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Greater China Semiconductors | Asia Pacific

Correction: The Foundry Floorplan: TSMC 3Q26 Earnings Preview; UMC Preliminary 2027 Positives

We think the capex budget might gradually shift to AI compute and AI networking in 2028, as memory usage needs to be optimized. We see positives for TSMC and UMC.

TSMC 3Q26 earnings preview: We expect the company to raise full-year revenue guidance to the low-to-mid-40% range (vs. above 40%) Y/Y, implying 4Q26 revenue will rise 10%-15% Q/Q amid very strong 3nm demand. 3Q26 gross margin should surpass the high end of guidance, reaching 67.5%. However, should Intel focus on internal capacity expansion, we think TSMC would maintain 2nm capacity expansion at the same pace and its capex at US$64bn for 2026. For 2027, we see TSMC's capex reaching US$75bn to US$80bn.

In terms of 2027 wafer price hikes, we see leading edge (7nm and below) up 5%-10% and mature nodes up 0%-3%; hence, gross margin could approach 70% in 2027. As a result, **we raise our TSMC price target by 3% to NT$3,088.**

Key topics for upcoming TSMC 3Q26 earnings call on October 15:

1. Would TSMC consider working with TereFab (Taiwan News, Oct 3 2026) and building new fab sites in Texas (Bloomberg, Oct 1 2026)? Our view is that expansion in Texas could be necessary, considering customer demand and limited space at the Arizona fab in five years.

2. If Intel were to increase capex, would that reduce outsourcing at TSMC? Our recent industry checks suggest some trimming of Intel's 3nm and 2nm; how might TSMC reallocate its resources?

3. How would TSMC address large reticle size chip demand? Our checks suggest MediaTek handled TPU v10 IceFish reticle size initially at 14x; could TSMC's CoWoS or CoPoS be able to support such packaging?

We raise our UMC price target by 36% to NT$188 on AI networking (SiPh) business upside: Some investors remain on the sidelines amid ongoing smartphone and PC demand weakness. We have seen some order cuts in PC semis recently, as some consumer analog IC customers (e.g., Silergy) have not been able to pass through UMC's wafer price hike. Therefore, some investors do not expect any UMC's price hike in 2027. However, two growth drivers could help UMC raise wafer price for 8-inch in 2027: 1) Samsung DDI outsourcing, as we noted in our earlier Foundry Floorplan, and 2) growing SiPh PIC demand, in particular after UMC introduced its 400Gb per lane solution (PIC + TFLN) solution.

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GREATER CHINA TECHNOLOGY SEMICONDUCTORS

Asia Pacific
Industry View **Attractive**

WHAT'S CHANGED

UMC (2303.TW)	**From**	**To**
Price Target	NT$138.00	**NT$188.00**
TSMC (2330.TW)	**From**	**To**
Price Target	NT$2,988.00	**NT$3,088.00**

investors should be aware that the firm may have a conflict of

Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

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We have corrected the second sentence and also amended the capex amount in the first paragraph on p1. This article was originally published on 5 October 2026 8:00 PM GMT, and is being republished on 6 October, 2026. Pricing data and disclosures reflect original publication date. To receive an electronic copy of the original version of this publication, please send an e-mail to Equity_Research_Publishing@morganstanley.com with the publication title and date.

AlphaSignals Earnings Preview

Focus KPI	Focus KPI Surprise	Likely impact to consensus EPS*
TSMC 2330.TW		
3Q26 GM and 4Q26 Revenue guidance	↑ Likely upside surprise	↑ Modest revision higher

*Likely impact to consensus EPS is for the next 12 months

TSMC 3Q26 earnings and 4Q26 guidance preview

Exhibit 1: 3Q26 earnings and 4Q26 guidance preview

	3Q26				4Q26		
(NT$ bn)	Guidance	Preliminary	MS Est.	Consensus	Guidance	MS Est.	Consensus
Revenue	US$44.6 - 45.8bn		1,499	1,450		1,686	1,591
Q/Q	*+12% at mid-point in USD*			*14.1%*			*9.7%*
Y/Y				*46.5%*			*52.1%*
GM (%)	65.0% - 67.0%		67.5%	66.5%		68.6%	66.4%
OpM (%)	56.0% - 58.0%		60.8%	58.2%		62.2%	58.4%
EPS (NT$)			**30.74**	**28.28**		**35.25**	**31.23**

TSMC's 2026–28 foundry floorplan broadly aligns with our bottom-up demand analysis

Our industry checks suggest ASML allocates capacity based largely on historical demand and long-term partnerships, indicating that TSMC remains the largest customer for EUV shipments. If so, TSMC should retain strong pricing power and could increase leading-edge wafer prices by 5%–10% in 2027, reflecting both the value it delivers to customers and the potential for margin expansion.

Exhibit 2: TSMC – Wafer pricing trend

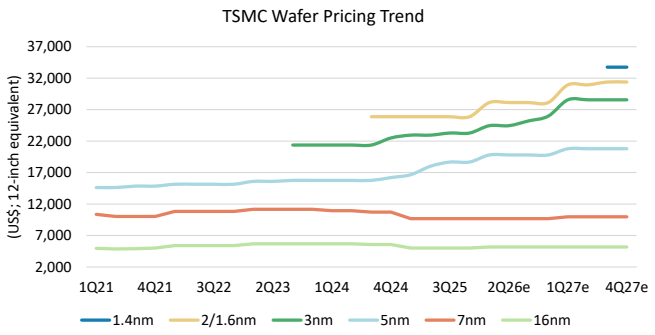


Exhibit 3: TSMC's GM and depreciation trends – 60% should be the floor

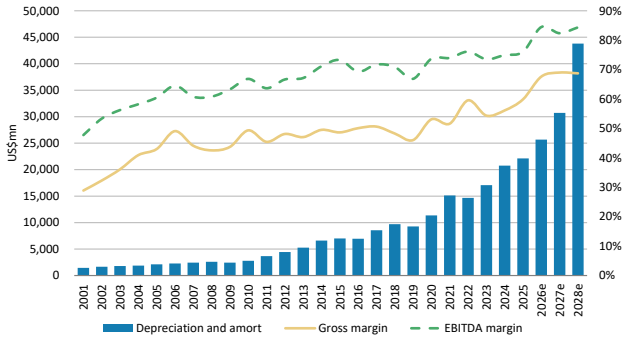
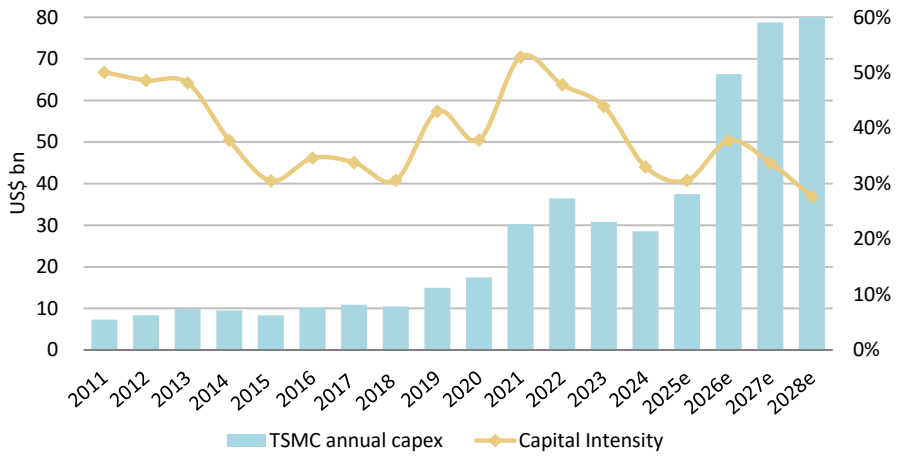


Exhibit 4:
TSMC's capex intensity should drop significantly as a result of robust revenue growth



TSMC 2nm and 3nm capacity growth remains robust; 5nm set to decline

Consistent with our demand forecast, TSMC indicated very strong capacity requirements for both 2nm and 3nm starting in 2026, implying a 70% capacity CAGR for N2 from 2026 to 2028. TSMC also suggested that 5nm capacity will begin to decline from 2027, in line with our forecast that 5nm demand will drop as Blackwell transitions to Rubin on 3nm.

Separately, advanced packaging capacity expansion should remain in focus for TSMC in 2027. This includes, but is not limited to, CoWoS and SoIC, for which we now expect capacity to reach 200kwpm and 40kwpm, respectively, by 2027.

Exhibit 5: TSMC – Our estimate of 2nm customer demand breakdown

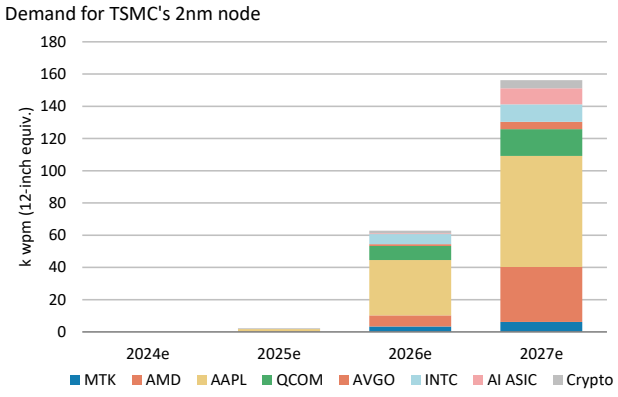
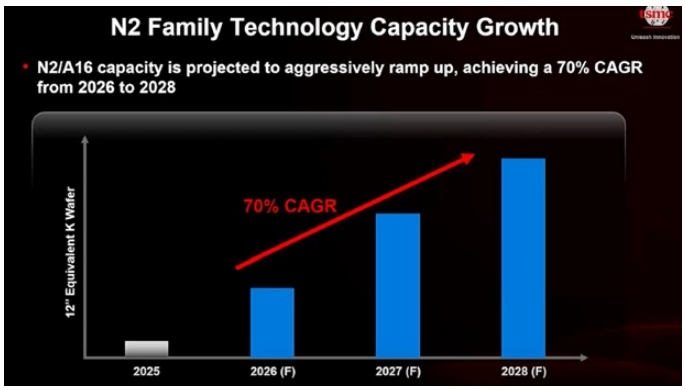


Exhibit 6: TSMC suggested N2 capacity could see >70% CAGR from 2026-28



Source: TSMC

With nodes below 3nm expected to continue to see strong demand, our checks suggest TSMC's 2nm/1.6nm capacity could approach 100kwpm by end-2026, increase to 150–170kwpm in 2027, and exceed 200kwpm in 2028. We expect 1.4nm to begin pulling in tools in 2027, with the bulk of capacity ramping in 2028. Looking further ahead, we expect TSMC to introduce initial 1.0nm capacity in Tainan in 2029. We have not baked in potential

capacity in Texas, which we believe is still under discussion.

