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IDEA

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Greater China Semiconductors | Asia Pacific

CPO Supply Chain Updates; More on GlassBridge

GlassBridge appears to be a strong solution, but remains far from mass production. We see TSMC scaling PIC capacity to 25kwpm in 2028, with Ins2 test efficiency improving. We remain OW on CPO enablers as investor expectations are already low.

Further thoughts on GlassBridge impact on FAU: We do not rule out GlassBridge hampering Fiber Array Units' (FAU) TAM in the long run (link), but we have yet see any projects in TSMC's COUPE platform adopt this technology. On the other hand, GlassBridge mainly serves edge coupling and can currently support only one-dimension fiber layouts. However, TSMC's mainstream COUPE platform and key customer (NVIDIA, AMD, Ayar Labs) solutions for the next few years should still stick to grating coupling, as it is easier to achieve mass production, which we expect to see soon in 2H26. In addition, CPO requires integrated design and discussion across the entire ecosystem—including foundry (OE), chip designer, FAU, laser, and even system integrator—so it is difficult to change a design overnight.

Latest developments on PIC capacity: Although several difficulties remain (link), we continue to see green shoots. TSMC plans to ramp PIC capacity from 10kwpm in 2Q26 to 15kwpm in 4Q26, and to at least 25kwpm in 2028. Reflecting limited resources, we believe key COUPE MP customers in 2026–27 could be NVIDIA, Broadcom, and AMD. With more capacity seen for 2028, other customers such as MediaTek, Marvell, and Ayar Labs could mass produce their CPO projects at TSMC.

What about the progress in CPO insertion tests? CPO insertion tests are one of the key bottlenecks to mass production. However, Insertion 2 EPIC wafer test time has improved from a wafer a day in 2H25 to a wafer in six hours now, making the 3–4 hour target in the next 6–12 months no longer a distant dream. Many investors ask whether Insertion 2 could be a skipped process, but we regard this as less likely as it is the first stop/time to conduct simultaneous optical-electrical signal testing.

FOCI – CPO mass production to start in 3Q: We expect CPO MP revenue to begin in July and continue scaling to 2027, mainly for the Spectrum CPO switch. Besides NVIDIA, we expect its FAU shipments to AMD's MI500 series to start from 2H27, along with more MP customers in 2028.

Stock implications: We remain optimistic about CPO development in the long run, and think investor expectations are very low for CPO stocks. We are OW on Asia CPO enablers such as TSMC, ASE , FOCI, AllRing, MPI, Winway, and Hon Precision. We think TFC has a competitive edge in high-end FAU, and is less likely to face disruption from GlassBridge as it is more likely to replace low-end FAU at the initial stage. We believe Largan could face more competition if V-Groove is the major product, but if it is making the entire FAU, it needs to show competitiveness vs. existing players. In this report, we revise estimates for FOCI and AllRing.

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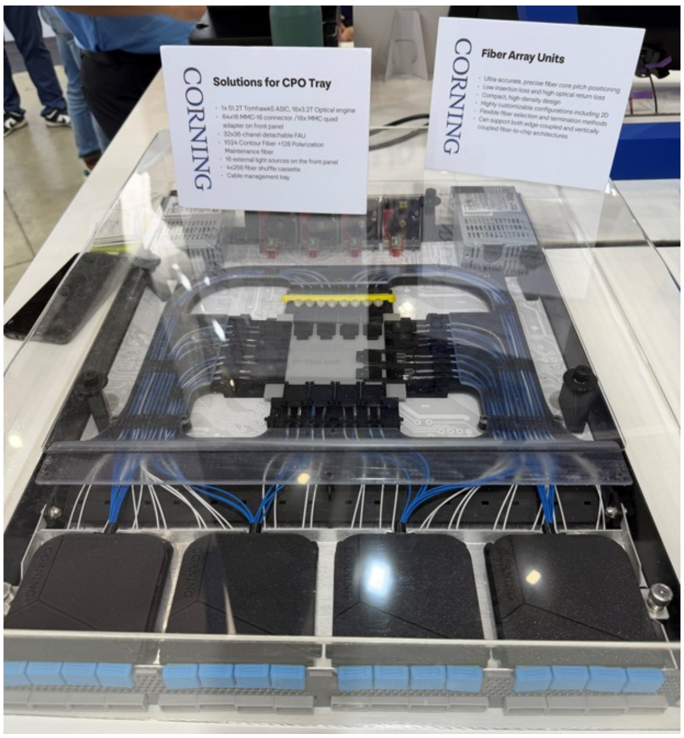
Industry View **Attractive**

What Is GlassBridge, and How Does It Differ from Traditional V-Groove FAU?

Traditional FAU is a mature, high-precision fiber-array assembly: fibers are placed into V-grooves on a glass/silicon/quartz substrate, fixed with a cover and adhesive, polished, and then aligned to a PIC or optical engine. It is proven, customizable, and very low-loss, but assembly becomes more difficult as channel count and density rise. Key FAU suppliers for CPO include vendors such as TFC Communication, FOCI, Senko, Browave and Sumitomo Electric. Corning has also said it is keen to develop several FAU solutions for CPO and NPO.

