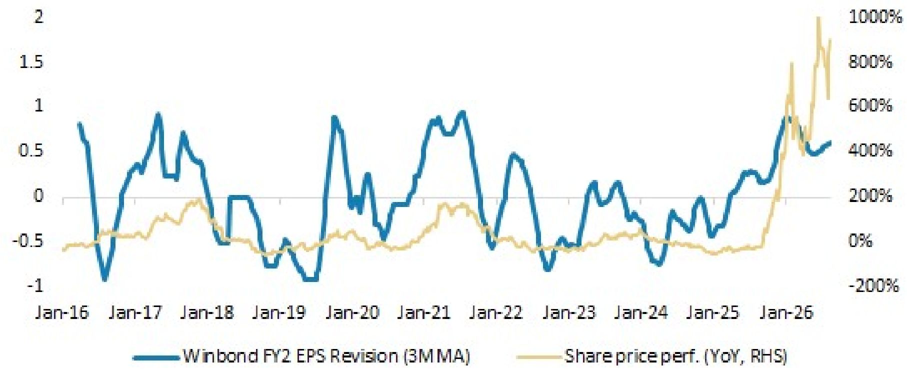
Source: Company data, Morgan Stanley Research estimates

Exhibit 14: Winbond: Historical Forward P/B vs. ROE



Source: Company data, Morgan Stanley Research estimates

Exhibit 15: Winbond: Earnings Estimate Revision Breadth



Source: Company data, Morgan Stanley Research estimates

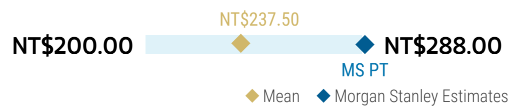
Risk Reward – Winbond Electronics Corp (2344.TW)

DDR, NOR and SLC NAND pricing upside; long-term opportunities in CUBE

PRICE TARGET NT$288.00

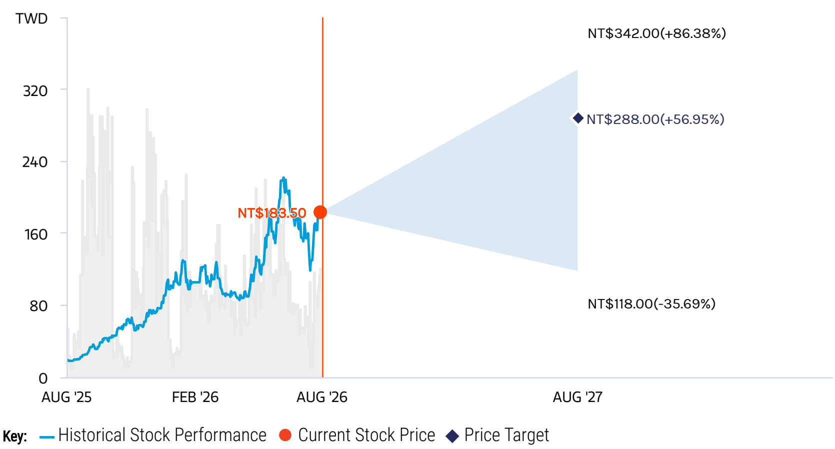
Base case, 2.9x 2027e P/B. This method is in line with the approach we adopt for Greater China memory IDM peers, in view of the industry's high volatility. We believe the stock merits a multiple beyond the high end of its historical band of 0.5-1.5x since 2017, as we are seeing DRAM pricing upside, a sustainable NOR price hike, and opportunities in SLC NAND and SiCap foundry business.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART

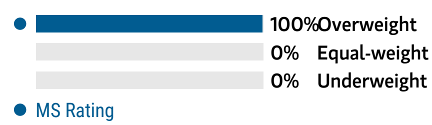


Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- We expect DDR3 and DDR4 price increases to continue in 2026. The supply/demand gap should widen into 2H26.
- We see NOR price hikes continuing throughout 2026.
- High density SLC NAND pricing is catching up, and we now expect a larger TAM from data center applications.
- We share management's view that CUBE could be meaningful in 2026, given engagement with multiple foundry partners and customers.
- We see potential for several headwinds ahead for the logic business.
- Our PT implies 2.9x 2027e P/B.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Pricing Power: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE NT$342.00

3.4x 2027e BVPS

NOR Flash pricing and DRAM prices rebound more in the next 12 months: NOR Flash rises dramatically. DRAM prices continue to rise drastically within the next 12 months, with 25nm accounting for >80% of sales.

BASE CASE NT$288.00

2.9x 2027e BVPS

Margin expansion benefiting from the memory up-cycle: 1) NOR Flash pricing rises significantly in the next 12 months; and 2) DRAM prices rise significantly in the next 12 months.

BEAR CASE NT$118.00

1.2x 2027e BVPS

NOR Flash prices face pressure in the next 12 months; DRAM market back to oversupply, with slower technology migration: 1) NOR Flash shows price declines; and 2) DRAM prices drop in the next 12 months.

Risk Reward – Winbond Electronics Corp (2344.TW)

KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
NOR ASP (%)	9	153	39	0
DRAM ASP (%)	(3)	284	37	10
Mobile RAM sales (NT$, mn)	5,302	24,035	41,647	46,688
DRAM sales (NT$, mn)	27,024	173,011	317,227	373,230
Flash sales (NT$, mn)	31,890	94,049	145,521	145,521

INVESTMENT DRIVERS

- DRAM pricing
- NOR pricing
- Technology migration

GLOBAL REVENUE EXPOSURE

- 0-10% Europe ex UK
- 0-10% India
- 0-10% Japan
- 0-10% MEA
- 0-10% North America
- 0-10% UK
- 20-30% APAC, ex Japan, Mainland China and India
- 40-50% Mainland China

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

MS ALPHA MODELS

1/5 **MOST** | 3 Month Horizon

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

RISKS TO PT/RATING

RISKS TO UPSIDE

- NOR Flash pricing increase, driven by stronger-than-expected demand
- Stronger-than-expected DRAM pricing given ongoing supply shortage
- Faster-than-expected SLC NAND development

RISKS TO DOWNSIDE

- NOR Flash downcycle, driven by weaker demand
- Lower-than-expected DRAM pricing given ongoing oversupply
- Slower-than-expected SLC NAND development

OWNERSHIP POSITIONING

Inst. Owners, % Active 58.8%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e

	Low	Morgan Stanley Estimates	Mean	High
Sales / Revenue (NT$, mn)	259,066	298,818	273,758	298,818
EBITDA (NT$, mn)	134,605	153,844	157,940	175,722
Net income (NT$, mn)	95,722	112,010	113,684	130,650
EPS (NT$)	21.27	24.89	25.26	29.03

◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Winbond: Financial Summary

Exhibit 16: Financial summary

Income Statement

NT$mn (Years End Dec)	2025	2026E	2027E	2028E
Net sales	89,406	298,818	495,128	558,647
COGS	(58,210)	(119,579)	(169,180)	(180,294)
Depreciation Expense	(12,683)	(15,219)	(19,785)	(25,721)
Variable Cost	(26,224)	(84,984)	(129,988)	(130,725)
Gross profit	31,196	179,239	325,948	378,352
Operating expenses	(25,662)	(41,006)	(46,213)	(47,577)
Operating income	**5,534**	**138,233**	**279,735**	**330,775**
Non-operating income	(924)	1,150	(33)	(53)
Pre-tax income	4,610	139,383	279,701	330,722
Income tax	(649)	(27,374)	(55,468)	(66,859)
Reported net Income	**3,962**	**112,009**	**224,234**	**263,863**
Adj.wtd. avg.shrs(m)	4,500	4,500	4,500	4,500
Reported EPS (NT$)	**0.88**	**24.89**	**49.83**	**59.96**
Modelware EPS (NT$)	**0.88**	**24.89**	**49.83**	**59.96**

Balance Sheet

NT$mn (Years End Dec)	2025	2026E	2027E	2028E
Cash	15,734	36,956	233,640	511,108
Mkt Securities	13,347	13,347	13,347	13,347
AR/NR	16,071	64,520	76,462	82,558
Inventory	25,758	120,232	142,484	153,846
Other	2,281	2,281	2,281	2,281
Current Assets	73,191	237,336	468,214	763,140
Long-term investments	19,266	19,073	19,013	18,973
Fixed assets	93,800	88,581	78,796	59,010
Other assets	5,935	5,935	5,935	5,935
Total Assets	192,192	350,925	571,958	847,059
S/T borrowings	2,739	2,739	2,739	2,739
AP/NP	8,224	30,505	28,905	31,280
Other ST liabilities	35,652	59,873	58,050	60,755
LT debt	26,399	26,399	26,399	26,399
Other LT liabilities	5,048	5,048	5,048	5,048
Total Liabilities	**78,062**	**124,565**	**121,142**	**126,222**
Common stocks	45,000	45,000	45,000	45,000
Preferred stocks	0	0	0	0
Capital Researve	13,752	13,752	13,752	13,752
Retained earning	49,184	161,415	385,870	655,891
Other shareholders' equity	0	0	0	0
Total Equity	114,130	226,361	450,816	720,837
Total Liab. & Shrhldr's Equity	**192,192**	**350,925**	**571,958**	**847,059**
BVPS	**25.4**	**50.3**	**100.2**	**160.2**

Cash Flow Statement

NT$mn (Years End Dec)	2025	2026E	2027E	2028E
Cashflow from Operations	**11,183**	**39,979**	**215,441**	**286,224**
Net profits	3,177	112,009	224,234	269,798
Depreciation	12,308	15,219	19,785	19,785
Working Capital Change	(3,909)	(120,641)	(35,794)	(15,083)
Other adjustments	(394)	33,392	7,216	11,724
Cashflow from Investing	**(7,658)**	**(18,132)**	**(10,331)**	**9,649**
Capex	(5,296)	(10,000)	(10,000)	(10,000)
Change of LT Investment	0	0	0	0
Change of ST Investment	(971)	0	0	0
Other adjustments	(1,391)	(8,132)	(331)	19,649
Cashflow from financing	**(1,561)**	**(625)**	**(8,425)**	**(18,405)**
Increase in L/T debt	(1,698)	0	0	0
Increase in S/T debt	777	0	0	0
Cash Dividend Paid	0	0	0	0
Dir.& Emp Bonus Paid	0	0	0	0
Other adjustments	(640)	(625)	(8,425)	(18,405)
Exchange rate adjustment	(330)	0	(0)	0
Net change in cash	**1,633**	**21,223**	**196,684**	**277,467**

Financial Ratio

	2025	2026E	2027E	2028E
Growth(%)				
Turnover	9.6	234.2	65.7	12.8
Margins (%)				
Gross Margin	34.9	60.0	65.8	67.7
Operating Margin	6.2	46.3	56.5	59.2
EBITA Margin	-8.0	41.2	52.5	54.6
Pretax Margin	5.2	46.6	56.5	59.2
Net Profit	4.4	37.5	45.3	47.2
Return (%)				
ROAE	4.3	103.8	101.8	59.3
ROAA	2.1	41.2	48.6	37.2
Gearing (%)				
Net Debt/Equity	31.9	6.7	(40.3)	(63.7)
Liabilities/Equity	68.4	55.0	26.9	17.5
Ratios (X)				
Current ratio	1.6	2.5	5.2	8.1
Quick ratio	0.7	1.1	3.5	6.3
Others				
AR/NR Turnover (days)	45	53	49	52
Inventory Turnover (days)	107	102	89	97
AP Turnover (days)	45	52	93	62
Cash Conversion (days)	107	104	45	86

Source: Company data, Morgan Stanley Research (E) estimates

GigaDevice: Estimate Revisions and Quarterly Financials

We raise our EPS estimates for 2026-28 by 108%, 49% and 48%, respectively. This reflects stronger-than-expected memory pricing across DDR4, NOR flash and SLC NAND. We now expect DDR4 pricing to rise further into 4Q, following the double-digit monthly uptrend. SLC NAND pricing is likely to continue rising into 4Q, after the 50-60% increase in 3Q. NOR pricing could increase by 30-40% in 3Q and extend into 4Q. We also reflect stronger gross margin as a result of the strong price hike.