Exhibit 7: TSMC fab roadmap (without potential Texas capacity)

Node	Location	Fab	Capacity				
			2025	2026	2027	2028	2029
N3	Tainan	F18 - P4/P5/P6/P8/P9	110k	160-170k			
	Arizona	F21 - P2		20k			
	Japan	F23 - P2				15k	
Total			110k	180-190k	190k	200-205k	
N2/A16	HsinChu	F20 - P1/P2	20k	30k			
	Tainan	F22 - P7/P8/P9			40-50k	60k	
	KaoHsiung	F22 - P1/P2/P3/P4/P5/P6	25k	60k	80-90k	100k	
	Arizona	F21 - P3/P4/P5/P6				20k	
Total			45k	90-100k	150-170k	210k	
A14	HsinChu	F20 - P3/P4			10-20k	30-40k	40k
A14/A13/A12	Taichung	F25 - P1/P2/P3/P4			10-20k	30-40k	80k
Total					20-40k	60-80k	120k
A10	Tainan	F26 - P1/P2/P3/P4					5k
N40/28/22/12	Japan	F23 - P1	25k				
N28/16	Germany	F24			5k	40k	

How might TSMC address Intel's competition in both wafer foundry and advanced packaging?

Intel EMIB-T remains competitive in 2029; how TSMC will address?

With demand in AI continuing to boom, we expect TSMC and its OSAT partners to expedite capacity expansion plans for CoWoS. We see TSMC's CoWoS capacity building further to 260kwpm in 2028, from 130/200kwpm in 2026/2027, with 2028's expansion mainly focused in Arizona's AP9/10 and potentially in AP7. TSMC is now conducting trial production for CoPoS in Taoyuan. If the progress goes well, we would expect TSMC to start building its CoPoS capacity, with location also likely to be in AP9/10 or AP7P3.

We expect the non-TSMC camp to expand CoWoS capacity to 110kwpm by 2028 year-end, from 80kwpm by end-2027. For ASE/SPIL, we expect FoCoS+CoWoS capacity to rise from 30kwpm at 2027-end to 50-60kwpm at 2028-end, with expansion focused on CoWoS-L and CoWoS-R. For Amkor, we expect CoWoS capacity to increase from 30kwpm at 2027-end to 55-60kwpm at 2028-end, also focused on CoWoS-L and CoWoS-R.

Exhibit 8: We expect TSMC's CoWoS capacity to build further to 260kwpm in 2028, with OSAT (ASE/SPIL/Amkor) together building to 110kwpm

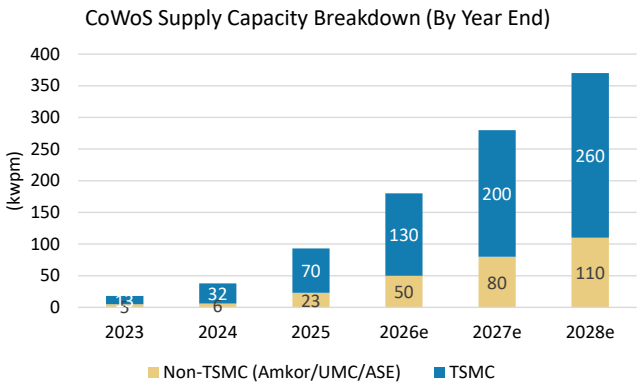
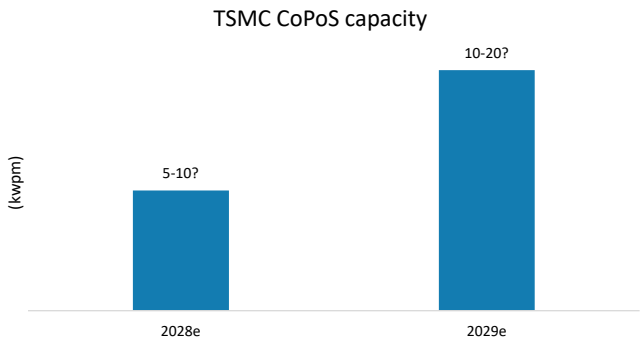


Exhibit 9: We expect TSMC's CoPoS capacity to build further to 5-10kwpm in 2028 and 10-20kwpm in 2029, but this might depend on results from trial production



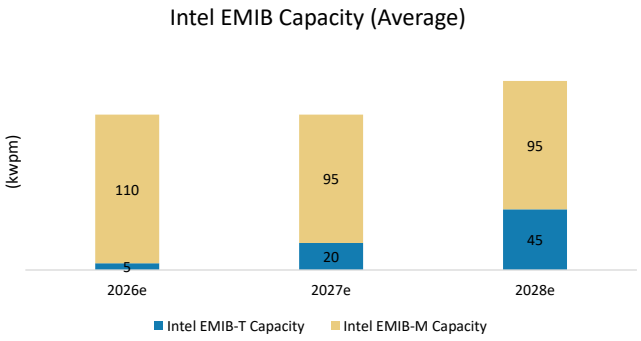
What about Intel EMIB capacity build?

For Intel, we see current average EMIB-M capacity of 110kwpm falling slightly to 95kwpm in 2027 as it converts some toward EMIB-T. We see the major customers of EMIB-M being Trainium3, upcoming Trainium 4 and its in-house server CPU. Average EMIB-T capacity is around 5kwpm in 2026, which we expect to further scale to 15-20kwpm in 2027 and 40-45kwpm in 2028. All of the capacity mentioned above is converted for 12-inch wafer equivalent, which we believe would be much more easier to communicate with compared to TSMC CoWoS capacity.

Although some small projects are ongoing, we still see MediaTek/Google Humufish consuming most of the capacity during 2027-28. We maintain our view that Intel EMIB-T

could still produce close to 3mn units of Humufish from late 2027-28, by assuming 4-5 chips per wafer of EMIB-T.

Exhibit 10: We expect Intel's EMIB-T capacity to reach 20kwpm in 2027 and 45kwpm in 2028; EMIB-M capacity is currently at 110kwpm, which could fall to 95kwpm due to conversion

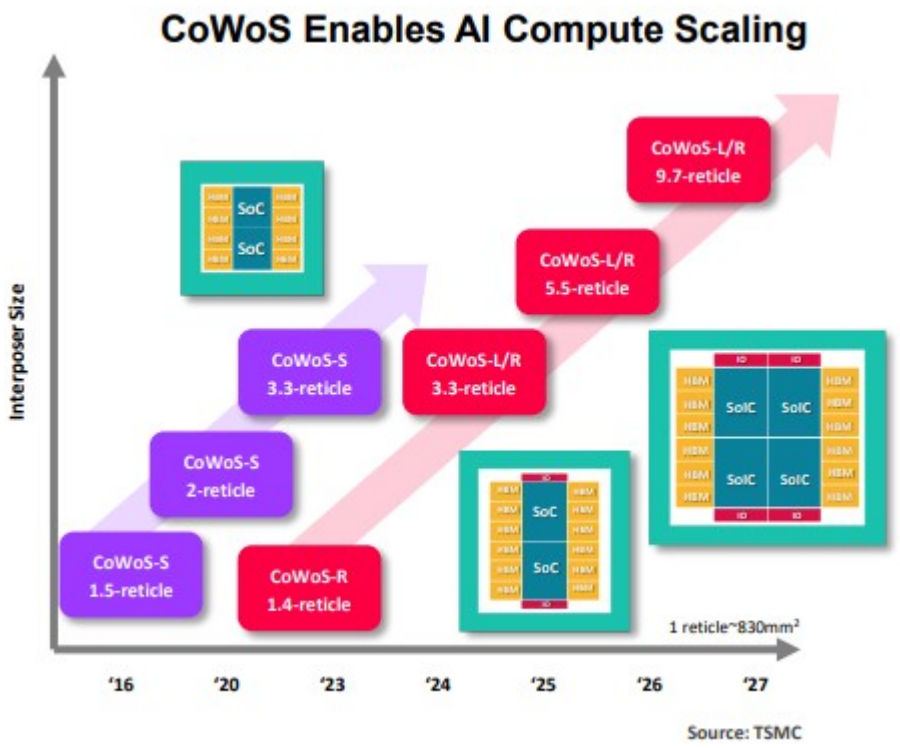


Indeed, we have seen some TSMC customers surveying (testing vehicles) Intel EMIB-T due to the design for larger chip size, lower cost, and intention to seek a second source because TSMC's CoWoS capacity is still relatively tight. However, we believe TSMC could still try to expand its packaging size by leveraging different technologies to meet customers' needs. We think it remains concerned about whether it is going to open its front-end computing die production/know-how to its competitor, Intel, for back-end packaging.

Our prediction of the trend after 2028 – TSMC might:

1. Pull in CoPoS (panel-level process) with both 300mm and 500mm square panel size
2. Introduce 3.5D packaging with SoIC for vertical chip stacking (Meta MTIA is surveying)
3. Adopt glass core substrate to solve warpage for >9.7x reticle-size chips

Exhibit 11: TSMC's roadmap for interposer size



Source: Winway, TSMC

Pros and cons of TSMC's CoWoS, Intel's EMIB, TSMC's CoPoS, and SoIC

TSMC's CoWoS, Intel's EMIB, TSMC's CoPoS, and TSMC's SoIC represent different points along the advanced packaging spectrum, each optimizing for a different balance of bandwidth, cost, scalability and integration complexity. We think future design of the chips is likely to combine these approaches—for example, using CoWoS for lateral integration and SoIC for vertical stacking—to achieve optimal system-level performance.