Exhibit 1: Corning's FAU/CPO demonstration

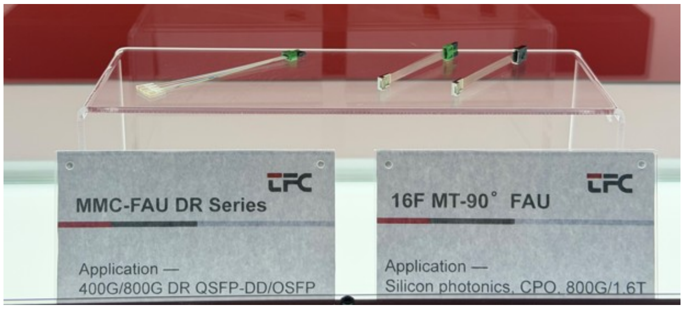


Source: Corning, Morgan Stanley Research

Exhibit 2: FAU demonstration at Computex for Ayar Labs scale-up solution

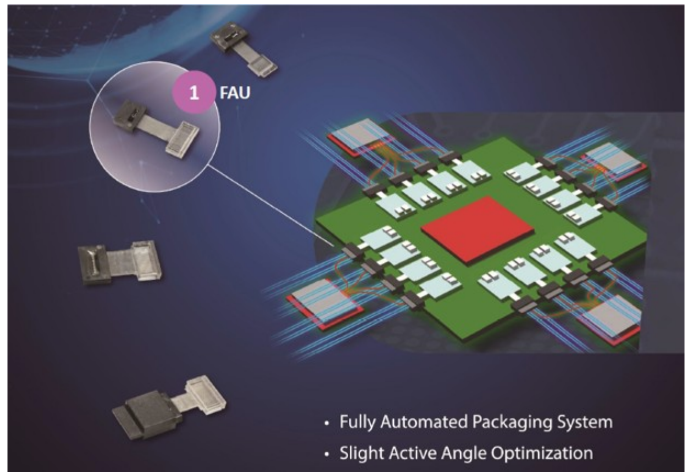
Source: Wiwynn

Exhibit 3: TFC's FAU



Source: TFC

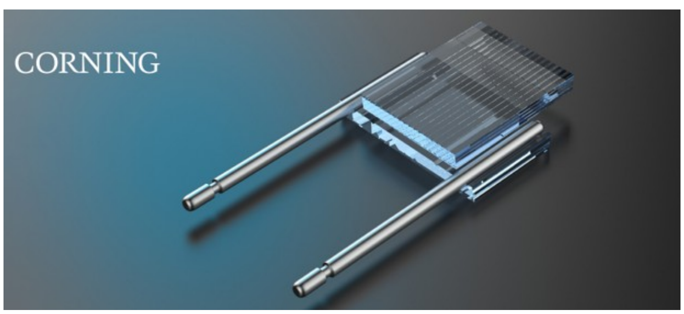
Exhibit 4: FOCI's FAU solution for CPO



Source: FOCI

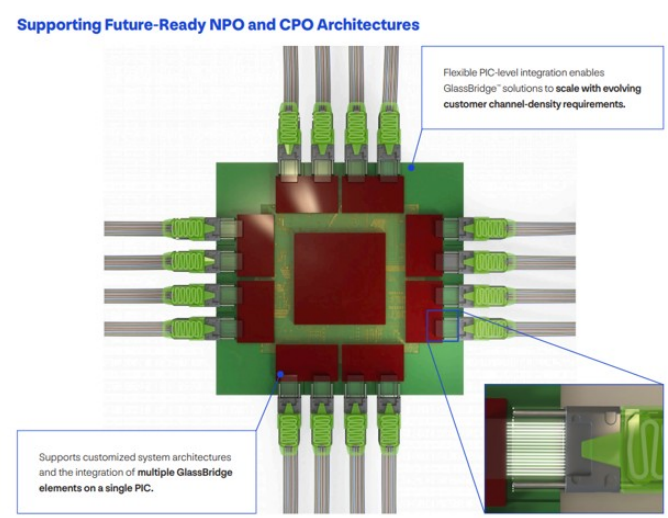
Corning GlassBridge is a newer wafer-based glass interposer / connector approach. Instead of directly presenting a fiber array to the PIC edge, it uses glass ion-exchange waveguides and a detachable, passively aligned connector interface to bridge fiber to PIC. Corning positions it for NPO, CPO, and high-density photonic modules where manufacturability, reworkability, and density become major constraints.

Exhibit 5: GlassBridge Fiber-to-PIC Connector



Source: Corning

Exhibit 6: Corning cites wafer-based high-volume manufacturing, customizable pitches, detachable solutions and passive alignments as the key advantages of GlassBridge



Source: Corning

The main difference is not simply "new FAU vs old FAU." It is connectorized glass waveguide bridge vs. direct fiber-array attach.

A traditional FAU tries to solve the alignment problem by making the fiber array itself extremely accurate. The fibers are held in V-grooves, polished, and aligned to the optical chip. This is a direct and proven method. FOCI describes the fiber array as a carrier using V-grooves to fix multi-core fiber, with optical-path positioning determined by the precision

V-groove and packaging/polishing process.

GlassBridge inserts a glass waveguide connector layer between the fiber side and the PIC side. That gives Corning more design freedom for pitch conversion, compact connector geometry, passive alignment, and detachability. Corning describes GlassBridge as using wafer-based glass ion-exchange waveguides for passive fiber-to-PIC coupling, and as an alternative that improves scalability and system integration at high fiber counts.

GlassBridge may not automatically be "lower loss" than a conventional FAU. Corning's brochure cites 1.5 dB O-band fiber-to-PIC coupling for GlassBridge, while traditional FAU component insertion loss can be far lower, although the final fiber-to-PIC coupling loss depends on the full assembly.

For today's conventional transceivers, PLC/PIC coupling, coherent optics, and many datacenter modules, traditional FAU from suppliers such as TFC, FOCI, Senko and others remains the mainstream solution. For next-generation CPO/NPO optical engines, where hundreds of optical lanes, tight PIC shoreline density, reflow-compatible assembly, testability, and field/service rework become critical, GlassBridge is a more system-level, connectorized architecture rather than just another FAU. It seems better viewed as a way to reduce the scaling pain of FAU-style direct attach, not as a universal replacement for every FAU use case.

Exhibit 7: Side-by-side comparison: Corning GlassBridge vs. Traditional FAU

Dimension	Corning GlassBridge	Traditional FAU (TFC / FOCI style)	Implication
Basic concept	Wafer-based glass connector/interposer using glass waveguides between fiber interface and PIC.	Direct fiber array: fibers fixed into precision V-grooves, bonded with cover/adhesive, and polished.	GlassBridge is more of a connectorized optical bridge; FAU is direct physical fiber positioning.
Coupling model	Fiber-to-PIC coupling through glass waveguides and passive alignment features.	Fiber cores are positioned mechanically by V-groove geometry and then aligned to chip/waveguide facets.	GlassBridge shifts some coupling complexity into a designed glass-waveguide interface.
Support	Edge Coupling	Could support both Grating and Edge Coupling	Traditional FAU could support both solution, which Grating coupling is the mainstream solution that TSMC's COUPE is adopting.
Manufacturing approach	Wafer-based glass processing with ion-exchange waveguides and scalable connector fabrication.	Precision dicing/cutting of substrate, fiber placement, adhesive bonding, cover attachment, polishing, and inspection.	GlassBridge is designed for scalable module assembly; FAU is mature but labor/process intensive at high counts, but now also migrating to automation.
Pitch flexibility	Supports pitch conversion between fiber pitch and fine PIC waveguide pitch, e.g., 40/80/127/165 μm classes.	Highly customizable pitches such as 127/250 μm or reduced-clad options, but physical fiber pitch limits remain important.	GlassBridge can act like an optical redistribution layer between fiber and PIC.
Optical loss	Published positioning emphasizes system-level fiber-to-PIC coupling; cited example around 1.5 dB O-band fiber-to-PIC coupling.	FAU component insertion loss can be very low; final fiber-to-PIC loss depends heavily on PIC facet, mode converter, gap, angle, and alignment.	Traditional FAU may win on component-level loss, while GlassBridge targets integration yield and density.
Thermal / assembly compatibility	Marketed as compatible with advanced module assembly including solder-reflow-compatible workflows.	Reliability depends on substrate, adhesive, fiber, and package process; many FAUs are qualified for telecom/datacom environments.	GlassBridge is attractive when optical attach must fit electronics-like assembly flows.
Customization	Likely more standardized around connector/PIC interface architectures and Corning's glass process platform.	Very customizable: fiber type, pitch, channel count, polishing angle, PM fiber, substrate material, termination, and packaging.	FAU remains strong for custom optical modules and specialized fiber-array needs.
Supply-chain maturity	Newer architecture; adoption tied to next-generation PIC/CPO ecosystems.	Long-established supplier base and manufacturing know-how across telecom/datacom/CPO.	FAU is lower adoption risk today; GlassBridge may offer more future scalability.
Best application fit	CPO/NPO optical engines, dense PIC shoreline coupling, testable/reworkable modules, and pitch-conversion-heavy designs.	Transceivers, coherent modules, PLC/AWG/WSS/ROADM, silicon photonics attach, and permanent fiber coupling.	Choose based on whether the priority is integration scalability or mature direct attach.

Source: Company data, Morgan Stanley Research

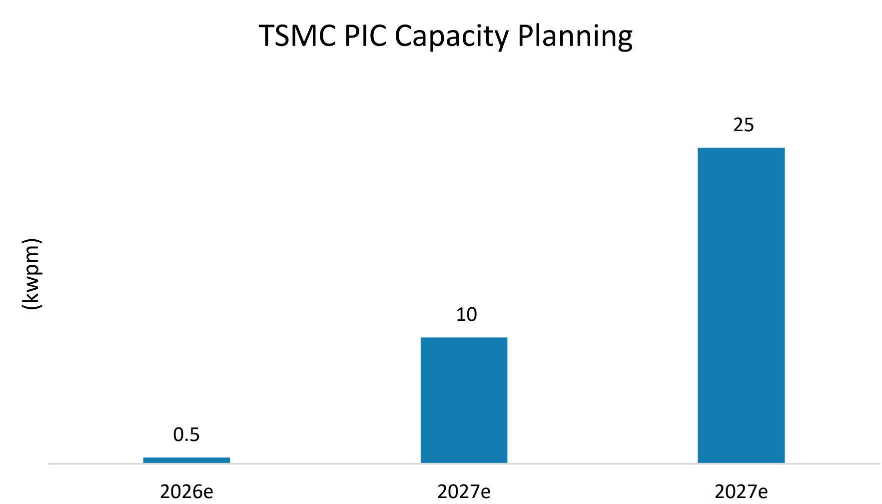
Key Charts for CPO Development

For 2026, we expect total CPO switch shipments to be 23k units, mostly 100T switches, with NVIDIA's Spectrum switch taking the lion's share.