Exhibit 17: GigaDevice: Estimate revisions

	Current	Previous		Current	Previous		Current	Previous	
Rmb mn	**2026E**	**2026E**	**Diff.**	**2027E**	**2027E**	**Diff.**	**2028E**	**2028E**	**Diff.**
Net sales	38,638	28,399	36%	66,329	46,298	43%	76,136	57,916	31%
COGS	8,251	12,196		27,613	19,366		31,692	26,712	
Gross profit	30,387	16,203	88%	38,715	26,932	44%	44,443	31,204	42%
Operating expenses	3,480	3,153		4,176	3,535		4,573	3,991	
Operating profit	26,907	13,050	106%	34,539	23,396	48%	39,870	27,214	47%
Non-op. income (exp.)	(125)	(125)		20	20		20	20	
Pretax Income	26,782	12,925	107%	34,559	23,416	48%	39,890	27,234	46%
Taxes	2,393	1,187		2,904	2,150		3,352	2,501	
Net income	24,345	11,693	108%	31,610	21,221	49%	36,493	24,688	48%
Reported EPS (Rmb)	**34.72**	**16.68**	**108%**	**45.09**	**30.27**	**49%**	**52.05**	**35.21**	**48%**
Margins									
Gross margin	78.6%	57.1%	21.6%	58.4%	58.2%	0.2%	58.4%	53.9%	4.5%
Operating margin	69.6%	46.0%	23.7%	52.1%	50.5%	1.5%	52.4%	47.0%	5.4%
Pretax margin	69.3%	45.5%	23.8%	52.1%	50.6%	1.5%	52.4%	47.0%	5.4%
Net margin	63.0%	41.2%	21.8%	47.7%	45.8%	1.8%	47.9%	42.6%	5.3%

Source: Morgan Stanley Research (E) estimates

Exhibit 18: GigaDevice: Quarterly financials

Rmb mn	1Q25	2Q25	3Q25	4Q25	1Q26	2Q26p	3Q26E	4Q26E
Total Revenues	**1,909**	**2,241**	**2,681**	**2,372**	**4,188**	**7,312**	**11,444**	**15,694**
Sequential Change	11.9%	17.4%	19.6%	-11.5%	76.6%	74.6%	56.5%	37.1%
Change vs Year Ago	17.3%	13.1%	31.4%	39.0%	119.4%	226.2%	326.8%	561.7%
Cost of Sales	1,194	1,412	1,589	1,307	1,798	2,112	1,901	2,441
Percent of Revenues	63%	63%	59%	55%	43%	29%	17%	16%
Gross Profit	**715**	**830**	**1,092**	**1,065**	**2,390**	**5,200**	**9,543**	**13,253**
Percent of Revenues	37.4%	37.0%	40.7%	44.9%	57.1%	71.1%	83.4%	84.4%
Incremental Margin	73%	35%	60%	NM	73%	90%	105%	87%
Total Opex	540	545	574	518	666	781	933	1,099
Percent of Revenues	28.3%	24.3%	21.4%	21.8%	15.9%	10.7%	8.2%	7.0%
R&D	292	276	292	257	358	368	383	403
Percent of Revenues	15.3%	12.3%	10.9%	10.8%	8.6%	5.0%	3.3%	2.6%
General & administrative	136	156	161	160	174	179	184	194
Percent of Revenues	7.1%	6.9%	6.0%	6.7%	4.2%	2.5%	1.6%	1.2%
Selling & marketing	112	113	121	101	134	234	366	502
Percent of Revenues	5.8%	5.0%	4.5%	4.3%	3.2%	3.2%	3.2%	3.2%
Operating Income	**175**	**285**	**518**	**547**	**1,724**	**4,419**	**8,610**	**12,154**
Percent of Revenues	9.2%	12.7%	19.3%	23.1%	41.2%	60.4%	75.2%	77.4%
Change vs Year Ago	12.7%	19.4%	36.9%	1331.9%	883.7%	1450.1%	1562.3%	2120.8%
Total Non-operating Income(Loss)	60	75	10	35	(103)	1,531	(7)	(7)
Profit Before Taxes	**236**	**360**	**528**	**583**	**1,621**	**5,950**	**8,603**	**12,147**
Percent of Revenues	12%	16%	20%	25%	39%	81%	75%	77%
Taxes	(4)	12	11	10	149	500	723	1,021
Tax Rate	-1.7%	3.4%	2.1%	1.7%	9.2%	8.4%	8.4%	8.4%
Net Income, Cont Ops	240	348	517	573	1,473	5,450	7,880	11,126
Percent of Revenues	13%	16%	19%	24%	35%	75%	69%	71%
Reported Income	**235**	**341**	**508**	**565**	**1,461**	**5,439**	**7,869**	**11,115**
Percent of Revenues	12%	15%	19%	24%	35%	74%	69%	71%
Change vs Year Ago	15%	9%	61%	109%	523%	1496%	1450%	1868%
Reported EPS (Rmb)	**0.35**	**0.51**	**0.76**	**0.85**	**2.08**	**7.76**	**11.22**	**15.85**
Change vs Year Ago	15%	10%	61%	108%	490%	1411%	1373%	1775%

Rmb mn	1Q27E	2Q27E	3Q27E	4Q27E	1Q28E	2Q28E	3Q28E	4Q28E	2025	2026E	2027E	2028E
Total Revenues	**15,854**	**16,235**	**16,789**	**17,452**	**17,881**	**18,576**	**19,389**	**20,290**	**9,203**	**38,638**	**66,329**	**76,136**
Sequential Change	1.0%	2.4%	3.4%	3.9%	2.5%	3.9%	4.4%	4.6%				
Change vs Year Ago	278.5%	122.0%	46.7%	11.2%	12.8%	14.4%	15.5%	16.3%	25.1%	319.8%	71.7%	14.8%
Cost of Sales	6,598	6,755	6,997	7,263	7,425	7,735	8,085	8,446	5,502	8,251	27,613	31,692
Percent of Revenues	42%	42%	42%	42%	42%	42%	42%	42%	60%	21%	42%	42%
Gross Profit	**9,256**	**9,480**	**9,791**	**10,188**	**10,456**	**10,841**	**11,303**	**11,843**	**3,701**	**30,387**	**38,715**	**44,443**
Percent of Revenues	58.4%	58.4%	58.3%	58.4%	58.5%	58.4%	58.3%	58.4%	40.2%	78.6%	58.4%	58.4%
Incremental Margin	-2510%	59%	56%	60%	62%	55%	57%	60%	49%	91%	30%	58%
Total Opex	992	1,019	1,057	1,108	1,078	1,115	1,161	1,220	2,176	3,480	4,176	4,573
Percent of Revenues	6.3%	6.3%	6.3%	6.3%	6.0%	6.0%	6.0%	6.0%	23.6%	9.0%	6.3%	6.0%
R&D	290	300	315	335	290	300	315	335	1,117	1,513	1,240	1,240
Percent of Revenues	1.8%	1.8%	1.9%	1.9%	1.6%	1.6%	1.6%	1.7%	12.1%	3.9%	1.9%	1.6%
General & administrative	195	200	205	215	216	221	226	236	612	732	816	900
Percent of Revenues	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	6.7%	1.9%	1.2%	1.2%
Selling & marketing	507	519	537	558	571	594	620	648	446	1,235	2,120	2,433
Percent of Revenues	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	4.8%	3.2%	3.2%	3.2%
Operating Income	**8,264**	**8,460**	**8,735**	**9,080**	**9,378**	**9,726**	**10,142**	**10,624**	**1,526**	**26,907**	**34,539**	**39,870**
Percent of Revenues	52.1%	52.1%	52.0%	52.0%	52.4%	52.4%	52.3%	52.4%	16.6%	69.6%	52.1%	52.4%
Change vs Year Ago	379.4%	91.5%	1.4%	-25.3%	13.5%	15.0%	16.1%	17.0%	88%	1664%	28%	15%
Total Non-operating Income(Loss)	5	5	5	5	5	5	5	5	181	(125)	20	20
Profit Before Taxes	**8,269**	**8,465**	**8,740**	**9,085**	**9,383**	**9,731**	**10,147**	**10,629**	**1,706**	**26,782**	**34,559**	**39,890**
Percent of Revenues	52%	52%	52%	52%	52%	52%	52%	52%	19%	69%	52%	52%
Taxes	695	711	734	763	789	818	853	893	29	2,393	2,904	3,352
Tax Rate	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	1.7%	8.9%	8.4%	8.4%
Net Income, Cont Ops	7,574	7,754	8,005	8,322	8,595	8,913	9,295	9,736	1,677	24,390	31,655	36,538
Percent of Revenues	48%	48%	48%	48%	48%	48%	48%	48%	18%	63%	48%	48%
Reported Income	**7,563**	**7,743**	**7,994**	**8,311**	**8,583**	**8,902**	**9,283**	**9,724**	**1,648**	**24,345**	**31,610**	**36,493**
Percent of Revenues	48%	48%	48%	48%	48%	48%	48%	48%	18%	63%	48%	48%
Change vs Year Ago	418%	42%	2%	-25%	13%	15%	16%	17%	49%	1377%	30%	15%
Reported EPS (Rmb)	**10.79**	**11.04**	**11.40**	**11.85**	**12.24**	**12.70**	**13.24**	**13.87**	**2.48**	**34.72**	**45.09**	**52.05**
Change vs Year Ago	418%	42%	2%	-25%	13%	15%	16%	17%	50%	1302%	30%	15%

Source: Company data, Morgan Stanley Research (E) estimates

GigaDevice: Valuation Methodology

We cut our price target (base case) to Rmb750.00: We continue to derive our price target from a residual income model, which we believe best captures the stock's long-term value. We cut our intermediate growth rate to 11.3% from 16.4% and our terminal growth rate to 2.5% from 3.0% to reflect stronger changes in the supply environment compared to the end market demand over the mid- to long term. We also raise our equity risk premium to 6.5% from 6.0%, resulting in the cost of equity raising to 9.4% from 8.9%, to reflect higher volatility associated with the broader memory sector. Our other key assumptions remain unchanged, including beta of 1.1, risk-free rate of 2% and payout ratio of 40%.