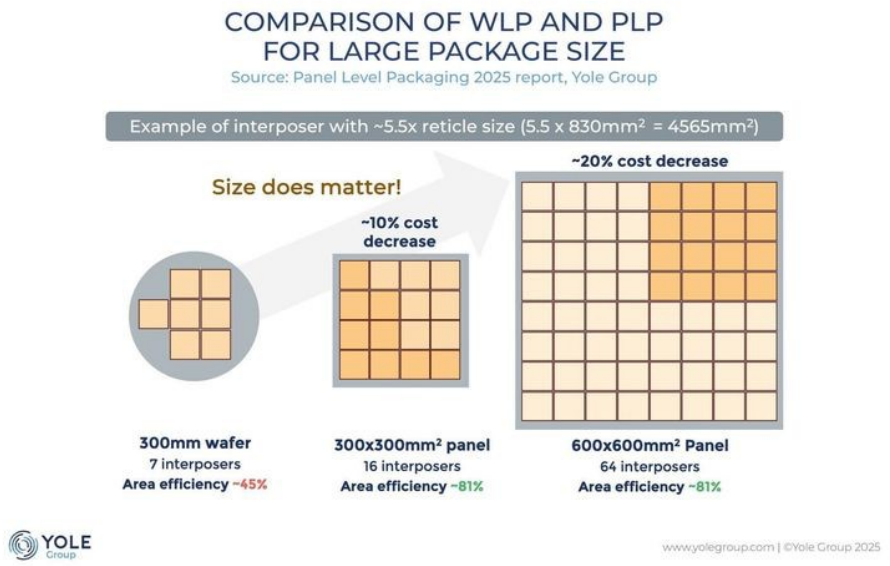
Exhibit 12: Comparison between TSMC's CoWoS, CoPoS, SoIC, and Intel's EMIB-T

	CoWoS	CoPoS	SoIC	EMIB
Packaging solutions	2.5D Wafer level	2.5D Panel level	3D Chip/die stacking	2.5D Substrate level
Performance (data bandwidth)	High	Low	Highest	Low
Efficiency for large chip (use of the subrate area)	Low	High	NA	High
Production sweet spot of the chip size	<9.7x reticle size	>9.7x reticle size	>9.7x reticle size	>9.7x reticle size
Cost at 9.7x retical size (including yield issue)	High	Theoretical low	Highest	Theoretical low
Technology maturity (opposite of execution risk)	High	Low	Medium	Low
Thermal challenge	Medium	Theoretical low	Highest	Theoretical low
Overview	CoWoS excels in high-bandwidth 2.5D integration but is costly and capacity-limited	CoPoS targets large-scale, cost-efficient integration but is still maturing	SoIC delivers the highest performance through 3D stacking at the expense of complexity and thermal constraints	EMIB offers a more cost-effective and modular alternative with some performance trade-offs
Strategic consideration from customers				
Pros	Reliable and time to market	Cost efficient with larger chip size	Breakthrough the planar constraints	Cost efficient with larger chip size
Cons	Higher Cost	Not currently avaiable at TSMC	High cost with thermal issue	Execution Risk

In summary,

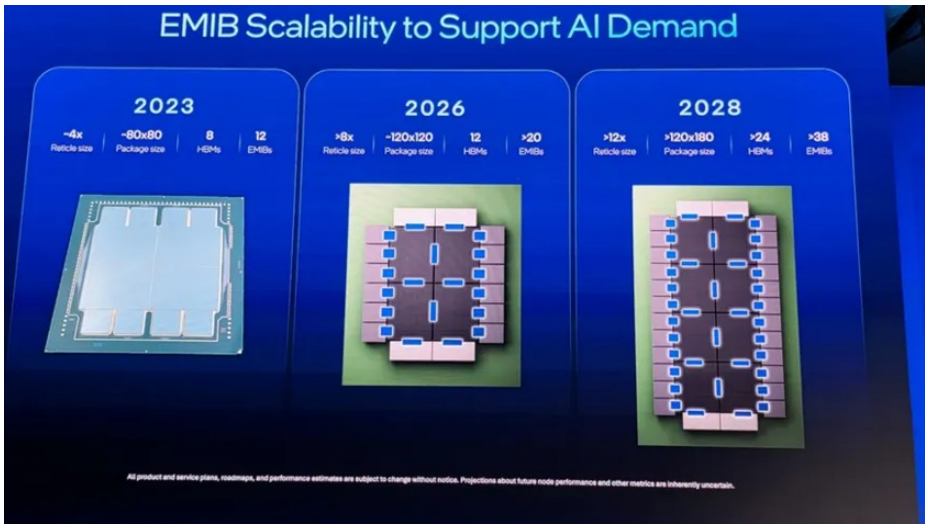
- CoWoS excels in high-bandwidth 2.5D integration but is costly and capacity-limited
- EMIB offers a more cost-effective and modular alternative with some performance trade-offs
- CoPoS targets large-scale, cost-efficient integration but is still maturing
- SoIC delivers the highest performance through 3D stacking at the expense of complexity and thermal constraints.

Exhibit 13: CoWoS, CoPoS and FoPLP comparison



Source: Yole

Exhibit 14: Intel's EMIB should easily support larger chips with more reticles (>12) if its supply chain can execute well



Source: Intel

UMC is well positioned for Silicon Photonic IC (PIC) foundry

In our previous Foundry Floorplan, we presented a constructive view on UMC given its AI-related revenue. Management indicated AI revenue of US$300mn this year (3-5% of revenue), potentially more than tripling to US$1bn in three years (2029).

UMC has a capacity expansion plan to capture AI demand, including a clean room for advanced packaging for AI chips, such as wafer-on-wafer and memory-on-memory stacking.

Some investors remain on the sidelines amid ongoing smartphone and PC demand weakness, and we have seen some order cuts of PC semis recently. Some think a UMC price hike in 2027 wouldn't go through, but we see two growth drivers helping it successfully hike wafer price for 8-inch in 2027: 1) Samsung DDI outsourcing, and 2) growing SiPh PIC demand, in particular after UMC introduced its 400Gb per lane solution (PIC + TFLN) solution.

How UMC is differentiated in PIC foundry

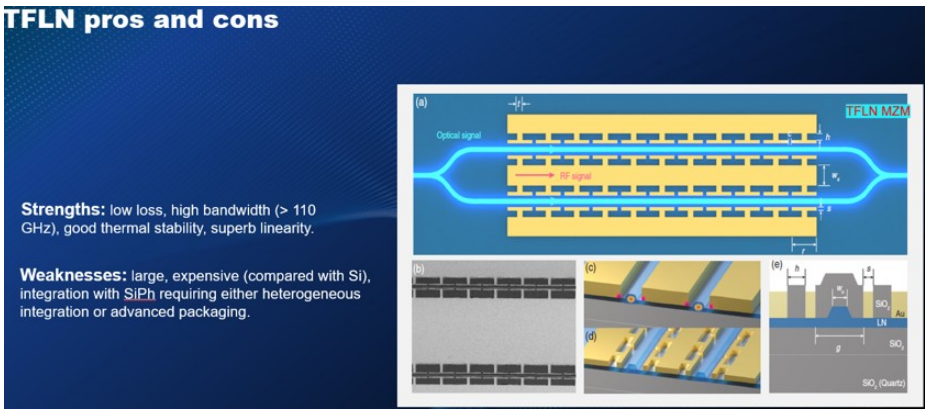
According to UMC, InP and TFLN are the two most promising solutions, as they are much more mature than the other contenders. InP is facing severe shortage, adding to TFLN's momentum.

UMC Group's TFLN program started in 2021 with 6" in mass production and 8" in sampling. TFLN's strengths include low loss, high bandwidth (> 110 GHz), good thermal stability, and strong linearity.

Integrating TFLN with PIC is a challenge as well as an opportunity. Advanced packaging schemes and micro transfer printing are both seen as promising candidates. UMC is developing the integration technology, leveraging its expertise in PIC, TFLN, and advanced packaging.

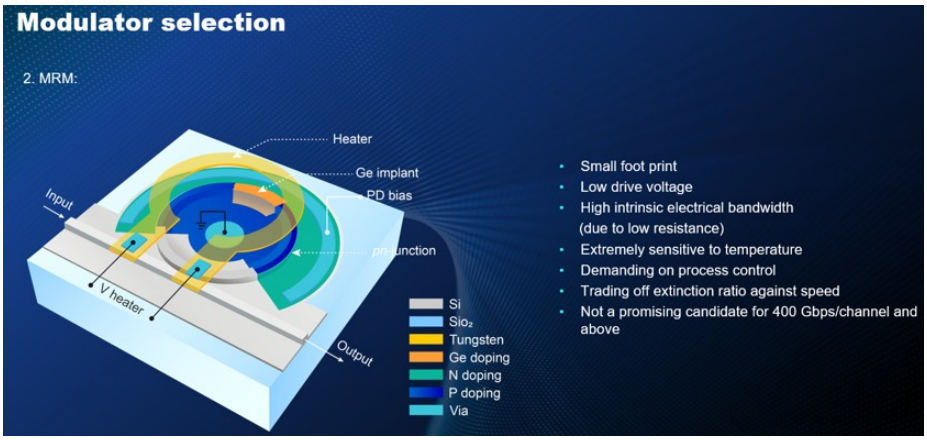
Adoption of higher-performance modulators (TFLN/InP) and improvement in photo diodes are key factors affecting deployment of plain-vanilla (non-WDM, IM/DD) DCIs with 400 Gbps/channel performance and beyond, which is very close to TSMC's mainstream PIC technology Micro Ring.

Exhibit 15: UMC differentiates in TFLN process offering for PIC



Source: UMC

Exhibit 16: TSMC's PIC focus on Micro Ring Modulator



Source: UMC

About Foundry Floorplan

In 2011, we first published this product (Asia/Pacific Foundry: The Foundry Floorplan) to provide our analysis of foundry industry dynamics. We have resumed this practice as global foundry competition remains active. Foundry supply is also a critical resource for future AI chips, whether in the global market or China's local market.

Below are prior reports from this series:

- The Foundry Floorplan: All boats riding on the same tide – mature node up-cycle begins (19 May 2026)
- The Foundry Floorplan: TSMC preview update; CoWoS vs. EMIB competition (14 Apr 2026)
- The Foundry Floorplan: Raise TSMC's 2027e and 2028e Capex (9 Mar 2026)
- The Foundry Floorplan: Update on TSMC's 2027 capex; interposer outsourcing to Vanguard? (13 Jan 2026)
- Asia/Pacific Foundry: The Foundry Floorplan, April 2011

TSMC: Estimate and price target revisions

Our earnings forecasts increase 4% for 2026, 5% for 2027 and 3% for 2028: We raise our 2026 revenue forecast and modestly increase our margin assumptions to reflect stronger-than-expected 3Q26 performance, driven by robust AI demand, including sustained Blackwell shipments. We raise our 2027–28 revenue assumptions by 3%–5%, reflecting the increase in strong leading-edge demand as well as the wafer price hike.