Looking to 2027, we expect total CPO switch shipments to reach 59k units, growing further to 200k units in total in 2030; this implies a 144% CAGR over 2024-30.

Our supply chain checks suggest that TSMC currently has ~500 wafers per month of PIC capacity. TSMC plans to ramp PIC capacity from 10kwpm in 2Q26 to 15kwpm in 4Q26 and to at least 25kwpm in 2028. Reflecting limited resources, we believe key COUPE MP customers in 2026–27 could be NVIDIA, Broadcom, and AMD. With more capacity in 2028, other customers such as MediaTek, Marvell, and Ayar Labs should also be able to mass-produce their CPO projects at TSMC.

Exhibit 8: TSMC's PIC capacity: likely to reach 25 kwpm in 2027



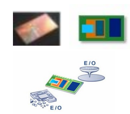
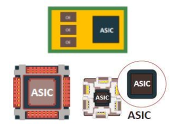
Source: Company data, Morgan Stanley Research (e) estimates

Exhibit 9: Annual optical engine output from PIC capacity planning; we think this is likely to increase over time as yield rate ramps

	2026e	2027e	2027e
TSMC PIC capacity (kwpm)	0.5	10	25
Die per wafer	648	648	648
Annual PIC production (mn)	4	78	194
SoIC yield rate	50%	50%	50%
Optical engine production (mn)	2	39	97
Downstream assembly yield rate	20%	20%	50%
Actual Optical engine shipment (mn)	0.39	7.78	48.60

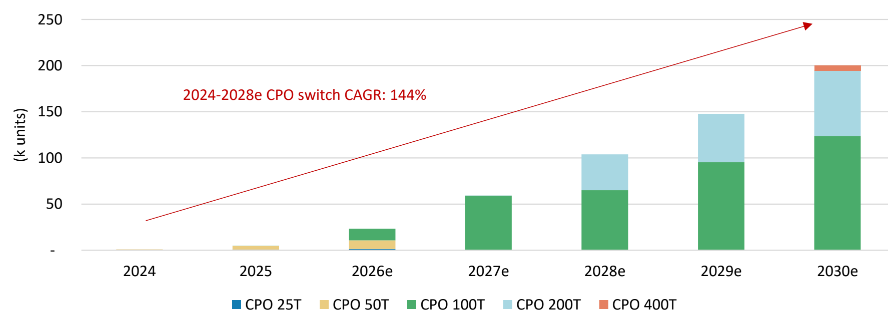
Source: Company data, Morgan Stanley Research (e) estimates

Exhibit 10: CPO Insertion Test Flow

Test Insertion	Insertion 1 (wafer-level)	Insertion 2 (wafer-level)	Insertion 3 (die-level)/3.5 (package-level)	Insertion 4 (module-level)		Insertion 5 (potential)
				Insertion 4O	Insertion 4E	
Test content	Electronic IC (EIC) & Photonic IC (PIC)	EIC die to PIC wafer (after SoIC)	Optical engine (die-to-die)	CPO package (ASIC+OE) Optical Testing	CPO package (ASIC+OE) Electrical Testing (2025-2026) Optical+Electrical Testing (starting	CPO package (ASIC+OE) SLT?
Testing surface						
Key Product timeline	**2025-2026 Scale-out CPO switch (Spectrum+Quantum) products** **2027e onward: Scale-out CPO switch (Spectrum+Quantum) + Scale-up CPO switch products**					
Testing details	El. & opt. DC, (power, loss, dark current etc.)	E/O, O/E, O/O, high speed, S-parameters	Full calibration/DC, high-speed functional, optical loopback, alternatively: S-parameters	Optical Light Transmission Testing, optical loopback	BER testing, signal testing	Full system functional validation
Testing service provider	Foundry (Wafer-level) TSMC	Foundry (Wafer-level) TSMC	OSAT (Die/chip level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)
Equipment and Consumable Vendor	PIC ATE tester: 1) Advantest + TEL + Formfactor 2) Chroma (underqualification) EIC tester: 1) Teradyne + TEL EIC Probe card: FormFactor	Wafer level testing: 1)Ficontec +Formfactor +Teradyne 2) Advantest+ **MPI**	Die-to-die prober: 1. TEL 2. MPI Optical engine E/O tester+laser reliability test+ELS source test head: Chroma **Optical and Electrical Test Socket: Winway**	CPO switch tester: Chroma **Hypersocket: Winway**	ATE tester: 1) Advantest (under qualification) 2)Teradyne **FT Handler+ELS source test head+optical alignmnet stage : Hon Precision** **Hypersocket: Winway**	CPO SLT tester: Chroma (under qualification) **Coaxial socket/Hypersocket: Winway**

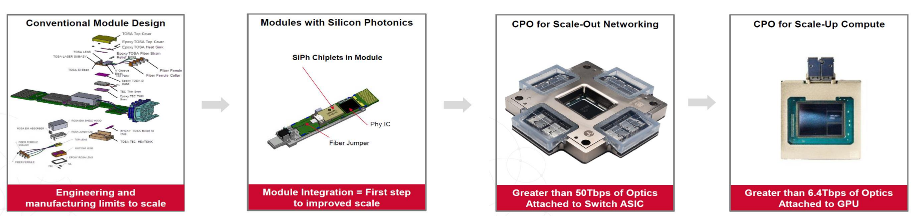
Source: Company data, Morgan Stanley Research (e) estimates

Exhibit 11: We expect scale-out CPO switch to grow rapidly, from 5k units in 2025 to 200k units in 2030, implying a 144% CAGR over 2023-30



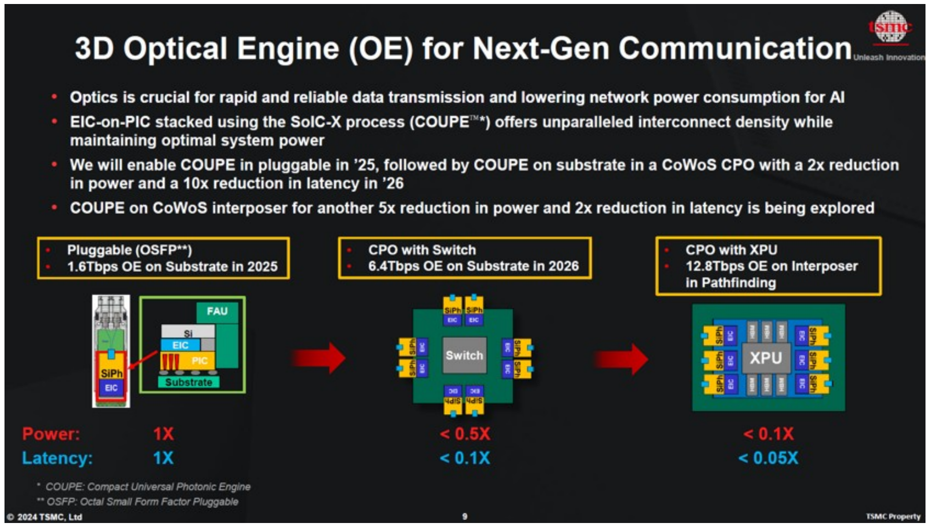
Source: Yole, Morgan Stanley Research (e) estimates