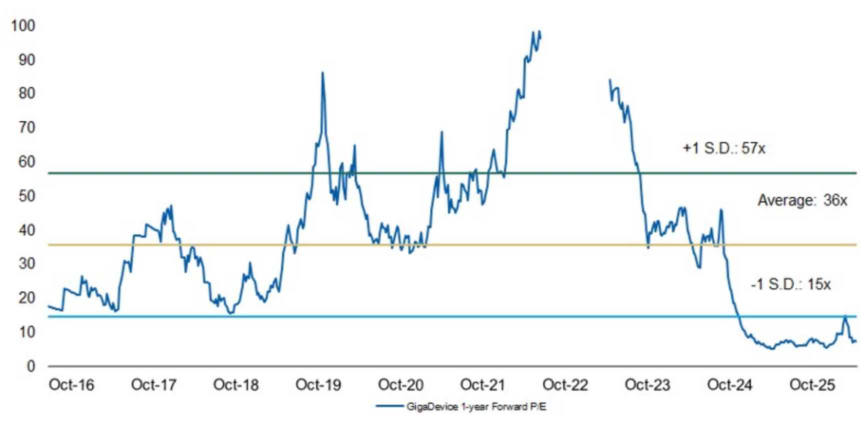
Our new price target implies a 2027e P/E of 17x, below the historical average of 38x since 2016, but roughly in line with the -1 S.D. at 18x. Our bull-case value falls to Rmb1,300.00 from Rmb1,542.00, and our bear case to Rmb324.00 from Rmb648.00. The risk reward is skewed more toward the bear case now, to reflect the higher volatility associated with the broader memory sector.

Exhibit 19: GigaDevice: Residual income model

Rmb mn	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E
Total Equity	43,073	67,380	94,390	120,312	149,163	181,274	217,013	256,791	301,064	350,340	405,185	466,226
Net Profit	24,345	31,610	36,493	40,617	45,207	50,315	56,001	62,329	69,372	77,211	85,936	95,646
ROAE	78.2%	57.2%	45.1%	37.8%	33.6%	30.5%	28.1%	26.3%	24.9%	23.7%	22.7%	22.0%
Residual Income	13,210	20,590	24,042	26,806	29,014	31,351	33,871	36,619	39,635	42,962	46,639	50,713
Spread	68.7%	47.8%	35.7%	28.4%	24.1%	21.0%	18.7%	16.9%	15.4%	14.3%	13.3%	12.5%
Ending Equity Capital	43,073											
PV of Forecast Period	178,724											
PV of Continuing Value	304,182											
Equity Value	525,979											
No. of Shares	701											
Projected Price (Rmb)	750											

Source: Morgan Stanley Research (E) estimates

Exhibit 20: GigaDevice: Historical forward P/E



Source: Company data, Morgan Stanley Research estimates

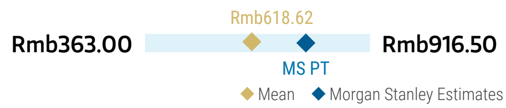
Risk Reward – GigaDevice Semiconductor Beijing Inc (603986.SS)

Multiple drivers ahead

PRICE TARGET Rmb750.00

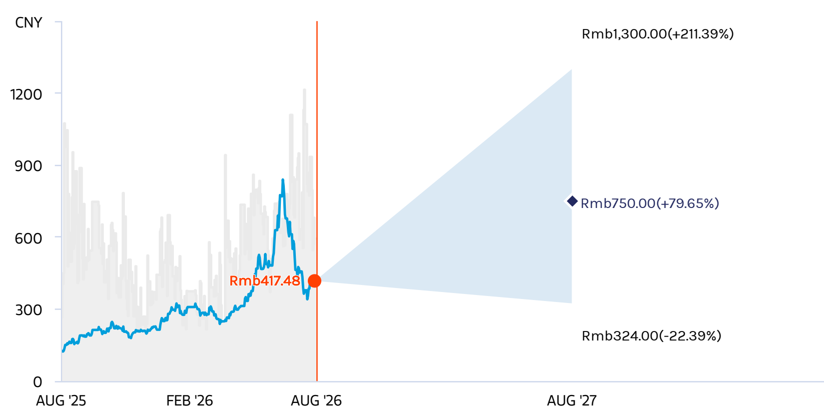
Our price target is our base-case value, derived from our residual income model. Key assumptions: cost of equity of 9.4% (beta 1.1, risk-free rate 2% and risk premium 6.5%), a payout ratio of 40%, medium-term growth rate of 11.3% and a terminal growth rate of 2.5%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



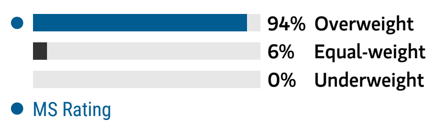
Key: Historical Stock Performance · Current Stock Price · Price Target

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- We expect GigaDevice to continue to gain share in China's MCU market. Auto MCUs offer bigger opportunities as local self-sufficiency is low.
- We see further NOR Flash pricing upside, and expect GigaDevice NOR quality to catch up in the auto segment.
- Specialty DRAM pricing started to rebound in late 1Q25, and there are opportunities such as wafer-on-wafer specialty memory.
- We believe GigaDevice will ramp up 16G LPDDR4 and 32G DDR4 at CXMT's Gen 4 platform in 2027.
- Our price target implies 2027e P/E of 17x, below the historical average of 38x from 2016, but roughly in line with the -1 S.D. of 18x.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Pricing Power:	*Positive*
Secular Growth:	*Positive*

View descriptions of Risk Rewards Themes here

BULL CASE Rmb1,300.00

29x 2027e EPS

NOR/SLC NAND prices rise more sharply into 2H26, and the company increases production of mid-/high-density NOR; MCU growth accelerates; DRAM business shows significant contribution: 1) Flash sales grow 300%+ Y/Y in 2026 via price hikes and meaningful growth in demand; 2) MCU sales growth significantly exceeds 40% in 2026; 3) contribution from WoW tops expectations in 2026-28e; 4) DDR4 price hike stronger than expected; 5) gross margin above 60% in 2026.

BASE CASE Rmb750.00

17x 2027e EPS

NOR/SLC NAND and DRAM pricing upside in 2026; moderate WoW contribution: 1) Flash sales rise 348% Y/Y in 2026; 2) MCU grows 28% in 2026; 3) meaningful contribution from WoW in 2026-28e; 4) significant DDR4 price hike in 2026; 5) gross margin at ~79% in 2026.

BEAR CASE Rmb324.00

7x 2027e EPS

NOR/SLC NAND price falls sharply into 2H26; MCU faces stronger competition from foreign and local vendors; pause in DRAM business development: 1) Flash sales grow less than expected in 2026, as ASP starts to drop towards the end of the year; 2) MCU sales decrease >10% Y/Y in 2026; 3) contribution from WoW falls below expectations in 2026-28e; 4) DDR4 price starts to decline toward the end of 2026; 5) gross margin below 35% in 2026.

Risk Reward – GigaDevice Semiconductor Beijing Inc (603986.SS)

KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
NOR Flash ASP growth (%)	4	217	49	0
MCU ASP growth (%)	(8)	0	0	0
Gross margin (%)	40	79	58	58

INVESTMENT DRIVERS

- Beneficiary of MCU localization
- Decreasing opex burden
- Development of AI glasses market

GLOBAL REVENUE EXPOSURE

- 0-10% Europe ex UK
- 0-10% India
- 0-10% Japan
- 0-10% MEA
- 0-10% North America
- 0-10% UK
- 20-30% APAC, ex Japan, Mainland China and India
- 50-60% Mainland China

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

MS ALPHA MODELS

3/5 MOST	3 Month Horizon

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

RISKS TO PT/RATING

RISKS TO UPSIDE

- NOR up-cycle driven by stronger demand
- Superior chip design, leading to increasing exposure to low-density NOR
- Faster-than-expected DRAM development

RISKS TO DOWNSIDE

- NOR down-cycle driven by weaker demand
- Inferior chip design, leading to increasing exposure to mid-/high-density NOR
- Slower-than-expected DRAM development

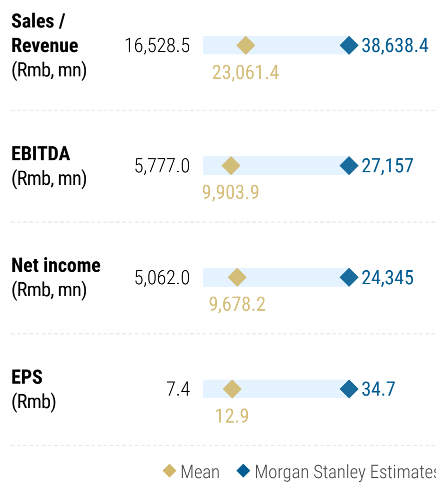
OWNERSHIP POSITIONING

Inst. Owners, % Active 86.1%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e



Source: Refinitiv, Morgan Stanley Research

GigaDevice: Financial Summary

Exhibit 21: Financial Summary

Income Statement

Rmb mn (Years End Dec)	2025	2026E	2027E	2028E
Net sales	9,203	38,638	66,329	76,136
COGS	(5,502)	(8,251)	(27,613)	(31,692)
Gross profit	3,701	30,387	38,715	44,443
Operating expenses	(2,176)	(3,480)	(4,176)	(4,573)
Operating income	**1,526**	**26,907**	**34,539**	**39,870**
Non-operating income	181	(125)	20	20
Pre-tax income	1,706	26,782	34,559	39,890
Income tax	29	2,393	2,904	3,352
Minority interests	(29)	(45)	(45)	(45)
Reported net Income	**1,648**	**24,345**	**31,610**	**36,493**
Adj.wtd.avg.shrs(m)	666	701	701	701
MW EPS (Rmb)	2.48	34.72	45.09	52.05
Reported EPS (Rmb)	**2.48**	**34.72**	**45.09**	**52.05**

Balance Sheet

Rmb mn (Years End Dec)	2025	2026E	2027E	2028E
Cash	9,186	31,739	48,786	74,170
Mkt Securities	102	102	102	102
AR/NR	199	943	1,619	1,858
Inventory	3,066	3,924	13,130	15,070
Other	873	873	873	873
Current Assets	**13,425**	**37,580**	**64,509**	**92,072**
Long-term investments	4,085	4,085	4,085	4,085
Fixed assets	1,325	1,325	1,325	1,325
Deferred assets	432	432	432	432
Other assets	2,129	2,129	2,129	2,129
Total Assets	**21,397**	**45,551**	**72,481**	**100,043**
S/T borrowings	200	200	200	200
AP/NP	813	1,118	3,740	4,293
Other ST liabilities	934	934	934	934
LT debt	0	0	0	0
Other LT liabilities	226	226	226	226
Total Liabilities	**2,174**	**2,478**	**5,101**	**5,653**
Common shares	668	668	668	668
Additional capital	9,201	9,201	9,201	9,201
Retained earning	8,407	32,257	56,564	83,574
Other shareholders' equity	946	946	946	946
Total Equity	**19,223**	**43,073**	**67,380**	**94,390**
Total Liab. & Shrhldr's Equity	**21,397**	**45,551**	**72,481**	**100,043**