Exhibit 17: TSMC: Estimate revisions

(NT$ mn)	New 2026e	Old 2026e	Diff.%	New 2027e	Old 2027e	Diff.%	New 2028e	Old 2028e	Diff.%
Net sales	5,589,451	5,438,831	3%	7,471,986	7,187,423	4%	9,340,906	9,037,662	3%
Gross profit	3,779,639	3,663,403	3%	5,155,084	4,912,038	5%	6,420,040	6,219,699	3%
Operating profit	3,384,759	3,249,517	4%	4,577,529	4,342,910	5%	5,739,313	5,548,069	3%
Pretax income	3,563,509	3,425,902	4%	4,685,707	4,446,359	5%	5,843,492	5,647,518	3%
Net income	2,990,329	2,880,237	4%	3,960,521	3,758,166	5%	4,924,352	4,759,400	3%
Diluted EPS	**115.32**	**111.08**	**4%**	**152.74**	**144.93**	**5%**	**189.91**	**183.55**	**3%**
Margins									
Gross margin	67.6%	67.4%		69.0%	68.3%		68.7%	68.8%	
Operating margin	60.6%	59.7%		61.3%	60.4%		61.4%	61.4%	
Pretax margin	63.8%	63.0%		62.7%	61.9%		62.6%	62.5%	
Net margin	53.5%	53.0%		53.0%	52.3%		52.7%	52.7%	

Exhibit 18: TSMC: Quarterly financials

(NT$ mn)	1Q25	2Q25	3Q25	4Q25	1Q26	2Q26	3Q26e	4Q26e	2023	2024	2025	2026e	2027e	2028e
Total Revenues	**839,254**	**933,792**	**989,918**	**1,046,090**	**1,134,103**	**1,270,380**	**1,499,073**	**1,685,894**	**2,161,736**	**2,894,308**	**3,809,054**	**5,589,451**	**7,471,986**	**9,340,906**
Sequential Change	*-3.4%*	*11.3%*	*6.0%*	*5.7%*	*8.4%*	*12.0%*	*18.0%*	*12.5%*						
Change vs Year Ago	*41.6%*	*38.6%*	*30.3%*	*20.5%*	*35.1%*	*36.0%*	*51.4%*	*61.2%*	*-4.5%*	*33.9%*	*31.6%*	*46.7%*	*33.7%*	*25.0%*
Cost of Sales	**(345,859)**	**(386,423)**	**(401,375)**	**(394,104)**	**(382,808)**	**(410,070)**	**(486,890)**	**(530,044)**	**(986,625)**	**(1,269,954)**	**(1,527,760)**	**(1,809,812)**	**(2,316,902)**	**(2,920,866)**
Percent of Revenues	*41.2%*	*41.4%*	*40.5%*	*37.7%*	*33.8%*	*32.3%*	*32.5%*	*31.4%*	*45.6%*	*43.9%*	*40.1%*	*32.4%*	*31.0%*	*31.3%*
Gross Profit	**493,395**	**547,369**	**588,543**	**651,987**	**751,295**	**860,311**	**1,012,184**	**1,155,849**	**1,175,111**	**1,624,354**	**2,281,294**	**3,779,639**	**5,155,084**	**6,420,040**
Gross Margin	58.8%	58.6%	59.5%	62.3%	66.2%	67.7%	67.5%	68.6%	54.4%	56.1%	59.9%	67.6%	69.0%	68.7%
Total Opex	**(86,314)**	**(83,946)**	**(87,858)**	**(87,084)**	**(92,329)**	**(93,708)**	**(101,410)**	**(107,433)**	**(253,645)**	**(302,301)**	**(345,202)**	**(394,880)**	**(577,555)**	**(680,727)**
Percent of Revenues	*10.3%*	*9.0%*	*8.9%*	*8.3%*	*8.1%*	*7.4%*	*6.8%*	*6.4%*	*11.7%*	*10.4%*	*9.1%*	*7.1%*	*7.7%*	*7.3%*
R&D	(56,547)	(61,280)	(63,742)	(64,858)	(67,757)	(73,146)	(77,146)	(80,146)	(182,370)	(204,182)	(246,427)	(298,195)	(356,300)	(400,500)
Percent of Revenues	*6.7%*	*6.6%*	*6.4%*	*6.2%*	*6.0%*	*5.8%*	*5.1%*	*4.8%*	*8.4%*	*7.1%*	*6.5%*	*5.3%*	*4.8%*	*4.3%*
SG&A	(29,767)	(22,666)	(24,116)	(22,227)	(24,573)	(20,562)	(24,263)	(27,287)	(71,275)	(98,119)	(98,775)	(96,685)	(221,255)	(280,227)
Sequential Change	*1.1%*	*-23.9%*	*6.4%*	*-7.8%*	*10.6%*	*-16.3%*	*18.0%*	*12.5%*						
Change vs Year Ago	*53.6%*	*-3.6%*	*-6.5%*	*-24.5%*	*-17.4%*	*-9.3%*	*0.6%*	*22.8%*						
Operating Income	**407,081**	**463,424**	**500,685**	**564,902**	**658,966**	**766,603**	**910,774**	**1,048,416**	**921,466**	**1,322,053**	**1,936,092**	**3,384,759**	**4,577,529**	**5,739,313**
Percent of Revenues	*48.5%*	*49.6%*	*50.6%*	*54.0%*	*58.1%*	*60.3%*	*60.8%*	*62.2%*	*42.6%*	*45.7%*	*50.8%*	*60.6%*	*61.3%*	*61.4%*
Non-operating Income(Loss)	**23,815**	**29,612**	**24,684**	**27,461**	**28,834**	**95,827**	**27,045**	**27,045**	**57,706**	**83,786**	**105,571**	**178,750**	**108,179**	**104,179**
Profit Before Taxes	**430,895**	**493,035**	**525,369**	**592,363**	**687,800**	**862,430**	**937,819**	**1,075,461**	**979,171**	**1,405,839**	**2,041,663**	**3,563,509**	**4,685,707**	**5,843,492**
Percent of Revenues	*51.3%*	*52.8%*	*53.1%*	*56.6%*	*60.6%*	*67.9%*	*62.6%*	*63.8%*	*45.3%*	*48.6%*	*53.6%*	*63.8%*	*62.7%*	*62.6%*
Taxes	(70,163)	(95,542)	(73,614)	(86,948)	(114,998)	(155,649)	(140,673)	(161,319)	(141,404)	(233,407)	(326,266)	(572,639)	(725,186)	(919,140)
Tax Rate	*16.3%*	*19.4%*	*14.0%*	*14.7%*	*16.7%*	*18.0%*	*15.0%*	*15.0%*	*14.4%*	*16.6%*	*16.0%*	*16.1%*	*15.5%*	*15.7%*
Net Income, Cont Ops	360,733	397,493	451,755	505,415	572,801	706,781	797,146	914,141	837,768	1,172,432	1,715,397	2,990,870	3,960,521	4,924,352
Minority Interest	831	780	546	329	(322)	(219)	0	0	730	836	2,486	(541)	0	0
Reported Income (TW GAAP)	**361,564**	**398,273**	**452,301**	**505,744**	**572,480**	**706,562**	**797,146**	**914,141**	**838,498**	**1,173,268**	**1,717,883**	**2,990,329**	**3,960,521**	**4,924,352**
Percent of Revenues	*43.1%*	*42.7%*	*45.7%*	*48.3%*	*50.5%*	*55.6%*	*53.2%*	*54.2%*	*38.8%*	*40.5%*	*45.1%*	*53.5%*	*53.0%*	*52.7%*
Change vs Year Ago	*60.3%*	*60.7%*	*39.1%*	*35.0%*	*58.3%*	*77.4%*	*76.2%*	*80.8%*	*-17.5%*	*39.9%*	*46.4%*	*74.1%*	*32.4%*	*24.3%*
Reported EPS (NT$, TW GAAP)	**13.94**	**15.36**	**17.44**	**19.50**	**22.08**	**27.25**	**30.74**	**35.25**	**32.34**	**45.25**	**66.25**	**115.32**	**152.74**	**189.91**
Basic shares (mn units)	25,927	25,928	25,929	25,928	25,930	25,931	25,931	25,931	25,929	25,928	25,928	25,930	25,931	25,931

Our PT increases to NT$3,088 from NT$2,988, driven primarily by our estimate revisions. Our PT implies a 20x P/E multiple on our new 2027 EPS forecast. TSMC currently trades at 17x that estimate, close to its average NTM P/E of 16.5x since 2018. We find the stock attractive at current levels.

We continue to derive our 12-month price target (base-case scenario) using a residual income valuation framework. Our key assumptions are unchanged, including a cost of equity of 9.2% (beta of 1.2, equity risk premium of 6.0%, and risk-free rate of 2.0%), an intermediate growth rate of 10.5%, and a terminal growth rate of 4%.

Our bull and bear case scenario values increase to NT$3,720 (from NT$3,600) and NT $1,700 (from NT$1,645), respectively.