Exhibit 12: CPO helps to reach scale-out networking and scale-up computing goal for AI/HPC applications



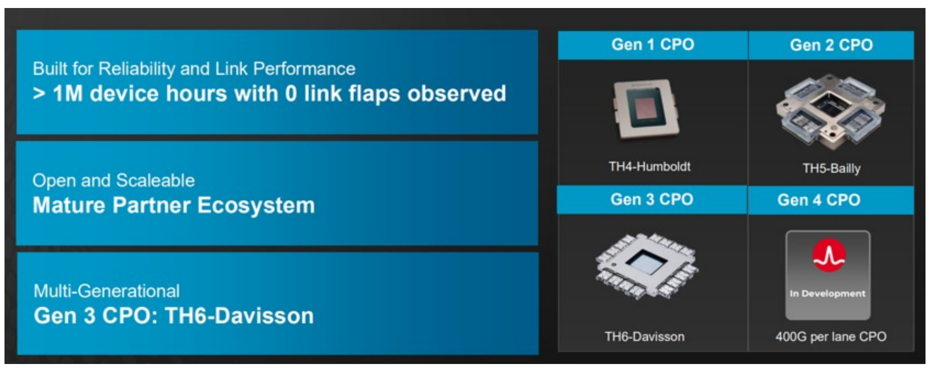
Source: Broadcom

Exhibit 13: TSMC's COUPE technology: Across SiPh pluggables to 3DIC



Source: TSMC

Exhibit 14: Broadcom's CPO platform



Source: Broadcom

FOCI business – Bottom-up analysis and capacity plan

FOCI's revenue bottom-up plan

For 2026, we expect Spectrum-X to be the mainstream scale-out CPO switch product, with the optical engine production number being 600k-1mn units, and total switch shipments being ~20k units given production lead time. We expect TFC, FOCI and Senko to be the major FAU suppliers, with FOCI taking around 40% of total market share. Thus, we expect NVIDIA's contribution to FOCI's total revenue to be around 18% in 2026.

Looking to 2027, our industry checks suggest that NVIDIA could introduce a CPO version of the Kyber alternative rack, leveraging two NVL72 architecture, with the launch time likely in 2H27. As a result, we assume 5k and 28k units of CPO Rubin Ultra rack shipments in 2027 and 2028, respectively, with FOCI having around 40% market share. Thus, we expect NVIDIA's total revenue to contribute around 42% and 80% of FOCI's total revenue in 2027 and 2028, respectively.

However, there are more than 10 customers that are doing prototypes and could recognize NRE revenue in 2026, with mass production starting in 2027 and 2028, according to our supply chain checks. We have not fully baked this into our model, and view it as only a bull case scenario as we await additional product launch and shipment signs in the supply chain.

Exhibit 15: Upcoming key CPO projects FAU vendors

CPO project	FAU Vendor	Introduced Timeline
NVIDIA Scale-out (Spectrum/Quantum)	TFC, FOCI, Senko?	2H26
NVIDIA Scale-up (OIO)	FOCI, Senko	2029 (Feynman Ultra)
Broadcom scale-out (Tomahawk)	Twinstar, Senko	2H24
AMD scale-up (MI series)	FOCI, Senko, Teramount?	2H27-2028 (MI500 small scale; MI600 mainstream)
Ayar Labs	FOCI, Senko	2H27-2028 (standard solution); AWS Trainium 5 (2H28-2029)
Marvell (COUPE version)	FOCI, Senko	2028
MediaTek		2028?

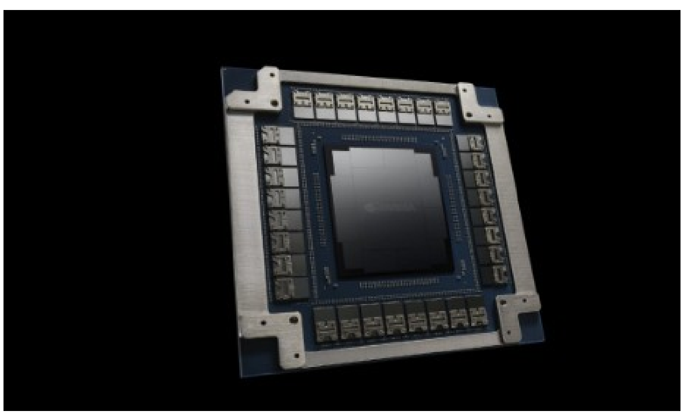
Source: Company data, Morgan Stanley Research estimates

Exhibit 16: Bottom-up analysis: NVIDIA's revenue contribution to FOCI in 2026-28e

	2026e	2027e	2028e
Rubin Ultra rack unit (k units)		5	20
Optical Engine content per Rubin Ultra rack		792	792
Scale-Up (NVLink switch/Quantum)		648	648
Scale-out (CX10)		144	144
Other scale-out switch optical engine consumption			
Spectrum-X (k units)	800	1,000	2,112
Quantum-X (k units)		1,000	1,408
Market Share Assumptions			
FOCI	35%	35%	35%
Others (TFC, Senko)	65%	65%	65%
FAU ASP Assumptions			
FAU ASP (6.4T; US$)	180	180	180
FAU ASP (3.2T; US$)	90	90	90
FAU ASP (1.6T; US$)	45	45	45
FOCI Revenue contribution from NVIDIA			
Revenue contribution (US$mn)	19	219	721
Revenue contribution (NT$mn)	567	6,577	21,622
FOCI CY Revenue (NT$mn)	1,985	8,694	23,559
% of total revenue	29%	76%	92%

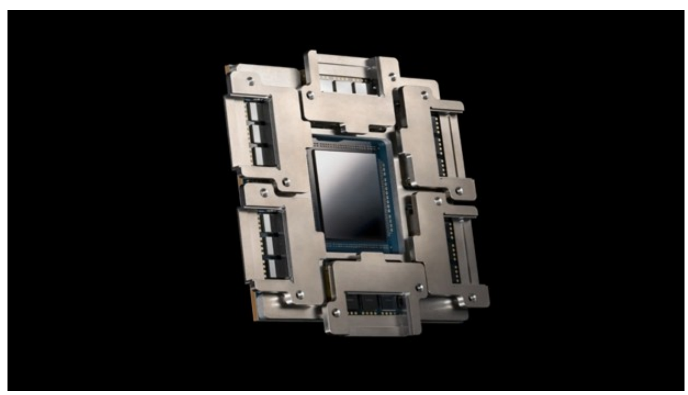
Source: Company data, Morgan Stanley Research (e) estimates

Exhibit 17: Spectrum-X CPO Switch



Source: NVIDIA

Exhibit 18: Quantum-X CPO Switch



Source: NVIDIA

For Optical I/O or optical engine on interposer adoption plans, we see NVIDIA exploring multiple solutions for the next generation Feyman and Feyman Ultra's platform, but whether there would be introduction or not still takes time. For other solutions, we see AMD targeting a scale-up CPO version for its MI550 or MI650 rack system in 2027/2028, based on its development progress. We also see ASIC vendors exploring CPO on GPU.

Our supply chain checks suggest that FOCI could see over 10 customers contributing to its Silicon Photonic/CPO revenue in 2026, besides some mass production revenue starting from 1Q26.

What are FOCI's current plans for capacity?