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research, Company Data

Cash Flow Statement

Rmb mn (Years End Dec)	2025	2026E	2027E	2028E
Cashflow from Operations	**2,032**	**23,297**	**24,600**	**35,117**
Net profits	1,648	24,345	31,610	36,493
Depreciation	250	250	250	250
Working Capital Change	(440)	(1,297)	(7,260)	(1,626)
Other adjustments	574	0	0	0
Cashflow from Investing	**(1,391)**	**(250)**	**(250)**	**(250)**
Capex	(1,049)	(250)	(250)	(250)
Change of LT Investment	(1,886)	0	0	0
Change of ST Investment	0	0	0	0
Other adjustments	1,544	0	0	0
Cashflow from financing	**(517)**	**(494)**	**(7,303)**	**(9,483)**
Increase in L/T debt	0	0	0	0
Increase in S/T debt	(698)	0	0	0
Cash Dividend Paid	(243)	(494)	(7,303)	(9,483)
Dir& Emp Bonus Paid	0	0	0	0
Issuance of stock	516	0	0	0
Other adjustments	(92)	0	0	0
Exchange rate adjustment	21	0	0	0
Net change in cash	**146**	**22,553**	**17,047**	**25,384**

Financial Ratios

	2025	2026E	2027E	2028E
Growth(%)				
Turnover	25.1	319.8	71.7	14.8
Operating profits	88.1	1663.8	28.4	15.4
EPS	49.6	1302.3	29.8	15.4
Margins (%)				
Gross Margin	40.2	78.6	58.4	58.4
Operating Margin	16.6	69.6	52.1	52.4
Pretax Margin	18.5	69.3	52.1	52.4
Net Margin	17.9	63.0	47.7	47.9
Return (%)				
ROAE	9.2	78.2	57.2	45.1
ROAA	8.1	72.7	53.6	42.3
Gearing (%)				
Net Debt/Equity	(46.7)	(73.2)	(72.1)	(78.4)
Liabilities/Equity	11.3	5.8	7.6	6.0
Ratios (X)				
Current ratio	6.9	16.7	13.2	17.0
Quick ratio	4.8	14.5	10.3	14.0
Others				
AR/NR Turnover (days)	9	9	9	9
Inventory Turnover (days)	174	174	174	174
AP Turnover (days)	49	49	49	49
Cash Conversion (days)	133	133	133	133

PSMC: Earnings Estimate Revisions

We raise our EPS forecasts for 2026-28 by 18%, 17% and 13%, respectively: This reflects stronger-than-expected foundry price hike for both memory and logic at PSMC. We now expect PSMC's foundry pricing to rise further into 4Q, following the strong hike in July. We also reflect stronger gross margin as a result of the strong price hike.

Exhibit 22: PSMC: Earnings estimate revision summary

(NT$ mn)	New 2026e	Old 2026e	Diff.%	New 2027e	Old 2027e	Diff.%	New 2028e	Old 2028e	Diff.%
Net sales	77,163	75,820	2%	107,846	102,954	5%	123,668	118,635	4%
Gross profit	18,628	16,783	11%	43,266	41,003	6%	53,158	50,792	5%
Operating profit	26,017	22,630	15%	37,386	31,964	17%	46,559	41,036	13%
Pretax income	27,772	23,249	19%	38,071	32,649	17%	47,244	41,721	13%
Net income	25,164	21,365	18%	30,457	26,119	17%	37,795	33,377	13%
EPS (NT$)	**5.66**	**4.80**	**18%**	**6.54**	**5.61**	**17%**	**8.11**	**7.16**	**13%**
Margins									
Gross margin	24.1%	22.1%		40.1%	39.8%		43.0%	42.8%	
Operating margin	33.7%	29.8%		34.7%	31.0%		37.6%	34.6%	
Pretax margin	36.0%	30.7%		35.3%	31.7%		38.2%	35.2%	
Net margin	32.6%	28.2%		28.2%	25.4%		30.6%	28.1%	

(NT$)	New 2026e	Old 2026e	Diff.%	New 2027e	Old 2027e	Diff.%	New 2028e	Old 2028e	Diff.%
BVPS	43.1	42.2	1.9%	54.3	52.8	2.8%	66.7	64.6	3.4%

Source: Company data, Morgan Stanley Research (E) estimates

Exhibit 23: PSMC: Quarterly financials

(NT$ mn)	1Q25	2Q25	3Q25	4Q25	1Q26	2Q26p	3Q26e	4Q26e
Total Revenues	**11,116**	**11,278**	**11,840**	**12,495**	**13,572**	**17,291**	**21,839**	**24,461**
Sequential Change	-0.1%	1.5%	5.0%	5.5%	8.6%	27.4%	26.3%	12.0%
Change vs Year Ago	2.7%	1.4%	1.6%	12.2%	22.1%	53.3%	84.4%	95.8%
Cost of Sales	(11,653)	(12,300)	(12,614)	(11,701)	(12,184)	(12,402)	(16,092)	(17,856)
Percent of Revenues	104.8%	109.1%	106.5%	93.6%	89.8%	71.7%	73.7%	73.0%
Gross Profit	**(536)**	**(1,022)**	**(773)**	**794**	**1,388**	**4,889**	**5,747**	**6,604**
Percent of Revenues	-4.8%	-9.1%	-6.5%	6.4%	10.2%	28.3%	26.3%	27.0%
Total Opex	(322)	(674)	(1,913)	(1,514)	12,838	(2,307)	(1,540)	(1,602)
Percent of Revenues	2.9%	6.0%	16.2%	12.1%	-94.6%	13.3%	7.1%	6.5%
R&D	(1,354)	(1,260)	(1,297)	(1,346)	(1,615)	(1,635)	(1,655)	(1,675)
Percent of Revenues	12.2%	11.2%	11.0%	10.8%	11.9%	9.5%	7.6%	6.8%
Sales and Marketing	(116)	(111)	(113)	(122)	(170)	(180)	(227)	(254)
Percent of Revenues	1.0%	1.0%	1.0%	1.0%	1.3%	1.0%	1.0%	1.0%
General and Admin	(622)	(583)	(569)	(560)	(744)	(744)	(759)	(774)
Percent of Revenues	5.6%	5.2%	4.8%	4.5%	5.5%	4.3%	3.5%	3.2%
Operating Income	**(858)**	**(1,696)**	**(2,686)**	**(719)**	**14,226**	**3,684**	**4,207**	**5,002**
Percent of Revenues	-7.7%	-15.0%	-22.7%	-5.8%	104.8%	21.3%	19.3%	20.5%
Total Non-operating Income(Loss)	(74)	(1,529)	(41)	127	106	171	171	171
Profit Before Taxes	**(932)**	**(3,226)**	**(2,727)**	**(592)**	**14,332**	**3,888**	**4,378**	**5,174**
Percent of Revenues	-8.4%	-28.6%	-23.0%	-4.7%	105.6%	22.5%	20.0%	21.2%
Change vs Year Ago	112.9%	64.8%	-5.3%	-62.0%	-1637.2%	-220.5%	-260.6%	-973.5%
Taxes	(165)	(108)	(1)	(62)	(101)	(597)	(876)	(1,035)
Tax Rate	-17.7%	-3.3%	0.0%	-10.4%	0.7%	15.4%	20.0%	20.0%
Reported Income (TW GAAP)	**(1,097)**	**(3,334)**	**(2,728)**	**(654)**	**14,231**	**3,291**	**3,502**	**4,139**
Percent of Revenues	-9.9%	-29.6%	-23.0%	-5.2%	104.9%	19.0%	16.0%	16.9%
Change vs Year Ago	149.8%	70.3%	-5.2%	-56.4%	-1397.2%	-198.7%	-228.4%	-732.8%
EPS (NT$)	**(0.26)**	**(0.80)**	**(0.65)**	**(0.16)**	**3.36**	**0.78**	**0.75**	**0.89**
Change vs Year Ago	NM	NM	NM	NM	NM	NM	NM	NM
Weighted average shares	4,179	4,188	4,191	4,193	4,239	4,239	4,659	4,659