Exhibit 19: TSMC: Residual income model

	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2034e	2035e	2036e	2037e
Total Equity	**7,887,536**	**11,096,019**	**15,060,873**	**18,543,374**	**22,391,538**	**26,643,760**	**31,342,464**	**36,534,533**	**42,271,769**	**48,611,415**	**55,616,723**	**63,357,589**
Net Profit	**2,990,329**	**3,960,521**	**4,924,352**	**5,441,409**	**6,012,757**	**6,644,096**	**7,341,726**	**8,112,607**	**8,964,431**	**9,905,696**	**10,945,794**	**12,095,103**
ROAE	**44.8%**	**41.7%**	**37.7%**	**32.4%**	**29.4%**	**27.1%**	**25.3%**	**23.9%**	**22.8%**	**21.8%**	**21.0%**	**20.3%**
Residual Income	1,944,291	2,565,485	3,157,086	3,491,900	3,741,525	4,007,915	4,295,590	4,608,548	4,950,628	5,325,712	5,737,863	6,191,417
Spread	**35.6%**	**32.5%**	**28.5%**	**23.2%**	**20.2%**	**17.9%**	**16.1%**	**14.7%**	**13.6%**	**12.6%**	**11.8%**	**11.1%**
Ending Equity Capital	7,887,536											
PV of Forecast Period	25,153,069											
PV of Continuing Value	47,029,569											
Equity Value	**80,070,174**											
No. of Shares	25,930											
Projected Price (NT$)	**3,088**											

Exhibit 20: TSMC's one-year forward P/E: Valuation does not appear stretched as a key AI semi enabler

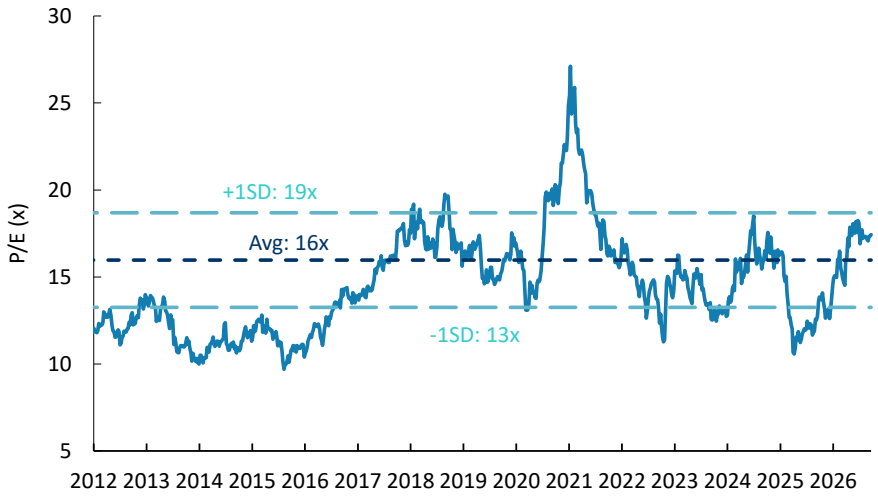
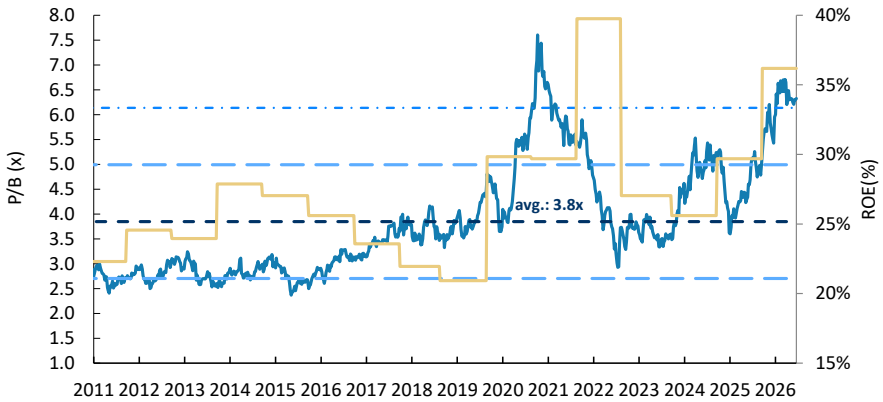


Exhibit 21: TSMC – P/B vs. ROE



Risk Reward – TSMC (2330.TW)

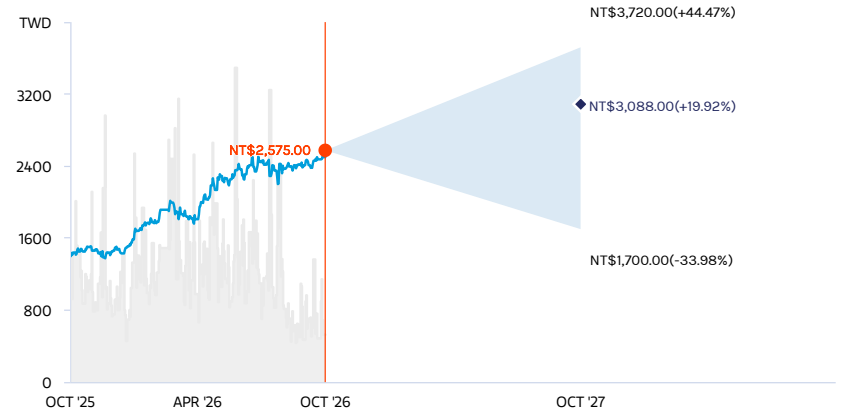
Expect 40-45% revenue growth in 2026; OW

PRICE TARGET NT$3,088.00

Base case, residual income model. Key assumptions: a cost of equity of 9.2% (beta of 1.2, risk-free rate of 2.0% and risk premium of 6.0%), an intermediate growth rate of 10.5%, and a terminal growth rate of 4.0%.

Consensus Price Target Distribution NT$2,010.00 NT$3,113.97 MS PT Mean NT$3,800.00

RISK REWARD CHART



Key: Historical Stock Performance Current Stock Price Price Target

OVERWEIGHT THESIS

- Reflecting robust AI capex guidance from global CSPs, we are OW on TSMC.
- Our estimates reflect TSMC's strong profitability and another year of >40% Y/Y revenue growth seen for 2026.
- Leading-edge (7nm below) demand remains robust.
- Reflecting increased bargaining power, long-term margin expansion, and sustainable AI semi demand, we expect the stock to re-rate to our implied 2027e target P/E of 20x.

Consensus Rating Distribution

97%	Overweight
3%	Equal-weight
0%	Underweight

MS Rating

Risk Reward Themes

New Data Era:	*Positive*
Pricing Power:	*Positive*
Secular Growth:	*Positive*

View descriptions of Risk Rewards Themes here

BULL CASE NT$3,720.00

24x 2027e EPS

TSMC dominates foundry services: 1) Breakthrough in EUV tech and materials accelerates node migration to 3nm and beyond. 2) Intel outsources its server CPU production to TSMC sooner than expected. 3) Intel or Samsung exits leading-edge foundry business. 4) New tech megatrends such as 6G or AI drive global semi revenue growth and increase demand for leading edge nodes. 5) Cost per transistor decreases further along with node migration.

BASE CASE NT$3,088.00

20x 2027e EPS

Leading position in leading-edge logic foundry services with some gross margin expansion: 1) Global semi revenue CAGR is sustained in the high single digits in 2025-28. 2) TSMC continues to lead in market share in 16nm, 7nm, 5nm, 3nm, and 2nm. 3) It continues to observe robust AI-related demand. 4) Cost per transistor does not decrease meaningfully in 3nm and 2nm, while capex per k is more demanding than for 7nm and 5nm.

BEAR CASE NT$1,700.00

11x 2027e EPS

TSMC's dominance in foundry business erodes: 1) Global ex-memory semi revenue growth is weaker than expected in 2025-28. 2) Declining trailing-edge market share causes revenue shortfall. 3) Intel's contribution is weaker than expected. Intel and/or Samsung successfully develop leading-edge process technology. 4) Intel's foundry business execution proves successful and weighs on TSMC with order competition. 5) Demand for 2nm is less than expected given high transistor cost for foundry customers.

Risk Reward – TSMC (2330.TW)

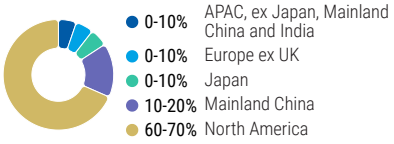
KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
Revenue from 5nm Geometry (NT$, mn)	1,179,907	1,388,663	1,154,712	1,147,783
Revenue from 10/7nm Geometry (NT$, mn)	459,258	534,422	542,812	540,706
Revenue from 16/20nm Geometry (NT$, mn)	220,027	294,906	329,278	347,256

INVESTMENT DRIVERS

- Moore's Law migration (chip scaling) and alternative technologies
- Capex intensity - cost of building leading-edge foundry capacity
- Bargaining power with key equipment vendors
- Transistor cost for customers
- ROI for leading-edge foundry

GLOBAL REVENUE EXPOSURE



View explanation of regional hierarchies here

MS ALPHA MODELS

1/5 MOST — 3 Month Horizon

the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- TSMC charging large customers more to keep its gross margin above 56% in the long term
- AI semi demand growing more significantly than expected while TSMC maintains high market share in leading-edge foundry business
- Outsourcing from Intel CPU increasing over 2025-27

RISKS TO DOWNSIDE

- Inventory correction in 2026
- Weakening demand for leading edge technologies
- Costs of overseas fabs growing significantly

OWNERSHIP POSITIONING

Inst. Owners, % Active 75.9%

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e

Sales / Revenue (NT$, mn)	5,157,000	5,589,451 / 5,429,715
EBITDA (NT$, mn)	3,751,000	4,201,496 / 4,204,053 / 4,013,608
Net income (NT$, mn)	2,551,000	2,990,329 / 2,791,558
EPS (NT$)	98.40	115.32 / 107.79

◆ Mean ◆

TSMC: Financial summary

Exhibit 22: TSMC: Financial Summary

Income Statement, 2024-2028e, Year End Dec

(NT$ mn)	2024	2025	2026e	2027e	2028e
Revenue	**2,894,308**	**3,809,054**	**5,589,451**	**7,471,986**	**9,340,906**
YoY Growth	*33.9%*	*31.6%*	*46.7%*	*33.7%*	*25.0%*
Gross Profit b/f dep	2,247,086	2,924,669	4,539,736	6,088,989	7,751,511
Less: COGS	**(1,269,954)**	**(1,527,760)**	**(1,809,812)**	**(2,316,902)**	**(2,920,866)**
Variable costs	(647,221)	(884,385)	(1,049,715)	(1,382,996)	(1,589,394)
Depreciation & amort	(622,733)	(643,376)	(760,097)	(933,906)	(1,331,471)
Gross profit	**1,624,354**	**2,281,294**	**3,779,639**	**5,155,084**	**6,420,040**
% margin	*56.1%*	*59.9%*	*67.6%*	*69.0%*	*68.7%*
YoY Growth	*38.2%*	*40.4%*	*65.7%*	*36.4%*	*24.5%*
Operating Expenses:	**(302,301)**	**(345,202)**	**(394,880)**	**(577,555)**	**(680,727)**
R&D	(204,182)	(246,427)	(298,195)	(356,300)	(400,500)
Sales and Marketing	(13,144)	(16,918)	(20,088)	(37,360)	(46,705)
General and Admin	(84,975)	(81,857)	(76,597)	(183,895)	(233,523)
Operating Profit	**1,322,053**	**1,936,092**	**3,384,759**	**4,577,529**	**5,739,313**
% margin	*45.7%*	*50.8%*	*60.6%*	*61.3%*	*61.4%*
YoY Growth	*43.5%*	*46.4%*	*74.8%*	*35.2%*	*25.4%*
Non-Operating Income	**83,786**	**105,571**	**178,750**	**108,179**	**104,179**
Pretax Profit	**1,405,839**	**2,041,663**	**3,563,509**	**4,685,707**	**5,843,492**
% margin	*48.6%*	*53.6%*	*63.8%*	*62.7%*	*62.6%*
Tax	(233,407)	(326,266)	(572,639)	(725,186)	(919,140)
Reported net Income	**1,173,268**	**1,717,883**	**2,990,329**	**3,960,521**	**4,924,352**
Reported EPS (NT$)	**45.25**	**66.25**	**115.32**	**152.74**	**189.91**
EPS for consensus (NT$)	**45.25**	**66.25**	**115.32**	**152.74**	**189.91**