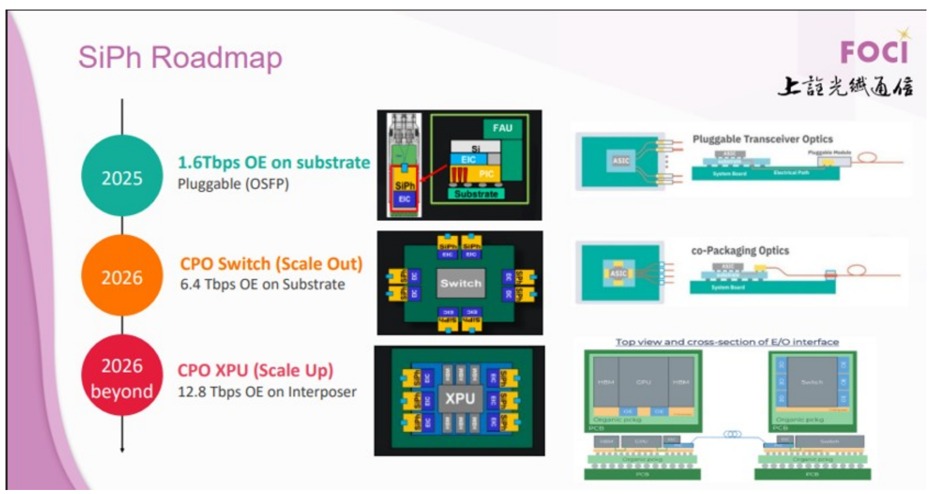
In its recent public offering disclosure for the SEO, FOCI disclosed its projected revenue and profitability for the NT$1.538bn capex spent (Exhibit 19). The company completed its SEO plan in early February, with total acquired capital of NT$3.1bn. It also announced a new private equity plan on Feb 26, with maximum new share issuance of 10mn units. We expect it to utilize all of the capital for R&D purposes (12.8T research) and further building and expanding its FAU capacity.

Exhibit 19: FOCI's projected revenue and profitability from NT$1.538bn capex spent

Year (NT$mn)	2026	2027	2028
Sales Revenue	518	2,398	3,980
Gross Profit	198	906	1,598
Gross margin	38.2%	37.8%	40.1%
Operating Profit	38	483	1,012
Operating margin	7.3%	20.1%	25.4%

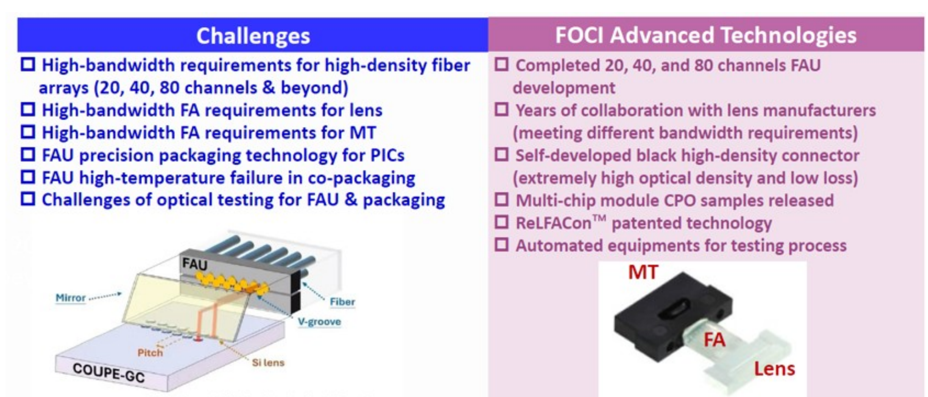
Source: Company data, Morgan Stanley Research

Exhibit 20: FOCI's SiPh Roadmap



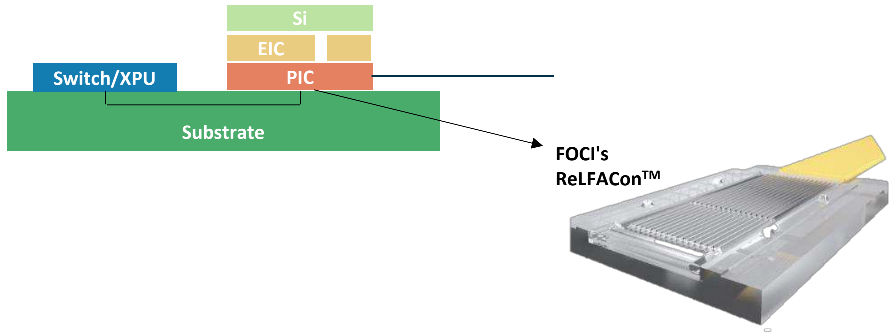
Source: FOCI

Exhibit 21: FOCI's solutions for CPO



Source: FOCI

Exhibit 22: ReLFACon enables direct transmission of external photonic signals with MCM modules to achieve reliable signal transmission



Source: FOCI

AllRing Business – Bottom-up Analysis

We expect CoWoS-related revenue to account for 79% of AllRing's total revenue in 2026, with AllRing focusing on oS equipment supply to TSMC and ASE/SPIL. On the other hand, our checks indicate that TSMC's CoWoS capacity is likely to extend to 130kwpm in 2026 year end, with a view to meet strong customer demand. However, we see more non-TSMC 2.5 packaging solution vendors qualifying more Taiwanese CoWoS equipment vendors, creating a new TAM for AllRing, including FoPLP and Intel's EMIB. We expect AllRing's 2027 CoWoS revenue to rise 53% Y/Y (TSMC's CoWoS seen at 200kwpm for 2027), and see it beginning to prepare equipment for CoPoS (if the trial round goes smoothly in 2026) and its AP fab in Arizona (MP likely starting in 2028).

For CPO, AllRing has penetrated the CPO supply chain of NVIDIA for FAU-optical engine coupling and FAU AOI equipment. Our latest supply chain checks suggest that AllRing may have also won the dispensing step after insertion 3, where the optical engine will be mounted onto the CPO package substrate. We expect more clarity from the company on CPO-related revenue in 2H26, and expect it to account for 11%, 19%, and 26% of AllRing's total revenue in 2026, 2027, and 2028, respectively.

For SoIC, we expect 2026 SoIC capacity to reach 14kwpm. TSMC further expanding its CoWoS capacity in AP7 could cause slightly delays in equipment pull-in. Our latest supply chain checks suggest that TSMC has revised 2027e capacity to 40kwpm (from 45kwpm) and 2028e to 70kwpm (from 75kwpm). AllRing is the sole WoW dispenser supplier for SoIC; we expect the delay in SoIC to be more than offset by the strong build in CoWoS. In the long run, we still expect it to be the key growth driver for AllRing. SoIC is one of the key advanced packaging nodes for TSMC in the coming years, as we see more and more customers adopting this technology to realize chiplet design, including AMD, NVIDIA, Apple, and Broadcom.

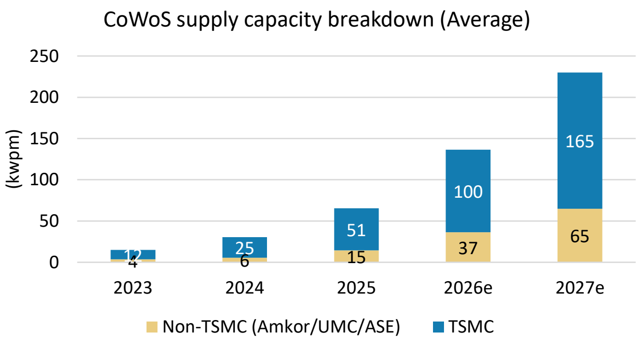
Exhibit 23: Bottom-up analysis for AllRing's revenue

(NT$mn)	2024	2025	2026e	2027e	2028e	2025 Y/Y	2026 Y/Y	2027 Y/Y	2028 Y/Y
CoWoS	3,530	4,771	7,405	11,305	11,305	35%	55%	53%	0%
CPO	0	150	1,050	3,000	4,500	NA	600%	186%	50%
Flip Chip	200	0	700	200	0	-100%	NA	-71%	-100%
SoIC		120	150	600	700		25%	300%	17%
Others	1,804	325	100	500	800	-82%	-69%	400%	60%
Total Revenue	**5,535**	**5,366**	**9,405**	**15,605**	**17,305**	**-3%**	**75%**	**66%**	**11%**