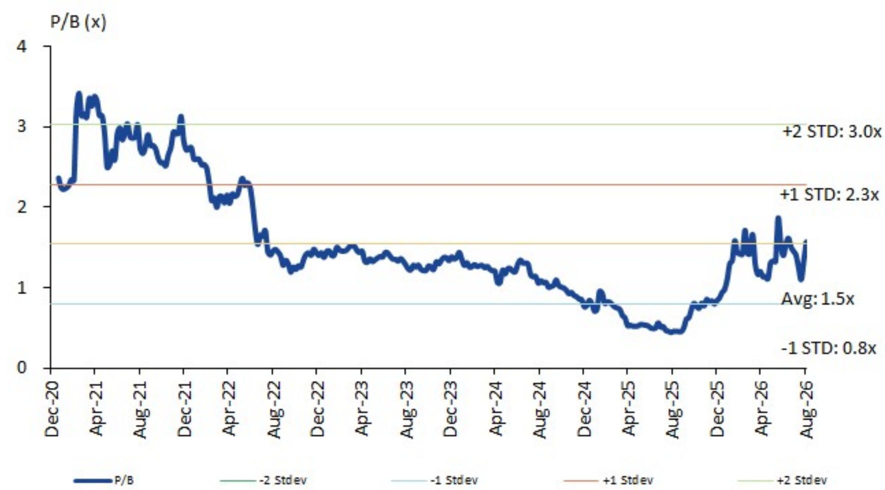
(NT$ mn)	1Q27e	2Q27e	3Q27e	4Q27e	1Q28e	2Q28e	3Q28e	4Q28e	2025	2026e	2027e	2028e
Total Revenues	**25,402**	**26,567**	**27,509**	**28,368**	**29,325**	**30,521**	**31,480**	**32,342**	**46,730**	**77,163**	**107,846**	**123,668**
Sequential Change	3.8%	4.6%	3.5%	3.1%	3.4%	4.1%	3.1%	2.7%				
Change vs Year Ago	87.2%	53.6%	26.0%	16.0%	15.4%	14.9%	14.4%	14.0%	4.5%	65.1%	39.8%	14.7%
Cost of Sales	(15,357)	(15,987)	(16,512)	(16,725)	(16,784)	(17,418)	(17,926)	(18,383)	(48,267)	(58,535)	(64,580)	(70,510)
Percent of Revenues	60.5%	60.2%	60.0%	59.0%	57.2%	57.1%	56.9%	56.8%	103.3%	75.9%	59.9%	57.0%
Gross Profit	**10,045**	**10,581**	**10,997**	**11,643**	**12,541**	**13,103**	**13,554**	**13,959**	**(1,537)**	**18,628**	**43,266**	**53,158**
Percent of Revenues	39.5%	39.8%	40.0%	41.0%	42.8%	42.9%	43.1%	43.2%	NM	24.1%	40.1%	43.0%
Total Opex	(1,402)	(1,449)	(1,493)	(1,537)	(1,581)	(1,628)	(1,673)	(1,716)	(8,054)	7,389	(5,880)	(6,599)
Percent of Revenues	5.5%	5.5%	5.4%	5.4%	5.4%	5.3%	5.3%	5.3%	17.2%	-9.6%	5.5%	5.3%
R&D	(1,300)	(1,320)	(1,340)	(1,360)	(1,380)	(1,400)	(1,420)	(1,440)	(5,257)	(6,581)	(5,320)	(5,640)
Percent of Revenues	5.1%	5.0%	4.9%	4.8%	4.7%	4.6%	4.5%	4.5%	11.3%	8.5%	4.9%	4.6%
Sales and Marketing	(254)	(266)	(275)	(284)	(293)	(305)	(315)	(323)	(463)	(831)	(1,078)	(1,237)
Percent of Revenues	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.1%	1.0%	1.0%
General and Admin	(950)	(965)	(980)	(995)	(1,010)	(1,025)	(1,040)	(1,055)	(2,334)	(3,023)	(3,890)	(4,130)
Percent of Revenues	3.7%	3.6%	3.6%	3.5%	3.4%	3.4%	3.3%	3.3%	5.0%	3.9%	3.6%	3.3%
Operating Income	**8,643**	**9,132**	**9,504**	**10,106**	**10,960**	**11,475**	**11,881**	**12,243**	**(9,591)**	**26,017**	**37,386**	**46,559**
Percent of Revenues	34.0%	34.4%	34.5%	35.6%	37.4%	37.6%	37.7%	37.9%	-20.5%	33.7%	34.7%	37.6%
Total Non-operating Income(Loss)	171	171	171	171	171	171	171	171	2,114	1,754	685	685
Profit Before Taxes	**8,814**	**9,303**	**9,676**	**10,278**	**11,131**	**11,646**	**12,053**	**12,414**	**(7,477)**	**27,772**	**38,071**	**47,244**
Percent of Revenues	34.7%	35.0%	35.2%	36.2%	38.0%	38.2%	38.3%	38.4%	NM	36.0%	35.3%	38.2%
Change vs Year Ago	-38.5%	139.3%	121.0%	98.7%	26.3%	25.2%	24.6%	20.8%				
Taxes	(1,763)	(1,861)	(1,935)	(2,056)	(2,226)	(2,329)	(2,411)	(2,483)	(336)	(2,608)	(7,614)	(9,449)
Tax Rate	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	-4.5%	9.4%	20.0%	20.0%
Reported Income (TW GAAP)	**7,051**	**7,443**	**7,740**	**8,222**	**8,905**	**9,317**	**9,642**	**9,931**	**(7,813)**	**25,164**	**30,457**	**37,795**
Percent of Revenues	27.8%	28.0%	28.1%	29.0%	30.4%	30.5%	30.6%	30.7%	-16.7%	32.6%	28.2%	30.6%
Change vs Year Ago	-50.5%	126.2%	121.0%	98.7%	26.3%	25.2%	24.6%	20.8%	NM	NM	21.0%	24.1%
EPS (NT$)	**1.51**	**1.60**	**1.66**	**1.76**	**1.91**	**2.00**	**2.07**	**2.13**	**(1.87)**	**5.66**	**6.54**	**8.11**
Change vs Year Ago	-54.9%	105.8%	121.0%	98.7%	26.3%	25.2%	24.6%	20.8%	NM	NM	15.6%	24.1%
Weighted average shares	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4,188	4,449	4,659	4,659

Source: Company data, Morgan Stanley Research (E) estimates

PSMC: Valuation Methodology

Our price target (also our base case) is unchanged at NT$111.00: We incorporate our revised estimates and maintain our P/B valuation methodology. Our new target is based on a 2027e P/B of 2.0x, down from 2.1x previously, to reflect the higher equity risk premium due to the volatility. The new 2027e P/B is still above the historical average of 1.5x since 2021, reflecting our strong conviction in shipments, ASP improvements and the emerging 3D AI foundry business. We believe PSMC is well positioned to benefit from its Micron partnership, including front-end migration to the one-year process node and back-end opportunities in advanced DRAM production (e.g., HBM). The company is also catching up with the DRAM pricing upcycle.

Exhibit 24: PSMC: Historical forward P/B



Source: Company data, Morgan Stanley Research estimates

Exhibit 25: PSMC: Historical forward P/B vs. ROE

Source: Company data, Morgan Stanley Research estimates

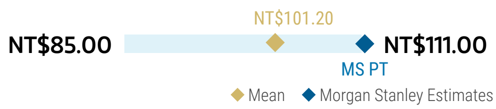
Risk Reward – Powerchip Semiconductor Manufacturing Co (6770.TW)

Beneficiary of mature node up-cycle and EMIB supply chain

PRICE TARGET NT$111.00

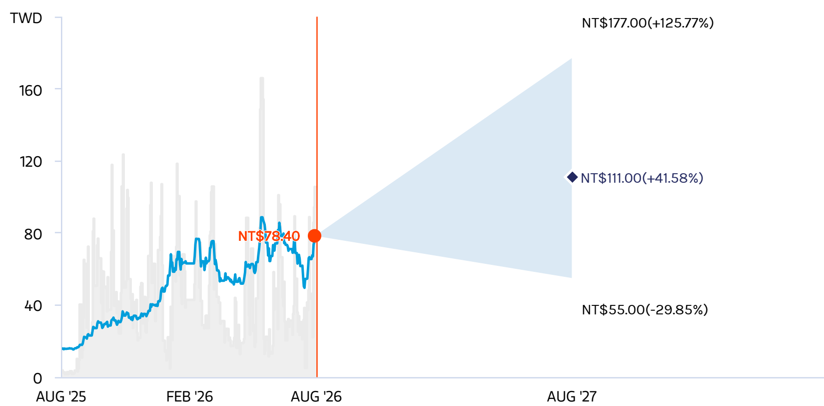
Base case, 2.0x 2027e P/B. This method is in line with our approach for Greater China memory IDM players, in view of the industry's high volatility. Our 2.0x target P/B is higher than the historical average of 1.5x since 2021, reflecting our optimistic view on improved pricing and utilization.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



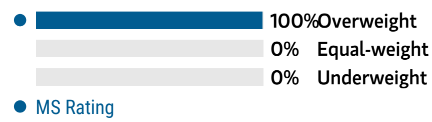
Key: Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- We expect a mature node capacity shortage in 2H27, reflecting fast growth of AI power ICs as a key part of future AI infrastructure.
- 3D AI foundry business is expected to be a major revenue contributor - we expect it to make up 5%, 10% and 14% of total revenue in 2026-28, respectively.
- We see specialty DRAM price hikes continuing throughout 2026.
- Our new target is based on 2027e P/B of 2.0x, down from 2.1x, still higher than the historical average of 1.5x since 2021, reflecting our optimistic view on improved pricing and utilization.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Disruption:	*Positive*
Pricing Power:	*Positive*

View descriptions of Risk Rewards Themes here

BULL CASE NT$177.00

3.3x 2027e BVPS

Strong sales growth with gross margin expansion: Our assumptions include: 1) a revenue CAGR of >40% in 2025-28; 2) gross margin expanding to 45%+ by 2028; 3) mature node foundry up-cycle longer than expected; 4) faster revenue ramp-up of 3D AI foundry business; 5) longer-than-expected specialty DRAM pricing increase .

BASE CASE NT$111.00

2.0x 2027e BVPS

Revenue growth with gross margin improvement: Our assumptions include: 1) a revenue CAGR of 38.3% in 2025-28; 2) a gross margin increase to 43% by 2028; 3) a mature node foundry up-cycle; 4) additional contribution from 3D AI foundry business; 5) specialty DRAM pricing continuing to increase.

BEAR CASE NT$55.00

1.0x 2027e BVPS

Revenue decline with gross margin erosion: Our assumptions include: 1) a revenue CAGR in the single digits (%) in 2025-28; 2) gross margin of <10% by 2028; 3) mature node foundry capacity no longer in shortage; 4) delays in revenue contribution from 3D AI foundry business; 5) decreases in specialty DRAM pricing.

Risk Reward – Powerchip Semiconductor Manufacturing Co (6770.TW)

KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
Wafer shipment (k 8 inch)	2,614	2,881	2,965	755
Wafer ASP (USD)	457.7	474.7	517.3	522.0
Utilization rate (%) (%)	79.1	90.3	94.3	95.0

INVESTMENT DRIVERS

- Demand from consumer electronics clients
- Inventory in the supply chain
- Utilization rate
- Long-term agreements with clients

GLOBAL REVENUE EXPOSURE

- 0-10% Europe ex UK
- 0-10% North America
- 10-20% Japan
- 10-20% Mainland China
- 60-70% APAC, ex Japan, Mainland China and India

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

MS ALPHA MODELS

2/5 MOST 3 Month Horizon

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

RISKS TO PT/RATING

RISKS TO UPSIDE

- Pricing power is sustained in 2026.
- Listing on main board attracts investment fund flows.
- Aluminum process enjoys higher margins.

RISKS TO DOWNSIDE

- Competition from China intensifies.
- Price erosion is faster than expected.
- Demand from consumer electronics clients weakens further.
- Inventory in the supply chain takes longer to digest.

OWNERSHIP POSITIONING

Inst. Owners, % Active 21.3%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e

	Low	Morgan Stanley Estimates	Mean	High
Sales / Revenue (NT$, mn)	69,159	77,163	75,166	82,999
EBITDA (NT$, mn)	15,758	15,758	41,109	42,674
Net income (NT$, mn)	6,205	6,205	30,141	36,193
EPS (NT$)	4.80	5.66	6.28	7.26
ROE (%)	3.7	7.6	22.6	32.6

◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

PSMC: Financial Summary

Exhibit 26: Financial Summary

Income Statement

NT$ mn (Years End Dec)	2025	2026e	2027e	2028e
Net sales	**46,730**	**77,163**	**107,846**	**123,668**
COGS	(48,267)	(58,535)	(64,580)	(70,510)
Gross profit	(1,537)	18,628	43,266	53,158
Operating expenses	(8,054)	7,389	(5,880)	(6,599)
R&D	(5,257)	(6,581)	(5,320)	(5,640)
SG&A	(2,797)	(3,854)	(4,968)	(5,367)
Operating income	**(9,591)**	**26,017**	**37,386**	**46,559**
Non-operating income	2,114	1,754	685	685
Pre-tax income	(7,477)	27,772	38,071	47,244
Income tax	(336)	(2,608)	(7,614)	(9,449)
Net income	**(7,813)**	**25,164**	**30,457**	**37,795**
Adj.wtd.avg.shrs (mn)	4,188	4,449	4,659	4,659
Reported EPS (NT$)	**(1.87)**	**5.66**	**6.54**	**8.11**
EPS for consensus (NT$)	**(1.87)**	**5.66**	**6.54**	**8.11**