Key Ratios, 2024-2028e

	2024	2025	2026e	2027e	2028e
Return (%)					
ROAA	19%	23%	32%	32%	31%
ROAE	30%	35%	45%	42%	38%
OP. ATO	0.7x	0.7x	0.8x	1.0x	0.9x
Gearing (x)					
Net Debt/ Equity	-0.33x	-0.38x	-0.39x	-0.41x	-0.47x
Current Ratio	2.4x	2.6x	2.8x	3.6x	5.0x
Quick Ratio	1.9x	2.1x	2.2x	3.0x	4.4x
Operating Cycle					
AR/NR Turnover (days)	29	26	26	29	28
Inventory Turnover (days)	76	68	73	76	74
AP Turnover (days)	19	19	22	23	22
Cash Conversion (days)	87	75	78	82	80

Balance Sheet, 2024-2028e, Year End Dec

(NT$ mn)	2024	2025	2026e	2027e	2028e
Cash & Equivalent	2,127,627	2,767,856	3,661,121	5,146,886	7,691,797
MarketableSecurity	294,393	300,738	383,795	383,795	383,795
A/R & N/R	272,088	281,791	531,976	660,603	799,884
Inventories	287,869	288,109	449,213	530,763	667,572
Other Current Ass.	106,376	178,635	221,240	221,240	221,240
Total current assets	**3,088,352**	**3,817,131**	**5,247,346**	**6,943,287**	**9,764,288**
Long-term Investment	149,040	172,370	227,936	227,936	227,936
Total fixed assets	3,234,980	3,691,841	5,059,707	6,596,943	7,782,224
Total other assets	219,565	251,682	279,138	279,138	279,138
Total Assets	**6,691,938**	**7,933,024**	**10,814,126**	**14,047,303**	**18,053,586**
A/P & N/P	74,227	84,330	136,031	160,727	202,155
Accrued Expenses	0	0	0	0	0
Other Payable	531,377	630,217	871,930	871,930	871,930
Curr. of L-T Debt	59,858	136,926	167,410	167,410	167,410
Other Curr. Liab.	599,064	606,547	707,796	707,796	707,796
Total Current Liab.	**1,264,525**	**1,458,019**	**1,883,167**	**1,907,863**	**1,949,291**
L-T Liabilities	926,605	856,228	815,037	815,037	815,037
Total Other L-T Liab	177,233	157,982	228,385	228,385	228,385
Total Liabilities	**2,368,362**	**2,472,229**	**2,926,589**	**2,951,285**	**2,992,713**
Common Stocks	259,327	259,325	259,324	259,324	259,324
Preferred Stocks	0	0	0	0	0
Capital Reserve	73,261	73,446	72,291	72,291	72,291
Retained earnings	3,955,957	5,086,825	7,513,969	10,722,452	14,687,306
Treasury Stock	0	0	0	0	0
Minority Equity	35,031	41,199	41,953	41,953	41,953
Total Equity	**4,323,576**	**5,460,795**	**7,887,536**	**11,096,019**	**15,060,873**
Total Liab. & Equity	**6,691,938**	**7,933,024**	**10,814,126**	**14,047,303**	**18,053,586**

Cash Flow Statement, 2024-2028e, Year End Dec

(NT$ mn)	2024	2025	2026e	2027e	2028e
Net Income Current	1,173,268	1,717,883	2,990,329	3,960,521	4,924,352
Depreciation	662,797	688,096	816,737	983,059	1,401,549
Net Investment Losses (Gains)	8,205	8,083	3,509	0	0
Decrease (Increase) in Working Capital	20,896	(17,144)	(16,282)	(185,482)	(234,662)
Others	(38,988)	(121,942)	(277,252)	0	0
Cash Flow-Operating	**1,826,177**	**2,274,976**	**3,517,042**	**4,758,098**	**6,091,239**
(Purchase) of FA	(956,007)	(1,272,411)	(2,056,340)	(2,520,295)	(2,586,830)
Sale of Fix Asset	895	797	1,992	0	0
(Purchase)L-T Inv.	(3,739)	0	0	0	0
Others	94,008	127,220	(4,892)	0	0
Cash Flow-Inv.	**(864,843)**	**(1,144,393)**	**(2,059,239)**	**(2,520,295)**	**(2,586,830)**
Inc(Dec)-S-T Debt	0	0	0	0	0
Inc(Dec) L-T Debt	28,601	7,948	11,299	0	0
Dividend Paid	(363,055)	(466,779)	(583,480)	(752,039)	(959,498)
Dir.&Emp.Bonus	0	0	0	0	0
Others	(11,847)	18,486	(30,604)	0	0
Cash Flow-Financing	**(346,301)**	**(440,345)**	**(602,786)**	**(752,039)**	**(959,498)**
Change in Cash	**662,199**	**640,229**	**893,265**	**1,485,764**	**2,544,911**
Net cash/(debt), b/f	1,465,428	2,127,627	2,767,856	3,661,121	5,146,886
Net cash/(debt), c/f	**2,127,627**	**2,767,856**	**3,661,121**	**5,146,886**	**7,691,797**

UMC: Estimate and price target revisions

We raise our 2026, 2027, and 2028 earnings estimates by 56%, 25%, and 31%, respectively: Our 2026e change is due mostly to strong 2Q26 non-op gains. We increase 2027/28e revenue and EPS due to new CPO related business contribution from 12-inch SiPh PIC as well as 8-inch TFLN. Our 2028e increase also includes DDI outsource from Samsung foundry.

Exhibit 23: UMC: Estimate revisions

(NT$ mn)	New 2026e	Old 2026e	Diff.%	New 2027e	Old 2027e	Diff.%	New 2028e	Old 2028e	Diff.%
Net sales	279,638	271,238	3%	357,846	327,483	9%	419,091	364,804	15%
Gross profit	89,018	82,884	7%	123,942	108,171	15%	156,862	127,311	23%
Operating profit	59,975	55,860	7%	94,477	78,823	20%	122,182	95,748	28%
Pretax income	97,963	65,511	50%	108,645	86,614	25%	138,350	105,539	31%
Net income	88,133	56,406	56%	89,233	71,242	25%	113,591	86,760	31%
Basic EPS	**7.06**	**4.52**	**56%**	**7.15**	**5.70**	**25%**	**9.11**	**6.95**	**31%**
Diluted EPS	**7.02**	**4.49**	**56%**	**7.11**	**5.67**	**25%**	**9.05**	**6.91**	**31%**
Margins									
Gross margin	31.8%	30.6%		34.6%	33.0%		37.4%	34.9%	
Operating margin	21.4%	20.6%		26.4%	24.1%		29.2%	26.2%	
Pretax margin	35.0%	24.2%		30.4%	26.4%		33.0%	28.9%	
Net margin	31.5%	20.8%		24.9%	21.8%		27.1%	23.8%	