Revenue mix	2024	2025e	2026e	2027e	2028e
CoWoS	64%	89%	79%	72%	65%
CPO	0%	3%	11%	19%	26%
Flip Chip	4%	0%	7%	1%	0%
SoIC	0%	2%	2%	4%	4%
Others	33%	6%	1%	3%	5%
Total Revenue	**100%**	**100%**	**100%**	**100%**	**100%**

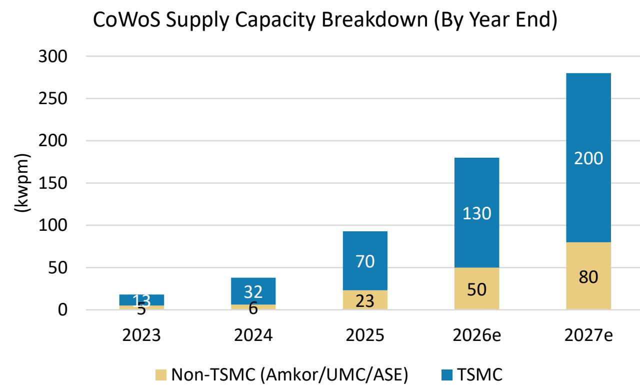
Source: Company data, Morgan Stanley Research (e) estimates

Exhibit 24: CoWoS supply capacity breakdown (average)



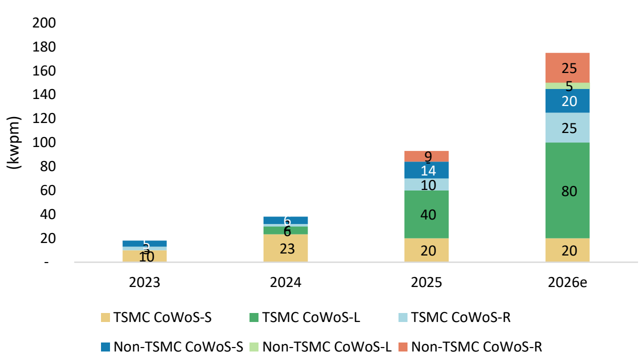
Source: Company data, Morgan Stanley Research (e) estimates. Note: estimates are compiled using our supply chain checks.

Exhibit 25: CoWoS supply capacity breakdown (by year-end)



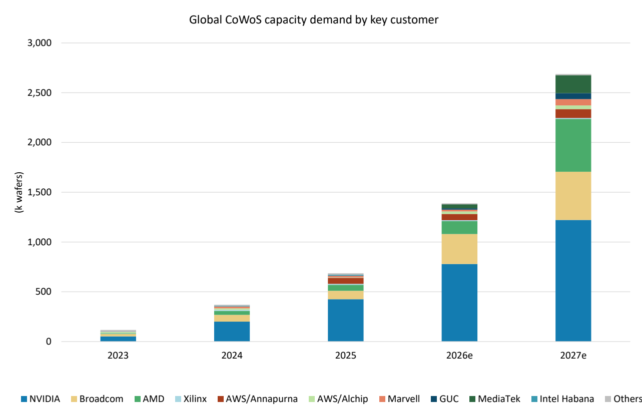
Source: Company data, Morgan Stanley Research (e) estimates. Note: estimates are compiled using our supply chain checks.

Exhibit 26: Detailed CoWoS capacity expansion by year end and by vendor



Source: Company data, Morgan Stanley Research (e) estimates. Note: estimates are compiled using our supply chain checks.

Exhibit 27: CoWoS demand breakdown by customer



Source: Company data, Morgan Stanley Research (e) estimates. Note: estimates are compiled using our supply chain checks.

Exhibit 28:

TSMC's advanced packaging fab planning

Advanced Packaging Plant	Location	Focused Technology
AP1	Hsinchu	R&D
AP2	Tainan	Bumping
AP3	Taoyuan	InFO and WMCM
AP5	Taichung	CoWoS
AP6	Miaoli	SoIC
AP7	Chiayi	WMCM, CoWoS, SoIC, CoPoS
AP8	Tainan	CoWoS
AP9 and AP10	Arizona	SoIC/CoWoS/CoPoS/WMCM/R&D

Source: Company data, Morgan Stanley Research

AllRing: Estimate Revisions

We lift our EPS estimates by 15% for 2026 and 2% for 2027, and fine-tune 2028 forecasts: We lift our 2026 and 2027 revenue estimates to reflect ongoing advanced packaging capacity opportunities, including CoPoS and CoWoS, and also CPO, with CoWoS capacity continue to see upside. We expect AllRing to win more advanced packaging opportunities from the non-TSMC camp. Gross margin is likely to be better than many fear, driven by a better product mix, as CPO equipment's GM is margin accretive at the 55-60% level.

Exhibit 29: AllRing: Estimate revisions

NTD mn	New '2026	Old '2026E	Diff.	New '2027e	Old '2027E	Diff.	New '2028e	Old '2028E	Diff.
Net sales	9,405	8,350	13%	14,955	14,410	4%	16,655	16,110	3%
Gross profit	4,877	4,329	13%	7,766	7,626	2%	8,749	8,686	1%
Operating profit	2,739	2,347	17%	4,385	4,310	2%	4,944	4,952	0%
Pretax Income	2,930	2,539	15%	4,561	4,486	2%	5,145	5,154	0%
Net income	2,454	2,125	15%	3,831	3,768	2%	4,322	4,329	0%
EPS for consensus	**25.48**	**22.07**	**15%**	**39.79**	**39.13**	**2%**	**44.89**	**44.96**	**0%**
Margins									
Gross margin	51.9%	51.8%		51.9%	52.9%		52.5%	53.9%	
Operating margin	29.1%	28.1%		29.3%	29.9%		29.7%	30.7%	
Pretax margin	31.2%	30.4%		30.5%	31.1%		30.9%	32.0%	
Net margin	26.1%	25.5%		25.6%	26.1%		25.9%	26.9%	
Opex %	22.7%	23.7%		22.6%	23.0%		22.8%	23.2%	