Cash Flow Statement

NT$mn (Years End Dec)	2025	2026e	2027e	2028e
Cash flow from Operations	**7,823**	**51,678**	**37,710**	**44,093**
Net profits	(7,813)	25,158	30,450	37,787
Depreciation	9,283	7,564	7,465	5,594
Equity investment losses (income)	11	0	0	0
Other adjustments	6,343	18,956	(205)	712
Cash flow from Investing	**3,554**	**41,439**	**(2,805)**	**(2,281)**
Capex	(8,591)	(15,361)	(2,805)	(2,281)
Change of LT Investment	0	0	0	0
Change of ST Investment	12,145	0	0	0
Other adjustments	(0)	56,800	0	0
Cash flow from financing	**(5,517)**	**59,944**	**24,851**	**23,263**
Increase in L/T debt	6,140	0	0	0
Increase in S/T debt	0	3,000	3,000	3,000
Cash Dividend Paid	0	2,344	(7,549)	(9,137)
Dir& Emp Bonus Paid	0	0	0	0
Issuance of stock	0	29,400	29,400	29,400
Dec/Inc-TreasureSt	0	25,200	0	0
Other Adjustments	(11,657)	0	0	0
Net change in cash	**5,860**	**153,061**	**59,756**	**65,076**

Balance Sheet

NT$mn (Years End Dec)	2025	2026e	2027e	2028e
Cash	16,789	169,850	229,606	294,682
Mkt Securities	2,800	2,800	2,800	2,800
AR/NR	6,550	4,932	6,893	7,905
Inventory	9,557	5,699	6,287	6,865
Other	8,451	8,451	8,451	8,451
Current Assets	**44,148**	**191,732**	**254,038**	**320,703**
Long-term investments	49	49	49	49
Fixed assets	122,004	109,520	104,861	101,547
Other assets	12,485	12,485	12,485	12,485
Total Assets	**178,686**	**313,786**	**371,432**	**434,783**
S/T borrowings	0	0	0	0
AP/NP	2,997	4,509	4,975	5,432
Other ST liabilities	19,789	34,756	39,636	44,479
LT debt	0	0	0	0
Other LT liabilities	73,900	73,900	73,900	73,900
Total Liabilities	**96,685**	**113,166**	**118,511**	**123,811**
Common shares	42,259	46,459	46,459	46,459
Retained earning	11,792	101,012	153,313	211,363
Other shareholders' equity	27,950	53,150	53,150	53,150
Total Equity	**82,000**	**200,621**	**252,922**	**310,972**
Total Liab. & Shrhldr's Equity	**178,686**	**313,786**	**371,432**	**434,783**

Financial Ratios

	2025	2026e	2027e	2028e
Growth(%)				
Turnover	4.5	65.1	39.8	14.7
Operating profits	3.2	(371.3)	N/A	N/A
Pretax profits	9.4	(471.4)	37.1	24.1
Net profits	N/A	N/A	N/A	N/A
EPS	N/A	N/A	N/A	N/A
Margins (%)				
Gross Margin	(3.3)	24.1	40.1	43.0
Operating Margin	(20.5)	33.7	34.7	37.6
Pretax Margin	(16.0)	36.0	35.3	38.2
Net Profit	(16.7)	32.6	28.2	30.6
Return (%)				
ROAA	(4.3)	10.2	8.9	9.4
ROAE	(9.2)	17.8	13.4	13.4
Gearing (%)				
Net Debt/Equity	69.6	(47.8)	(61.6)	(71.0)
Liabilities/Equity	117.9	56.4	46.9	39.8
Ratios (X)				
Current ratio	1.9	4.9	5.7	6.4
Quick ratio	1.1	4.5	5.4	6.1
Others				
AR/NR Turnover (days)	23.3	23.3	23.3	23.3
Inventory Turnover (days)	35.5	35.5	35.5	35.5
AP Turnover (days)	28.1	28.1	28.1	28.1
Cash Conversion (days)	30.7	30.7	30.7	30.7

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research, Company Data

Macronix: Earnings Estimate Revisions

We raise our 2026-28 EPS forecasts by 139%, 144% and 147%, respectively: This reflects stronger-than-expected memory pricing across NOR flash and SLC/MLC NAND. SLC/MLC NAND pricing is likely to continue rising into 4Q, following the 50-60% increase in 3Q. NOR pricing could increase by 30-40% in 3Q and extend into 4Q. We also reflect stronger gross margin as a result of the strong price hike.

Exhibit 27: Macronix: Earnings estimate revisions

(NT$ mn)	New 2026e	Old 2026e	Diff.%	New 2027e	Old 2027e	Diff.%	New 2028e	Old 2028e	Diff.%
Net sales	99,611	77,854	28%	198,217	143,216	38%	200,794	144,185	39%
Gross profit	67,438	33,669	100%	158,581	72,197	120%	165,449	74,529	122%
Operating profit	54,052	22,733	138%	141,065	58,187	142%	147,537	60,159	145%
Pretax income	54,767	22,860	140%	141,791	58,171	144%	148,299	60,170	146%
Net income	46,345	19,377	139%	120,082	49,257	144%	125,594	50,950	147%
Diluted EPS	**23.54**	**9.84**	**139%**	**60.99**	**25.02**	**144%**	**63.79**	**25.88**	**147%**
Margins									
Gross margin	67.7%	43.2%	24.5 ppt	80.0%	50.4%	29.6 ppt	82.4%	51.7%	30.7 ppt
Operating margin	54.3%	29.2%	25.1 ppt	71.2%	40.6%	30.5 ppt	73.5%	41.7%	31.8 ppt
Pretax margin	55.0%	29.4%	25.6 ppt	71.5%	40.6%	30.9 ppt	73.9%	41.7%	32.1 ppt
Net margin	46.5%	24.9%	21.6 ppt	60.6%	34.4%	26.2 ppt	62.5%	35.3%	27.2 ppt

NT$	New '26E	Old '26E	Diff.	New '27E	Old '27E	Diff.	New '28E	Old '28E	Diff.
BVPS	**45.11**	**31.41**	**44%**	**106.09**	**56.43**	**88%**	**169.88**	**82.30**	**106%**

Source: Company data, Morgan Stanley Research (E) estimates

Exhibit 28: Macronix: Quarterly financials

(NT$ mn)	1Q26	2Q26	3Q26e	4Q26e	1Q27e	2Q27e	3Q27e	4Q27e	1Q28e	2Q28e	3Q28e	4Q28e	2025	2026e	2027e	2028e
Total Revenues	**10,469**	**19,125**	**26,754**	**43,264**	**46,213**	**51,253**	**50,407**	**50,343**	**50,283**	**50,224**	**50,169**	**50,117**	**28,880**	**99,611**	**198,217**	**200,794**
Sequential Change	*35.4%*	*82.7%*	*39.9%*	*61.7%*	*6.8%*	*10.9%*	*-1.7%*	*-0.1%*	*-0.1%*	*-0.1%*	*-0.1%*	*-0.1%*				
Change vs Year Ago	*70.6%*	*181.3%*	*225.7%*	*459.8%*	*341.4%*	*168.0%*	*88.4%*	*16.4%*	*8.8%*	*-2.0%*	*-0.5%*	*-0.4%*	*11.6%*	*244.9%*	*99.0%*	*1.3%*
Cost of Sales	**(6,198)**	**(6,805)**	**(8,604)**	**(10,568)**	**(9,676)**	**(10,338)**	**(9,948)**	**(9,675)**	**(9,216)**	**(8,965)**	**(8,715)**	**(8,448)**	**(23,749)**	**(32,174)**	**(39,636)**	**(35,345)**
Gross Profit	**4,271**	**12,320**	**18,150**	**32,696**	**36,538**	**40,916**	**40,459**	**40,669**	**41,066**	**41,259**	**41,454**	**41,670**	**5,131**	**67,438**	**158,581**	**165,449**
Gross Margin	40.8%	64.4%	67.8%	75.6%	79.1%	79.8%	80.3%	80.8%	81.7%	82.1%	82.6%	83.1%	17.8%	67.7%	80.0%	82.4%
Total Opex	(2,339)	(3,352)	(3,596)	(4,099)	(4,251)	(4,419)	(4,414)	(4,432)	(4,450)	(4,469)	(4,487)	(4,505)	(8,829)	(13,386)	(17,516)	(17,911)
Percent of Revenues	*22.3%*	*17.5%*	*13.4%*	*9.5%*	*9.2%*	*8.6%*	*8.8%*	*8.8%*	*8.9%*	*8.9%*	*8.9%*	*9.0%*	*30.6%*	*13.4%*	*8.8%*	*8.9%*
R&D	(1,411)	(1,870)	(1,890)	(1,910)	(1,930)	(1,950)	(1,970)	(1,990)	(2,010)	(2,030)	(2,050)	(2,070)	(5,714)	(7,082)	(7,842)	(8,162)
Percent of Revenues	*13.5%*	*9.8%*	*7.1%*	*4.4%*	*4.2%*	*3.8%*	*3.9%*	*4.0%*	*4.0%*	*4.0%*	*4.1%*	*4.1%*	*19.8%*	*7.1%*	*4.0%*	*4.1%*
Sales and Marketing	(425)	(560)	(783)	(1,266)	(1,352)	(1,500)	(1,475)	(1,473)	(1,471)	(1,470)	(1,468)	(1,466)	(1,520)	(3,033)	(5,800)	(5,875)
Percent of Revenues	*4.1%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*	*5.3%*	*3.0%*	*2.9%*	*2.9%*
General and Admin	(503)	(922)	(922)	(922)	(969)	(969)	(969)	(969)	(969)	(969)	(969)	(969)	(1,594)	(3,270)	(3,874)	(3,874)
Percent of Revenues	*4.8%*	*4.8%*	*3.4%*	*2.1%*	*2.1%*	*1.9%*	*1.9%*	*1.9%*	*1.9%*	*1.9%*	*1.9%*	*1.9%*	*5.5%*	*3.3%*	*2.0%*	*1.9%*
Operating Income	**1,933**	**8,968**	**14,554**	**28,597**	**32,287**	**36,497**	**36,045**	**36,237**	**36,616**	**36,790**	**36,967**	**37,164**	**(3,698)**	**54,052**	**141,065**	**147,537**
Percent of Revenues	*18.5%*	*46.9%*	*54.4%*	*66.1%*	*69.9%*	*71.2%*	*71.5%*	*72.0%*	*72.8%*	*73.3%*	*73.7%*	*74.2%*	*-12.8%*	*54.3%*	*71.2%*	*73.5%*
Total Non-operating Income(Loss)	**134**	**232**	**173**	**175**	**178**	**181**	**183**	**185**	**188**	**191**	**190**	**192**	**64**	**715**	**726**	**761**
Profit Before Taxes	**2,066**	**9,200**	**14,728**	**28,773**	**32,464**	**36,678**	**36,228**	**36,422**	**36,804**	**36,981**	**37,157**	**37,356**	**(3,633)**	**54,767**	**141,791**	**148,299**
Percent of Revenues	*19.7%*	*48.1%*	*55.0%*	*66.5%*	*70.2%*	*71.6%*	*71.9%*	*72.3%*	*73.2%*	*73.6%*	*74.1%*	*74.5%*	*-12.6%*	*55.0%*	*71.5%*	*73.9%*
Change vs Year Ago	*-313.2%*	*-753.6%*	*-1644.0%*	*-9613.2%*	*1471.1%*	*298.7%*	*146.0%*	*26.6%*	*13.4%*	*0.8%*	*2.6%*	*2.6%*				
Taxes	(287)	(1,464)	(2,253)	(4,402)	(4,967)	(5,612)	(5,543)	(5,573)	(5,631)	(5,658)	(5,685)	(5,716)	328	(8,407)	(21,694)	(22,690)
Tax Rate	*-13.9%*	*-15.9%*	*15.3%*	*15.3%*	*15.3%*	*15.3%*	*15.3%*	*15.3%*	*15.3%*	*15.3%*	*15.3%*	*15.3%*	*9.0%*	*15.3%*	*15.3%*	*15.3%*
Net Income, Cont Ops	1,779	7,736	12,474	24,371	27,497	31,066	30,685	30,849	31,173	31,323	31,472	31,641	(3,305)	46,360	120,097	125,609
Percent of Revenues	*17.0%*	*40.4%*	*46.6%*	*56.3%*	*59.5%*	*60.6%*	*60.9%*	*61.3%*	*62.0%*	*62.4%*	*62.7%*	*63.1%*	*-11.4%*	*46.5%*	*60.6%*	*62.6%*
Minority Interest	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(3)	(15)	(15)	(15)
Reported Income (TW GAAP)	**1,776**	**7,732**	**12,471**	**24,367**	**27,493**	**31,062**	**30,681**	**30,845**	**31,169**	**31,319**	**31,468**	**31,637**	**(3,308)**	**46,345**	**120,082**	**125,594**
Percent of Revenues	*17.0%*	*40.4%*	*46.6%*	*56.3%*	*59.5%*	*60.6%*	*60.9%*	*61.3%*	*62.0%*	*62.4%*	*62.7%*	*63.1%*	*-11.5%*	*46.5%*	*60.6%*	*62.5%*
Change vs Year Ago	*-303.4%*	*-705.9%*	*-1544.6%*	*-8353.3%*	*1448.2%*	*301.7%*	*146.0%*	*26.6%*	*13.4%*	*0.8%*	*2.6%*	*2.6%*	*2.9%*	*-1501.1%*	*159.1%*	*4.6%*
Reported Diluted EPS (NT$, TW GAAP)	**0.90**	**3.93**	**6.33**	**12.38**	**13.96**	**15.78**	**15.58**	**15.67**	**15.83**	**15.91**	**15.98**	**16.07**	**(1.78)**	**23.54**	**60.99**	**63.79**
Reported Basic EPS (NT$, GAAP)	**0.90**	**3.93**	**6.33**	**12.38**	**13.96**	**15.78**	**15.58**	**15.67**	**15.83**	**15.91**	**15.98**	**16.07**	**(1.78)**	**23.54**	**60.99**	**63.79**