Exhibit 24: UMC: Quarterly financials

(NT$ mn)	1Q26	2Q26	3Q26e	4Q26e	1Q27e	2Q27e	3Q27e	4Q27e	2024	2025	2026e	2027e	2028e
Total Revenues	**61,038**	**68,733**	**73,187**	**76,680**	**83,696**	**88,507**	**93,909**	**91,735**	**232,303**	**237,553**	**279,638**	**357,846**	**419,091**
Sequential Change	*-1.2%*	*12.6%*	*6.5%*	*4.8%*	*9.1%*	*5.7%*	*6.1%*	*-2.3%*					
Change vs Year Ago	*5.5%*	*17.0%*	*23.8%*	*24.1%*	*37.1%*	*28.8%*	*28.3%*	*19.6%*	*4.4%*	*2.3%*	*17.7%*	*28.0%*	*17.1%*
Cost of Sales	**(43,219)**	**(46,410)**	**(49,399)**	**(51,592)**	**(54,705)**	**(58,395)**	**(60,907)**	**(59,896)**	**(156,649)**	**(168,647)**	**(190,620)**	**(233,904)**	**(262,228)**
Gross Profit	**17,818**	**22,323**	**23,789**	**25,088**	**28,991**	**30,111**	**33,002**	**31,838**	**75,654**	**68,906**	**89,018**	**123,942**	**156,862**
Gross Margin	29.2%	32.5%	32.5%	32.7%	34.6%	34.0%	35.1%	34.7%	32.6%	29.0%	31.8%	34.6%	37.4%
Total Opex	(6,542)	(7,373)	(7,480)	(7,648)	(7,192)	(7,313)	(7,441)	(7,518)	(24,042)	(24,958)	(29,043)	(29,465)	(34,680)
Percent of Revenues	*10.7%*	*10.7%*	*10.2%*	*10.0%*	*8.6%*	*8.3%*	*7.9%*	*8.2%*	*10.3%*	*10.5%*	*10.4%*	*8.2%*	*8.3%*
R&D	(4,575)	(4,747)	(4,757)	(4,767)	(4,650)	(4,700)	(4,750)	(4,800)	(15,616)	(17,725)	(18,847)	(18,900)	(22,380)
Percent of Revenues	*7.5%*	*6.9%*	*6.5%*	*6.2%*	*5.6%*	*5.3%*	*5.1%*	*5.2%*	*6.7%*	*7.5%*	*6.7%*	*5.3%*	*5.3%*
Sales and Marketing	(689)	(733)	(780)	(817)	(892)	(943)	(1,001)	(978)	(2,701)	(2,433)	(3,020)	(3,815)	(4,610)
Percent of Revenues	*1.1%*	*1.1%*	*1.1%*	*1.1%*	*1.1%*	*1.1%*	*1.1%*	*1.1%*	*1.2%*	*1.0%*	*1.1%*	*1.1%*	*1.1%*
General and Admin	(1,278)	(1,893)	(1,943)	(2,063)	(1,650)	(1,670)	(1,690)	(1,740)	(5,724)	(4,800)	(7,176)	(6,750)	(7,690)
Percent of Revenues	*2.1%*	*2.8%*	*2.7%*	*2.7%*	*2.0%*	*1.9%*	*1.8%*	*1.9%*	*2.5%*	*2.0%*	*2.6%*	*1.9%*	*1.8%*
Operating Income	**11,276**	**14,950**	**16,308**	**17,441**	**21,798**	**22,798**	**25,561**	**24,320**	**51,613**	**43,949**	**59,975**	**94,477**	**122,182**
Percent of Revenues	*18.5%*	*21.8%*	*22.3%*	*22.7%*	*26.0%*	*25.8%*	*27.2%*	*26.5%*	*22.2%*	*18.5%*	*21.4%*	*26.4%*	*29.2%*
Total Non-operating Income(Loss)	**5,367**	**30,236**	**1,192**	**1,192**	**3,392**	**3,492**	**3,592**	**3,692**	**4,607**	**5,699**	**37,987**	**14,168**	**16,168**
Profit Before Taxes	**16,644**	**45,186**	**17,500**	**18,633**	**25,190**	**26,290**	**29,152**	**28,012**	**56,220**	**49,648**	**97,963**	**108,645**	**138,350**
Percent of Revenues	*27.3%*	*65.7%*	*23.9%*	*24.3%*	*30.1%*	*29.7%*	*31.0%*	*30.5%*	*24.2%*	*20.9%*	*35.0%*	*30.4%*	*33.0%*
Change vs Year Ago	*78.1%*	*345.0%*	*19.5%*	*20.2%*	*51.3%*	*-41.8%*	*66.6%*	*50.3%*					
Taxes	(527)	(2,962)	(3,150)	(3,354)	(4,534)	(4,732)	(5,247)	(5,042)	(9,113)	(8,113)	(9,993)	(19,556)	(24,903)
Tax Rate	*3.2%*	*6.6%*	*18.0%*	*18.0%*	*18.0%*	*18.0%*	*18.0%*	*18.0%*	*16.2%*	*16.3%*	*10.2%*	*18.0%*	*18.0%*
Net Income, Cont Ops	16,117	42,224	14,350	15,279	20,656	21,558	23,905	22,970	47,106	41,535	87,970	89,089	113,447
Percent of Revenues	*26.4%*	*61.4%*	*19.6%*	*19.9%*	*24.7%*	*24.4%*	*25.5%*	*25.0%*	*20.3%*	*17.5%*	*31.5%*	*24.9%*	*27.1%*
Minority Interest	54	36	36	36	36	36	36	36	105	182	163	145	145
Reported Income (TW GAAP)	**16,171**	**42,260**	**14,386**	**15,315**	**20,692**	**21,594**	**23,941**	**23,006**	**47,211**	**41,716**	**88,133**	**89,233**	**113,591**
Percent of Revenues	*26.5%*	*61.5%*	*19.7%*	*20.0%*	*24.7%*	*24.4%*	*25.5%*	*25.1%*	*20.3%*	*17.6%*	*31.5%*	*24.9%*	*27.1%*
Change vs Year Ago	*107.9%*	*374.7%*	*-4.0%*	*52.3%*	*28.0%*	*-48.9%*	*66.4%*	*50.2%*	*-22.6%*	*-11.6%*	*111.3%*	*1.2%*	*27.3%*
Reported diluted EPS (NT$, TW GAAP)	**1.29**	**3.37**	**1.15**	**1.22**	**1.65**	**1.72**	**1.91**	**1.83**	**3.76**	**3.32**	**7.02**	**7.11**	**9.05**
Reported Basic EPS (NT$, GAAP)	**1.29**	**3.39**	**1.15**	**1.23**	**1.66**	**1.73**	**1.92**	**1.84**	**3.80**	**3.34**	**7.06**	**7.15**	**9.11**

We raise our price target to NT$188 from NT$138: We continue to derive our price target (base case scenario value) from a residual income model, as we believe it best represents the value of the company. Besides our estimate increases, we raise our intermediate growth rate from 12.5% to 13.5% due to structural changes in the industry's supply/demand dynamics. Other key assumptions are unchanged, including a cost of

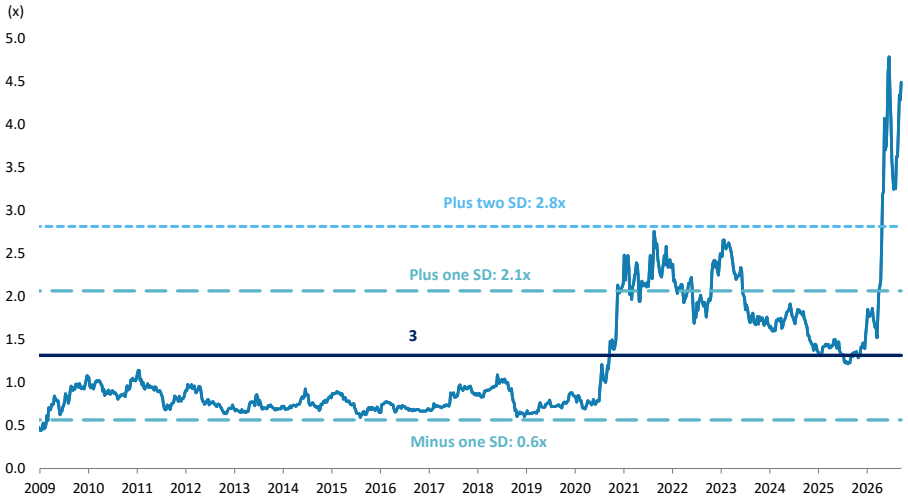
equity of 9.2% (beta of 1.2, equity risk premium of 6%, and risk-free rate of 2%), and terminal growth rate of 3%.

Our bull case scenario value increases from NT$200 to NT$270, and our bear case value rises from NT$70 to NT$95, implying 7.5x and 2.6x 2027e BVPS, respectively.

Exhibit 25: UMC: Residual income model

(NT$ mn)	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2034e	2035e	2036e	2037e
Total Equity	**441,934**	**464,221**	**510,031**	**569,076**	**635,797**	**711,191**	**796,387**	**892,658**	**1,001,444**	**1,124,372**	**1,263,281**	**1,420,249**
Net Profit	**88,133**	**89,233**	**113,591**	**128,358**	**145,045**	**163,901**	**185,208**	**209,285**	**236,492**	**267,236**	**301,976**	**341,233**
ROAE	**21.4%**	**19.7%**	**23.3%**	**23.8%**	**24.1%**	**24.3%**	**24.6%**	**24.8%**	**25.0%**	**25.1%**	**25.3%**	**25.4%**
Residual Income	46,528	46,381	65,542	74,412	84,658	96,233	109,312	124,088	140,785	159,650	180,966	205,052
Spread	**12.2%**	**10.5%**	**14.1%**	**14.6%**	**14.9%**	**15.1%**	**15.4%**	**15.6%**	**15.8%**	**15.9%**	**16.1%**	**16.2%**
Ending Equity Capital	441,934											
PV of Forecast Period	624,556											
PV of Continuing Value	1,293,778											
Equity Value	**2,360,268**											
No. of Shares	12,556											
Projected Price (NT$)	**188.0**											

Exhibit 26: UMC's one-year forward P/B band



Risk Reward – UMC (2303.TW)

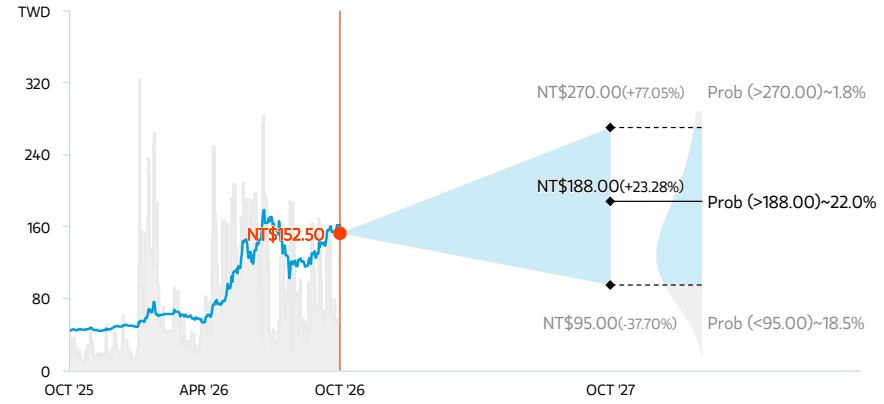
Wafer prices on the rise; OW

PRICE TARGET NT$188.00

Base case, residual income model. Key assumptions: 9.2% cost of equity, 13.5% medium-term growth, and 3.0% terminal growth.

Consensus Price Target Distribution NT$38.30 — NT$128.90 — MS PT — Mean — NT$258.00

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



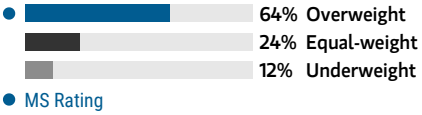
Key: Historical Stock Performance ● Current Stock Price ◆ Price Target

Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 5 Oct 2026. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology here

OVERWEIGHT THESIS

- We are OW as we see structural changes in the mature node industry's supply/demand dynamics.
- Its foundry quality is comparable to TSMC's in mature nodes. Along with specialty technologies, this could help offset part of the margin downside.
- Non-AI market recovery remains uncertain in 2027, yet UMC should still benefit from strong AI-related demand spillover from its foundry peers.
- 12nm FinFET development is strategic. It should be one of UMC's long-term strengths, notably when Chinese foundries cannot effectively expand FinFET capacity.
- The stock now trades at 4.1x 2027e BVPS. That is well above its historical average since 2009, but our price target implies 5.1x.