Source: Morgan Stanley Research (e) estimates

Exhibit 30: AllRing: Quarterly financials

(NT$ mn)	1Q26	2Q26E	3Q26E	4Q26E	1Q27E	2Q27E	3Q27E	4Q27E	2024	2025E	2026E	2027E	2028E
Total revenues	1,411	2,241	2,996	2,757	2,719	3,394	4,112	4,730	5,535	5,366	9,405	14,955	16,655
Q/Q Change	*59%*	*59%*	*34%*	*-8%*	*-1%*	*25%*	*21%*	*15%*	*359%*	*-3%*	*75%*	*59%*	*11%*
Y/Y Change	*13%*	*47%*	*75%*	*211%*	*93%*	*51%*	*37%*	*72%*	*359%*	*-3%*	*75%*	*59%*	*11%*
Cost of Sales	681	1,079	1,441	1,327	1,307	1,632	1,976	2,273	2,818	2,453	4,528	7,188	7,906
Percent of Revenues	*48%*	*48%*	*48%*	*48%*	*48%*	*48%*	*48%*	*48%*	*51%*	*46%*	*48%*	*48%*	*47%*
Gross Profit	731	1,162	1,554	1,430	1,411	1,762	2,136	2,457	2,717	2,913	4,877	7,766	8,749
Gross Margin	*52%*	*52%*	*52%*	*52%*	*52%*	*52%*	*52%*	*52%*	*49%*	*54%*	*52%*	*52%*	*53%*
Total Opex	403	513	628	595	835	773	852	920	1,284	1,304	2,139	3,381	3,805
Percent of Revenues	*29%*	*23%*	*21%*	*22%*	*31%*	*23%*	*21%*	*19%*	*23%*	*24%*	*23%*	*23%*	*23%*
R&D	192	200	210	210	400	400	400	400	775	767	812	1,600	1,640
Percent of Revenues	*14%*	*9%*	*7%*	*8%*	*15%*	*12%*	*10%*	*8%*	*14%*	*14%*	*9%*	*11%*	*10%*
General & Adm Exp.	112	178	238	219	218	204	247	284	276	275	748	952	1,166
Percent of Revenues	*8%*	*8%*	*8%*	*8%*	*8%*	*6%*	*6%*	*6%*	*5%*	*5%*	*8%*	*6%*	*7%*
Selling Expenses	99	134	180	165	218	170	206	236	233	262	579	829	999
Percent of Revenues	*7%*	*6%*	*6%*	*6%*	*8%*	*5%*	*5%*	*5%*	*4%*	*5%*	*6%*	*6%*	*6%*
Operating Income	327	649	926	835	576	989	1,283	1,536	1,433	1,610	2,739	4,385	4,944
Operating Margin	*23%*	*29%*	*31%*	*30%*	*21%*	*29%*	*31%*	*32%*	*26%*	*30%*	*29%*	*29%*	*30%*
Total Non-operating Income (	-60	-44	-44	-44	-44	-44	-44	-44	-133	-12	-14	-14	0
Profit Before Taxes	387	693	970	879	620	1,033	1,327	1,580	1,566	1,813	2,930	4,561	5,145
Percent of Revenues	*27%*	*31%*	*32%*	*32%*	*23%*	*30%*	*32%*	*33%*	*28%*	*34%*	*31%*	*30%*	*31%*
Taxes	67	118	155	141	99	165	212	253	255	316	481	730	823
Tax Rate	*17%*	*17%*	*16%*	*16%*	*16%*	*16%*	*16%*	*16%*	*16%*	*17%*	*16%*	*16%*	*16%*
Total Net Income to Parent	325	575	815	739	521	868	1,115	1,327	1,311	1,485	2,454	3,831	4,322
Percent of Revenues	*23%*	*26%*	*27%*	*27%*	*19%*	*26%*	*27%*	*28%*	*24%*	*28%*	*26%*	*26%*	*26%*
EPS (NT$)	3.37	5.98	8.46	7.67	5.41	9.01	11.58	13.79	15.25	15.46	25.48	39.79	44.89
Change vs Year Ago	*-6%*	*44%*	*94%*	*128%*	*61%*	*51%*	*37%*	*80%*	*794%*	*1%*	*65%*	*56%*	*13%*
EPS for consensus (NT$)	3.37	5.98	8.46	7.67	5.41	9.01	11.58	13.79	15.25	15.46	25.48	39.79	44.89
Change vs Year Ago	*-6%*	*44%*	*94%*	*128%*	*61%*	*51%*	*37%*	*80%*	*794%*	*1%*	*65%*	*56%*	*13%*

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

AllRing: Valuation Methodology

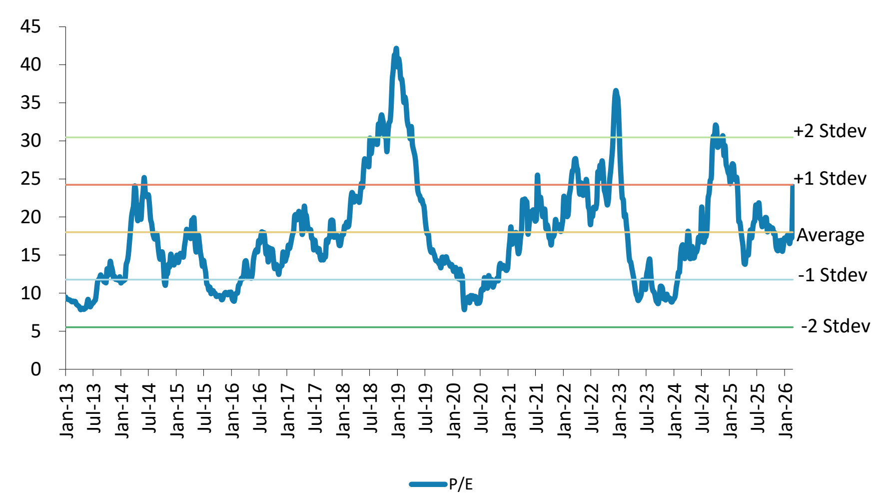
We keep our RI-based price target (base case scenario value) at NT$1,580, reflecting our minor estimate changes for 2027 and 2028. Our other key assumptions are unchanged, including a cost of equity (CoE) at 8%, derived from a risk-free rate of 2.0%, beta of 1.0 and market risk premium of 6%, intermediate growth rate of 16% and terminal growth rate of 4.5%.

Exhibit 31: AllRing: RI model

NT$ million	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E
Total Equity	8,539	11,160	13,584	15,323	17,341	19,682	22,398	25,548	29,202	33,440	38,357	44,060
Net Profit	2,454	3,831	4,322	5,013	5,816	6,746	7,825	9,078	10,530	12,215	14,169	16,436
ROAE	**30.6%**	**38.9%**	**34.9%**	**34.7%**	**35.6%**	**36.4%**	**37.2%**	**37.9%**	**38.5%**	**39.0%**	**39.5%**	**39.9%**
Residual Income	1,694	2,638	3,006	3,625	4,230	4,932	5,746	6,689	7,783	9,052	10,524	12,230
Spread	**22.6%**	**30.9%**	**26.9%**	**26.7%**	**27.6%**	**28.4%**	**29.2%**	**29.9%**	**30.5%**	**31.0%**	**31.5%**	**31.9%**
Ending Equity Capital	8,539											
PV of Forecast Period	35,496											
PV of Continuing Value	108,054											
Equity Value	**152,089**											
No. of Shares	96											
Price Target	**1,580**											

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

Exhibit 32: AllRing: NTM P/E



Source: Company data, FactSet, Morgan Stanley Research estimates

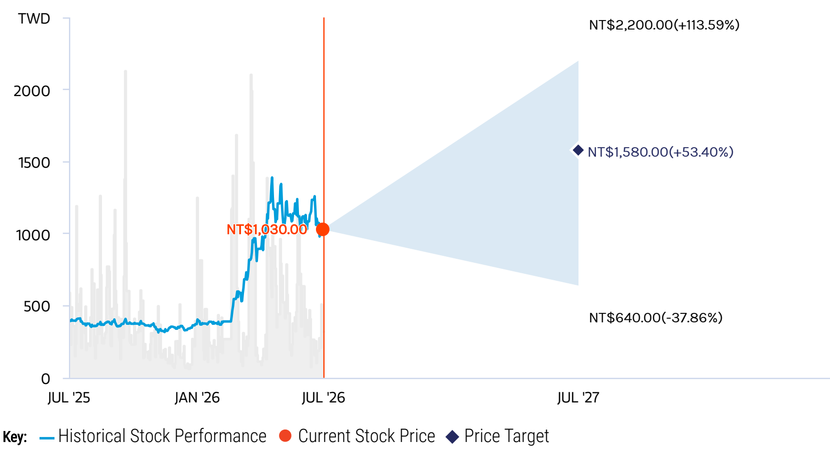
Risk Reward – AllRing Tech Co. (6187.TWO)

CPO, SoIC, and CoPoS Help to Extend Revenue Momentum; OW

PRICE TARGET NT$1,580.00

Base case, residual income model. Our key assumptions are:
- Cost of equity (CoE) of 8%, derived from a risk-free rate of 2.0%, beta of 1.0, and a market risk premium of 6.0%.
- Intermediate growth rate of 16%.
- Cash dividend payout of 65%
- Terminal growth rate of 4.5%.