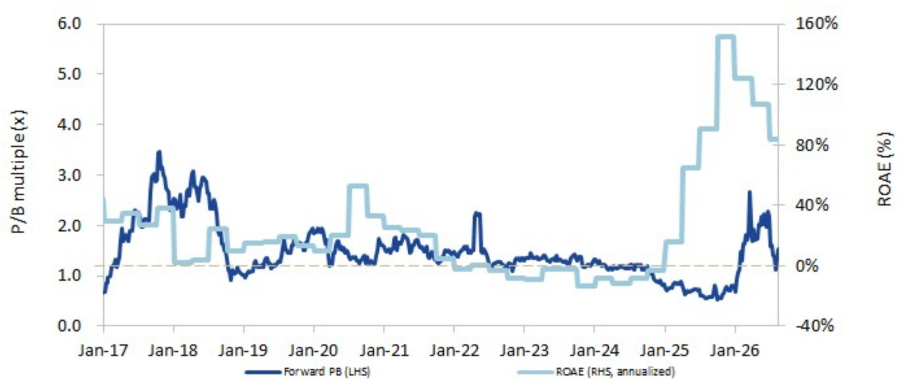
Source: Company data, Morgan Stanley Research (E) estimates

Macronix: Valuation Methodology

We maintain our price target (base case) of NT$220: We continue to use a P/B multiple methodology to derive our price target, in line with our approach for Greater China memory IDM peers and in view of the industry's high volatility. Our new target is based on a 2027e P/B of 2.1x, down from 3.9x previously, to reflect the higher equity risk premium due to the volatility. The new 2027e P/B is still above the historical band of 0.5x to 1.5x since 2017, as we remain positive on the strong pricing power of the company's SLC/MLC NAND products.

We keep our bull-case value of NT$355, which is 3.3x our 2027e BVPS. We cut our bear-case value to NT$100.00 from NT$130.00, which is 0.9x our 2027e BVPS. The risk reward is skewed more toward the bear case now to reflect the higher volatility associated with the broader memory sector.

Exhibit 29: Forward P/B vs. ROAE



Source: Factset, Morgan Stanley Research

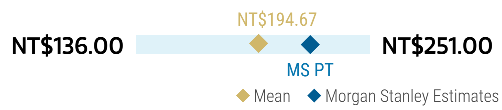
Risk Reward – Macronix International Co Ltd (2337.TW)

OW on legacy Flash opportunities

PRICE TARGET NT$220.00

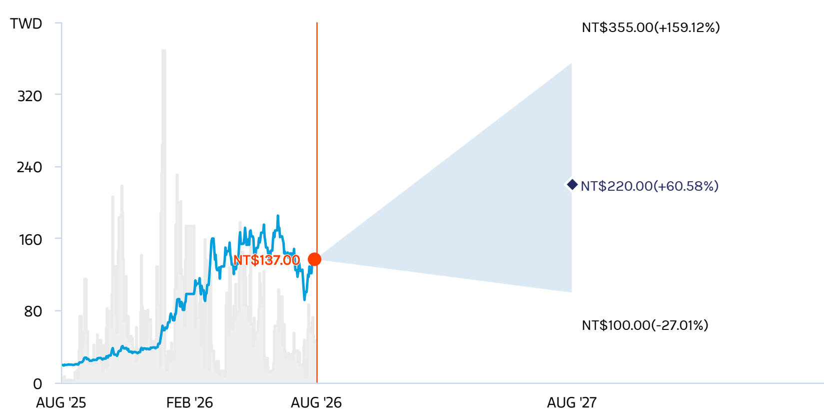
Base case, P/B, in line with our Greater China memory coverage, due to the industry's cyclical nature. We apply a target multiple of 2.1x to our 2027 BVPS estimate vs. its historical average of 1.5x since 2017. We continue to believe the P/B target is justifiable, as the MLC and legacy TLC NAND could be in greater shortage into 2H26, with under-supply easily reaching 40%. We believe the only supplier that could fill the gap remains Macronix.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



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

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- MLC and legacy TLC NAND could be in greater shortage into 2H26, with under-supply easily rising to 40%. The only supplier that could fill the gap, in our view, remains Macronix. Pricing for MLC and legacy TLC could could rise over 200% from 1Q26 to 4Q26.
- We expect low-single-digit NOR undersupply throughout 2026, driven by capacity cannibalization from other high-margin products.
- ROM may benefit from the Nintendo Switch 2, which started selling in June 2025.
- We view the current P/B valuation as attractive given the strong near-term outlook.

Consensus Rating Distribution

100%	Overweight
0%	Equal-weight
0%	Underweight

● MS Rating

Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Pricing Power: *Positive*
Secular Growth: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE NT$355.00

3.3x 2027e BVPS

Higher than expected price hike for legacy NAND, and significant price hike for NOR throughout 2026: NAND revenue grows 1200%+, and NOR flash revenue grows 150%+ Y/Y in 2026.

BASE CASE NT$220.00

2.1x 2026e BVPS

Significant price hike for legacy NAND, and continued price hike for NOR throughout 2026: NAND revenue grows 1270%, and NOR flash revenue grows 169% Y/Y in 2026.

BEAR CASE NT$100.00

0.9x 2027e BVPS

Moderate price hike for legacy NAND, and flattish price for NOR throughout 2026: NAND revenue grows <150%, and NOR flash revenue grows <80% Y/Y in 2026.

Risk Reward – Macronix International Co Ltd (2337.TW)

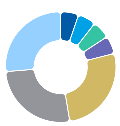
KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
NOR Flash pricing (NT$)	1,721	3,680	4,724	4,724
ROM sales (NT$, mn)	5,898	3,887	3,808	4,119
NAND sales (NT$, mn)	3,540	48,497	149,883	159,167

INVESTMENT DRIVERS

- NOR pricing trend
- SLC NAND pricing
- Peers' production expansion

GLOBAL REVENUE EXPOSURE



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

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

MS ALPHA MODELS

1/5 MOST | 3 Month Horizon

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

RISKS TO PT/RATING

RISKS TO UPSIDE

- Wider legacy NAND supply/demand gap
- NOR up-cycle, driven by limited supply expansion and/or stronger demand
- Faster growth for Switch hardware and core titles

RISKS TO DOWNSIDE

- Less severe legacy NAND supply/demand gap
- NOR down-cycle, driven by faster supply expansion and/or demand weakness
- Slower growth for Switch hardware and core titles

OWNERSHIP POSITIONING

Inst. Owners, % Active 49.6%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e

Source: Refinitiv, Morgan Stanley Research

Macronix: Financial Summary

Exhibit 30: Financial Summary

Income Statement, 2025-2028e, Year End Dec (NT$ mn)	**2025**	**2026e**	**2027e**	**2028e**
Turnover	**28,880**	**99,611**	**198,217**	**200,794**
YoY Growth	*11.6%*	*244.9%*	*99.0%*	*1.3%*
Less: COGS	**(23,749)**	**(32,174)**	**(39,636)**	**(35,345)**
Variable costs	(19,503)	(25,790)	(34,164)	(30,622)
Depreciation & amort	(4,246)	(6,384)	(5,473)	(4,722)
Gross profit	**5,131**	**67,438**	**158,581**	**165,449**
YoY Growth	*-15.9%*	*1214.3%*	*135.2%*	*4.3%*
% margin	*17.8%*	*67.7%*	*80.0%*	*82.4%*
Operating Expenses:	**(8,829)**	**(13,386)**	**(17,516)**	**(17,911)**
R&D	(5,714)	(7,082)	(7,842)	(8,162)
Sales and Marketing	(1,520)	(3,033)	(5,800)	(5,875)
General and Admin	(1,594)	(3,270)	(3,874)	(3,874)
Operating Profit	**(3,698)**	**54,052**	**141,065**	**147,537**
YoY Growth	*-5.8%*	*-1561.8%*	*161.0%*	*4.6%*
% margin	*-12.8%*	*54.3%*	*71.2%*	*73.5%*
Total Non-op	**64**	**715**	**726**	**761**
Pretax Profit	(3,633)	54,767	141,791	148,299
YoY Growth	*2.5%*	*-1607.3%*	*158.9%*	*4.6%*
% margin	*-12.6%*	*55.0%*	*71.5%*	*73.9%*
Tax	328	(8,407)	(21,694)	(22,690)
Reported Net Income	(3,308)	46,345	120,082	125,594
Reported EPS (NT$)	**(1.78)**	**23.54**	**60.99**	**63.79**
ModelWare EPS (NT$)	**(1.78)**	**23.54**	**60.99**	**63.79**