Consensus Rating Distribution



Risk Reward Themes

New Data Era:	*Positive*
Pricing Power:	*Negative*
Secular Growth:	*Positive*

View descriptions of Risk Rewards Themes here

BULL CASE NT$270.00

7.5x 2027e BVPS

Stabilized semi demand; better-than-expected 8-inch and trailing-edge 12-inch demand: 1) Global semi sales grow >15% Y/Y in 2026, and ex-TSMC foundry industry grows >10% Y/Y; 2) UMC gains share in both 8- and 12-inch wafers thanks to technology differentiation; 3) UMC receives more outsourcing from customers, which helps fill 22/28nm capacity and lifts blended wafer ASP; 4) traction increases for UMC's 12nm/14nm FinFET technologies.

BASE CASE NT$188.00

5.2x 2027e BVPS

Healthy semi growth; improving demand for 8-inch and trailing-edge 12-inch: 1) Global semi sales grow ~15% in 2026 and ex-TSMC foundry industry grows 3-5% Y/Y; 2) 8-inch utilization rate is above 75% with steady 12-inch demand amid semi inventory digestion; 3) UMC hikes wafer prices slightly in response to strong AI-related demand.

BEAR CASE NT$95.00

2.6x 2027e BVPS

Significant semi industry decline; 8-inch and trailing-edge 12-inch face weakening demand: 1) Global semi sales grow only <5% in 2026; 2) display semi and power semi demand deteriorates further; 3) significant wafer pricing erosion given low fab utilization and mature node peers' competition; 4) depreciation ramp-up of more than 30% Y/Y in 2026 without sufficient wafer order inflow to sustain UMC's gross margin.

Risk Reward – UMC (2303.TW)

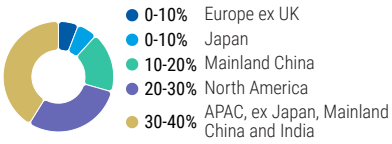
KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
Wafer shipment (K, 8 inch equivalent) (NT$, mn)	8,741	10,052	11,463	11,927
Wafer ASP (USD) (NT$, mn)	824	862	976	1,099
Utilization rate (%) (%)	75.2	83.4	92.0	92.8

INVESTMENT DRIVERS

- Semiconductor end-demand
- Outsourcing orders from IDM customers
- Ramp-up of new capacity

GLOBAL REVENUE EXPOSURE



View explanation of regional hierarchies here

MS ALPHA MODELS

3/5 MOST — 3 Month Horizon

the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Stronger-than-expected global economic and semiconductor growth
- Looser pricing competition, increasing margins and utilization rates
- Favorable customer mix changes

RISKS TO DOWNSIDE

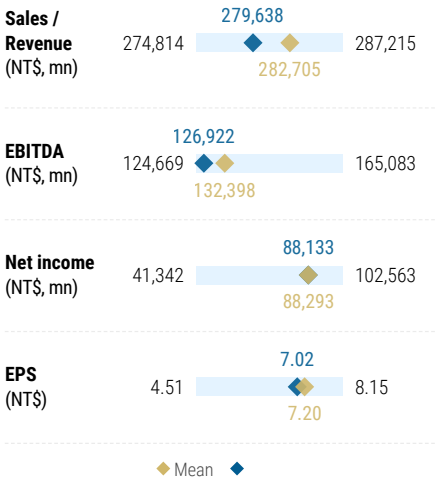
- Softer-than-expected global economic and semiconductor growth
- Increasing pricing competition, reducing margins and utilization rates
- Unfavorable customer mix changes

OWNERSHIP POSITIONING

Inst. Owners, % Active 70.1%

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e



UMC: Financial summary

Exhibit 27: UMC: Financial Summary

Income Statement, 2024-28e, Year End Dec

(NT$ mn)	2024	2025	2026e	2027e	2028e
Turnover	**232,303**	**237,553**	**279,638**	**357,846**	**419,091**
YoY Growth	*4.4%*	*2.3%*	*17.7%*	*28.0%*	*17.1%*
Less: COGS	**(156,649)**	**(168,647)**	**(190,620)**	**(233,904)**	**(262,228)**
Variable costs	(111,866)	(114,015)	(128,161)	(165,143)	(193,273)
Depreciation & amort	(44,782)	(54,631)	(62,459)	(68,761)	(68,956)
Gross profit	**75,654**	**68,906**	**89,018**	**123,942**	**156,862**
YoY Growth	*-2.7%*	*-8.9%*	*29.2%*	*39.2%*	*26.6%*
% margin	*32.6%*	*29.0%*	*31.8%*	*34.6%*	*37.4%*
Operating Expenses:	**(24,042)**	**(24,958)**	**(29,043)**	**(29,465)**	**(34,680)**
R&D	(15,616)	(17,725)	(18,847)	(18,900)	(22,380)
Sales and Marketing	(2,701)	(2,433)	(3,020)	(3,815)	(4,610)
General and Admin	(5,724)	(4,800)	(7,176)	(6,750)	(7,690)
Operating Profit	**51,613**	**43,949**	**59,975**	**94,477**	**122,182**
YoY Growth	*-10.8%*	*-14.8%*	*36.5%*	*57.5%*	*29.3%*
% margin	*22.2%*	*18.5%*	*21.4%*	*26.4%*	*29.2%*
Total Non-op	**4,607**	**5,699**	**37,987**	**14,168**	**16,168**
Pretax Profit	56,220	49,648	97,963	108,645	138,350
YoY Growth	*-20.7%*	*-11.7%*	*97.3%*	*10.9%*	*27.3%*
% margin	*24.2%*	*20.9%*	*35.0%*	*30.4%*	*33.0%*
Tax	(9,113)	(8,113)	(9,993)	(19,556)	(24,903)
Reported Net Income	47,211	41,716	88,133	89,233	113,591
Reported EPS (NT$)	**3.76**	**3.32**	**7.02**	**7.11**	**9.05**
ModelWare EPS (NT$)	**3.76**	**3.32**	**7.02**	**7.11**	**9.05**

Key Ratios

	2024	2025	2026e	2027e	2028e
Return (%)					
ROAA	*8.4%*	*7.3%*	*14.2%*	*13.2%*	*15.9%*
ROAE	*12.8%*	*11.0%*	*21.4%*	*19.7%*	*23.3%*
OP. ATO	*53.3%*	*54.5%*	*56.2%*	*69.7%*	*79.3%*
Gearing (x)					
Net Debt/ Equity	(0.1x)	(0.2x)	(0.1x)	(0.2x)	(0.2x)
Current Ratio	2.5x	2.3x	2.1x	2.4x	2.8x
Quick Ratio	1.8x	1.6x	1.4x	1.7x	2.1x
Operating Cycle					
AR/NR Turnover (days)	49	49	48	48	48
Inventory Turnover (days)	84	79	76	71	72
AP Turnover (days)	17	18	18	17	17
Cash Conversion (days)	115	110	106	102	103

Balance sheet

(NT$ mn)	2024	2025	2026e	2027e	2028e
Assets					
Cash & Equivalent	105,000	110,660	111,350	129,380	169,460
MarketableSecurity	606	569	550	550	550
A/R & N/R	33,343	31,274	43,117	51,582	60,478
Inventories	36,408	37,934	42,756	49,638	55,329
Other Current Ass.	11,983	20,850	24,811	24,811	24,811
Total current assets	**189,678**	**204,783**	**225,667**	**259,044**	**313,710**
LT Investment	72,487	75,373	148,847	152,847	156,847
Total Fixed Assets	279,059	271,395	260,798	247,324	235,805
Total Other Assets	28,976	27,445	29,654	29,654	29,654
Total Assets	**570,201**	**578,996**	**664,966**	**688,869**	**736,016**
A/P & N/P	7,633	9,170	10,040	11,656	12,992
Accrued Expenses	281	229	148	148	148
Other Payable	34,626	36,128	66,392	66,392	66,392
Total Current Liab.	**75,260**	**87,598**	**107,289**	**108,905**	**110,242**
L-T Liabilities	55,533	45,372	45,566	45,566	45,566
Total Other L-T Liab	61,222	66,170	70,177	70,177	70,177
Total Liabilities	**192,016**	**199,141**	**223,032**	**224,648**	**225,985**
Common Stocks	125,607	125,882	125,770	125,770	125,770
Preferred Stocks					
Capital Reserve	14,782	15,410	15,871	15,871	15,871
Retained earnings	237,539	238,477	303,384	325,671	371,482
Treasury Stock	0	0	(3,096)	(3,096)	(3,096)
Total Equity	**378,185**	**379,855**	**441,934**	**464,221**	**510,031**

Cash Flow Statement

(NT$ mn)	2024	2025	2026e	2027e	2028e
Net Income, continued ops	47,106	41,535	87,970	89,089	113,447
Depreciation	48,168	59,259	66,947	74,149	74,359
Net Investment Losses (Gains)	(72)	(99)	(37)	0	0
Others	(3,426)	(2,954)	(44,667)	(17,731)	(17,250)
Cash Flow-Operating	**93,872**	**99,864**	**110,250**	**145,507**	**170,556**
(Purchase) of FA	(88,544)	(47,745)	(57,656)	(60,675)	(62,840)
Sale of Fix Asset	121	129	74	0	0
(Purchase)L-T Inv.	(541)	0	(659)	0	0
Sale of L-T Inv.	1,602	575	375	0	0
Sale(Pur.)S-T Inv.	1,564	(8,245)	(9,579)	0	0
Cash Flow-Investing	**(85,941)**	**(53,154)**	**(65,082)**	**(60,675)**	**(62,840)**
Inc(Dec)-S-T Debt	13,178	(21,689)	669	0	0
Dividend Paid	(37,586)	(35,784)	(31,620)	(66,802)	(67,636)
Dir.&Emp.Bonus	0	0	0	0	0
Proceed from New Issue	0	0	0	0	0
Dec/Inc-TreasureSt	0	0	(3,096)	0	0
Others	(14,793)	18,270	(12,012)	0	0
Cash Flow-Financing	**(39,200)**	**(39,204)**	**(46,059)**	**(66,802)**	**(67,636)**
Change in Cash	**(27,553)**	**5,660**	**690**	**18,030**	**40,080**
Net cash/(debt), b/f	132,553	105,000	110,660	111,350	129,380
Net cash/(debt), c/f	**105,000**	**110,660**	**111,350**	**129,380**	**169,459**

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