Key Ratios	**2025**	**2026e**	**2027e**	**2028e**
Return (%)				
ROAA	*(0.0)*	*0.2*	*0.4*	*0.4*
ROAE	*(0.1)*	*0.3*	*0.6*	*0.5*
OP. ATO	*46.7%*	*81.4%*	*146.6%*	*155.2%*
Gearing (x)				
Net Debt/ Equity	0.1x	0.1x	(0.5x)	(0.7x)
Current Ratio	2.4x	6.1x	15.5x	25.6x
Quick Ratio	1.6x	4.4x	13.8x	24.1x
Operating Cycle				
AR/NR Turnover (days)	143	84	54	56
Inventory Turnover (days)	247	222	210	224
AP Turnover (days)	58	51	46	49
Cash Conversion (days)	331	255	218	231

Balance sheet (NT$ mn)	**2025**	**2026e**	**2027e**	**2028e**
Assets				
Cash & Equivalents	14,913	37,987	168,030	299,866
Marketable Security	7	7	7	7
A/R & N/R	4,315	26,820	31,208	31,068
Inventories	9,813	25,608	23,444	20,470
Other Current Asset	190	190	190	190
Total current assets	**29,425**	**90,799**	**223,067**	**351,788**
LT Investment	6,618	6,613	6,609	6,606
Total Fixed Assets	38,549	52,658	48,004	44,230
Total Other Assets	3,909	3,909	3,909	3,909
Total Assets	**78,500**	**153,978**	**281,588**	**406,533**
A/P & N/P	3,120	5,590	5,117	4,468
Accrued Expenses	0	0	0	0
Other Payable	1,877	1,877	1,877	1,877
Total Current Liab.	**12,404**	**14,873**	**14,401**	**13,752**
L-T Liabilities	17,386	47,386	55,386	55,386
Total Other L-T Liab	2,903	2,903	2,903	2,903
Total Liabilities	**32,693**	**65,162**	**72,690**	**72,041**
Common Stock	18,573	18,573	18,573	18,573
Preferred Stock				
Capital Reserve	1,472	1,472	1,472	1,472
Retained earnings	25,916	68,925	189,007	314,601
Treasury Stock	(159)	(159)	(159)	(159)
Total Equity	**45,808**	**88,816**	**208,899**	**334,493**

Cash Flow Statement (NT$ mn)	**2025**	**2026e**	**2027e**	**2028e**
Net Income	(3,308)	46,345	120,082	125,594
Depreciation	5,094	7,478	6,411	5,532
Net Investment Losses (Gains)	(2)	0	0	0
Others	3,051	(35,826)	(2,692)	2,467
Cash Flow-Operating	**4,835**	**17,998**	**123,801**	**133,593**
(Purchase) of FA	(3,000)	(21,587)	(1,758)	(1,758)
Sale of Fix Asset	2	0	0	0
(Purchase)L-T Inv.	0	0	0	0
Sale of L-T Inv.	0	0	0	0
Sale(Pur.)S-T Inv.	144	0	0	0
Cash Flow-Investing	**(2,884)**	**(21,587)**	**(1,758)**	**(1,758)**
Inc(Dec)-S-T Debt	(2,488)	0	0	0
Dividend Paid	(3,337)	(3,337)	(3,337)	(3,337)
Dir.&Emp.Bonus	0	0	0	0
Proceed from New Issue	0	0	0	0
Dec/Inc-TreasureSt	0	0	0	0
Others	2,884	30,000	8,000	0
Cash Flow-Financing	**(2,941)**	**26,663**	**4,663**	**(3,337)**
Change in Cash	**3,289**	**23,074**	**126,706**	**128,499**
Net cash/(debt), b/f	57,530	60,819	83,893	210,600
Net cash/(debt), c/f	**60,819**	**83,893**	**210,600**	**339,099**

e = Morgan Stanley Research Estimates
Source: Company Data, Morgan Stanley Research

Risk Reward Reference links

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

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

3. View explanation of regional hierarchies - GEG_Exhibit_Link.pdf

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

5. View explanation of HERS methodology - ESG_HERS_External_Link.pdf

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	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1529	42%	442	47%	29%	750	43%
Equal-weight/Hold	1582	43%	396	42%	25%	773	44%
Not-Rated/Hold	3	0%	1	0%	33%	1	0%
Underweight/Sell	560	15%	97	10%	17%	217	12%
Total	3,674		936			1741	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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INDUSTRY COVERAGE: Greater China Technology Semiconductors

COMPANY (TICKER)	RATING (AS OF)	PRICE* (08/14/2026)
Charlie Chan		
ACM Research Inc (ACMR.O)	O (03/07/2023)	US$80.42
Advanced Micro-Fabrication Equipment Inc (688012.SS)	O (11/06/2023)	Rmb374.85
Advanced Wireless Semiconductor Co (8086.TWO)	U (07/14/2025)	NT$114.00
Alchip Technologies Ltd (3661.TW)	O (05/14/2021)	NT$4,210.00
ASE Technology Holding Co. Ltd. (3711.TW)	O (09/15/2024)	NT$616.00
Cambricon Technology Corporation (688256.SS)	O (04/27/2026)	Rmb1,093.00
Global Unichip Corp (3443.TW)	O (06/24/2026)	NT$5,465.00

GlobalWafers Co Ltd (6488.TWO)	E (05/19/2026)	NT$1,010.00
Gudeng Precision (3680.TWO)	O (11/25/2025)	NT$463.50
Hua Hong Semiconductor Ltd (1347.HK)	E (03/12/2026)	HK$130.20
Iluvatar CoreX Semiconductor Co., Ltd. (9903.HK)	O (04/27/2026)	HK$412.00
King Yuan Electronics Co Ltd (2449.TW)	O (03/03/2023)	NT$247.00
Maxscend Microelectronics Co Ltd (300782.SZ)	U (01/11/2021)	Rmb78.87
MediaTek (2454.TW)	O (11/28/2025)	NT$4,210.00
MetaX Integrated Circuits (688802.SS)	E (04/27/2026)	Rmb748.00
Nanya Technology Corp. (2408.TW)	O (05/28/2026)	NT$512.00
NAURA Technology Group Co Ltd (002371.SZ)	O (11/06/2023)	Rmb738.66
OmniVision Integrated Circuits Group Inc (603501.SS)	E (11/17/2025)	Rmb91.08
Phison Electronics Corp (8299.TWO)	E (02/25/2026)	NT$2,080.00
SG Micro Corp. (300661.SZ)	E (11/03/2025)	Rmb123.00
Silergy Corp. (6415.TW)	U (05/19/2026)	NT$480.00
SMIC (0981.HK)	O (10/21/2025)	HK$70.80
TSMC (2330.TW)	O (02/07/2022)	NT$2,395.00
UMC (2303.TW)	O (05/19/2026)	NT$121.00
Vanguard International Semiconductor (5347.TWO)	E (01/14/2026)	NT$160.50
WIN Semiconductors Corp (3105.TWO)	U (07/14/2025)	NT$378.00
Daisy Dai, CFA		
ASMPT Ltd (0522.HK)	O (07/24/2025)	HK$176.00
China Resources Microelectronics Limited (688396.SS)	U (03/02/2026)	Rmb60.73
Empyrean Technology Co Ltd (301269.SZ)	E (01/17/2025)	Rmb95.90
Hangzhou Silan Microelectronics Co. Ltd. (600460.SS)	U (08/25/2025)	Rmb32.75
Hygon Information Technology Co., Ltd. (688041.SS)	O (07/03/2026)	Rmb280.99
Innoscience (2577.HK)	E (10/13/2025)	HK$46.56
JCET Group Co Ltd (600584.SS)	E (01/16/2026)	Rmb78.71
Shanghai Fudan Microelectronics (1385.HK)	O (03/07/2025)	HK$26.68
SICC Co Ltd (688234.SS)	O (03/20/2026)	Rmb111.15
StarPower Semiconductor Ltd (603290.SS)	E (05/14/2026)	Rmb87.12
Unigroup Guoxin Microelectronics Co Ltd (002049.SZ)	U (01/10/2023)	Rmb67.89
Universal Scientific Ind. (Shanghai) (601231.SS)	O (11/05/2025)	Rmb27.59
Yangjie Technology (300373.SZ)	O (06/10/2022)	Rmb96.38
Daniel Yen, CFA		
AP Memory Technology Corp (6531.TW)	O (07/11/2025)	NT$932.00
ASMedia Technology Inc (5269.TW)	U (10/03/2025)	NT$1,380.00
Aspeed Technology (5274.TWO)	O (06/09/2025)	NT$17,690.00
Egis Technology Inc (6462.TWO)	E (01/28/2026)	NT$99.50
Elan Microelectronics Corp (2458.TW)	O (10/03/2025)	NT$144.50
Espressif Systems (688018.SS)	O (05/15/2023)	Rmb112.00
GigaDevice Semiconductor Beijing Inc (603986.SS)	O (05/15/2025)	Rmb417.48
Macronix International Co Ltd (2337.TW)	O (09/18/2025)	NT$137.00
Montage Technology Co Ltd (6809.HK)	O (03/18/2026)	HK$283.80
Montage Technology Co Ltd (688008.SS)	O (03/18/2026)	Rmb211.91
Novatek (3034.TW)	U (02/04/2026)	NT$512.00
Nuvoton Technology Corporation (4919.TW)	U (11/10/2025)	NT$123.00
Parade Technologies Ltd (4966.TWO)	O (05/27/2026)	NT$570.00
Powerchip Semiconductor Manufacturing Co (6770.TW)	O (10/27/2025)	NT$78.40
Realtek Semiconductor (2379.TW)	E (01/30/2026)	NT$721.00
Shenzhen Goodix Technology Co Ltd (603160.SS)	U (07/14/2025)	Rmb51.13
Winbond Electronics Corp (2344.TW)	O (05/28/2026)	NT$183.50
WPG Holdings (3702.TW)	O (03/16/2026)	NT$115.00
WT Microelectronics Co. Ltd. (3036.TW)	O (01/27/2026)	NT$210.00
Duan Liu		
Dosilicon Co Ltd (688110.SS)	U (09/06/2024)	Rmb117.09

Shenzhen Longsys Electronics Co Ltd (301308.SZ)	E (02/25/2026)	Rmb406.45
Tiffany Yeh		
AllRing Tech Co. (6187.TWO)	O (09/23/2025)	NT$1,275.00
FOCI Fiber Optic Communications Inc (3363.TWO)	O (01/15/2025)	NT$586.00
Himax Technologies Inc (HIMX.O)	E (02/04/2026)	US$15.23
Hon Precision (7769.TW)	O (04/17/2026)	NT$6,590.00
MPI Corporation (6223.TWO)	O (04/17/2026)	NT$6,440.00
Silicon Motion (SIMO.O)	O (05/06/2024)	US$268.90
WinWay Technology Co Ltd (6515.TW)	O (04/17/2026)	NT$6,750.00

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* Historical prices are not split adjusted.