RISK REWARD CHART

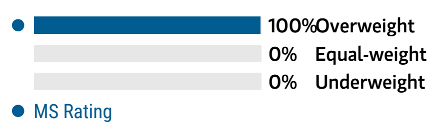


Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- NVIDIA's next-generation GPU Rubin will stick with graphene for heat sink attachment, reducing concerns about competition for Allring.
- We expect AllRing to be a key beneficiary of the multi-year advanced packaging trend, including CoPoS and SoIC, but large-scale revenue contributions will likely take time.
- It is the sole WoW (Wafer-on-Wafer) dispenser supplier for SoIC, which we expect to be the next growth driver, contributing at least 2% of total revenue in 2026 and 4% in 2027.
- Our implied 2027e target P/E is 40x, similar to its SoIC peer and lower than CPO peers. We expect new advanced packaging opportunities including CPO, CoWoP, and CoPoS to benefit the company in the long run.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Secular Growth: *Positive*
Technology Diffusion: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE NT$2,200.00

55x 2027e EPS

We assume: 1) 60% revenue CAGR over 2025-28, thanks to stronger-than-expected capacity expansion plans for TSMC's CoWoS, CPO and SoIC; 2) gross margin expands to more than 55% in 2025-28, due to stronger-than-expected operating leverage resulting from the equipment production outsourcing strategy; 3) new product launches exceed expectations and AllRing increases its market share in other processes such as "CoW."

BASE CASE NT$1,580.00

40x 2027e EPS

We expect: 1) 46% revenue CAGR in 2025-28e after strong CoWoS capacity expansion for TSMC in 2024-25; 2) gross margin to be maintained at 48-53% from 2024-28 thanks to high operating leverage resulting from the equipment production outsourcing strategy; and 3) with new equipment launches, we expect AllRing to expand its market share in other processes. CPO, SoIC and other applications continue to bear fruit.

BEAR CASE NT$640.00

16x 2027e EPS

We assume: 1) -30% revenue CAGR in 2024-28 due to slower-than-expected CoWoS capacity expansion plans by TSMC; 2) gross margin falls below 40% owing to the high bargaining power of its customers; 3) market share loss in "WoS" process amid rising peer competition.

Risk Reward – AllRing Tech Co. (6187.TWO)

KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
Semi revenue (NT$, mn)	5,215	9,294	14,871	16,563
Passive revenue (NT$, mn)	52	56	43	47

INVESTMENT DRIVERS

- CoWoS capacity expansion from TSMC
- New technology migration such as SoIC and silicon photonics
- Strong operating leverage, given equipment production outsourcing strategy

GLOBAL REVENUE EXPOSURE

100% APAC, ex Japan, Mainland China and India

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

- Stronger-than-expected CoWoS capacity expansion
- Faster-than-expected adoption of silicon photonics
- Market share gains from peers, led by continuous R&D and China's localization trend

RISKS TO DOWNSIDE

- Slowdown in CoWoS capacity expansion
- Allring's "WoS" market share declining
- Slowdown in technology migration such as SoIC and silicon photonics adoption

OWNERSHIP POSITIONING

Inst. Owners, % Active 76.4%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e

EPS (NT$): 20.62 – 26.33; Mean 23.14; Morgan Stanley Estimate 25.48

Sales / Revenue (NT$, mn): 7,574 – 9,405; Mean 8,219; Morgan Stanley Estimate 9,405

ROE (%): Morgan Stanley Estimate 32.7

Note: There are not sufficient brokers supplying consensus data for this metric

Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

AllRing: Financial Summary

Income Statement

NT$mn (Years End Dec)	2024	2025	2026E	2027E	2028E
Net sales	5,535	5,366	9,405	14,955	16,655
COGS	2,818	2,453	4,528	7,188	7,906
Gross profit	2,717	2,913	4,877	7,766	8,749
Operating expenses	1,284	1,304	2,139	3,381	3,805
Operating income	**1,433**	**1,610**	**2,739**	**4,385**	**4,944**
Non-operating income	(133)	(203)	(191)	(176)	(202)
Pre-tax income	1,566	1,813	2,930	4,561	5,145
Income tax	255	316	481	730	823
Minority Interest	1,311	1,496	2,449	3,831	4,322
Reported net Income	**1,311**	**1,485**	**2,454**	**3,831**	**4,322**
Adj.wtd.avg.shrs(m)	90	96	96	96	96
Reported EPS (NT$)	**15.25**	**15.46**	**25.48**	**39.79**	**44.89**
EPS for consensus (NT$)	**15.25**	**15.46**	**25.48**	**39.79**	**44.89**

Balance Sheet

NT$mn (Years End Dec)	2024	2025	2026E	2027E	2028E
Cash	3,536	4,182	4,461	5,835	7,814
Mkt Securities	0	53	0	0	0
AR/NR	1,552	806	1,782	2,834	3,156
Inventory	949	1,114	1,631	2,590	2,848
Other	293	180	180	180	180
Current Assets	**6,330**	**6,335**	**8,054**	**11,438**	**13,997**
Long-term investments	36	0	0	0	0
Fixed assets	1,298	1,879	1,979	2,079	2,179
Deffered assets	50	76	76	76	76
Other assets	1,056	1,288	1,288	1,288	1,288
Total Assets	**8,796**	**9,609**	**11,429**	**14,912**	**17,572**
S/T borrowings	0	0	0	0	0
AP/NP	888	564	1,288	2,045	2,249
Other ST liabilities	865	943	943	943	943
LT debt	290	339	339	339	339
Other LT liabilities	131	142	142	142	142
Total Liabilities	**2,279**	**2,121**	**2,889**	**3,751**	**3,988**
Common shares	969	971	971	971	971
Additional capital	2,919	3,017	3,017	3,017	3,017
Retained earning	2,347	2,941	3,991	6,596	9,002
Other shareholders' equity	282	559	559	576	593
Total Equity	**6,517**	**7,488**	**8,539**	**11,160**	**13,584**
Total Liab. & Shrhldr's Equity	**8,796**	**9,609**	**11,429**	**14,912**	**17,571**

E = Morgan Stanley Research Estimates

Source: Morgan Stanley Research, Company Data

Cash Flow Statement

NT$mn (Years End Dec)	2024	2025	2026E	2027E	2028E
Cashflow from Operations	**1,079**	**1,958**	**1,797**	**2,752**	**4,046**
Net profits	1,311	1,485	2,454	3,831	4,322
Depreciation	47	59	59	59	59
Working Capital Change	(130)	476	(725)	(1,148)	(344)
Other adjustments	(157)	(71)	0	0	0
Cashflow from Investing	**(359)**	**(666)**	**(98)**	**(151)**	**(151)**
Capex	(372)	(581)	(100)	(100)	(100)
Change of LT Investment	(36)	36	0	0	0
Other adjustments	50	(68)	(51)	(51)	(51)
Cashflow from financing	**1,851**	**(645)**	**(1,403)**	**(1,227)**	**(1,916)**
Increase in L/T debt	(563)	49	0	0	0
Increase in S/T debt	0	0	0	0	0
Cash Dividend Paid	(131)	(980)	(1,403)	(1,227)	(1,916)
Net change in cash	**2,601**	**646**	**279**	**1,373**	**1,979**

Financial Ratios

	2024	2025	2026E	2027E	2028E
Growth(%)					
Turnover	359.2	-3.0	75.3	59.0	11.4
Operating profits	1623.8	12.3	70.1	60.1	12.7
Pretax profits	873.5	15.8	61.6	55.7	12.8
Net profits	848.5	13.3	65.2	56.1	12.8
EPS	793.9	1.4	64.8	56.1	12.8
Margins (%)					
Gross Margin	49.1	54.3	51.9	51.9	52.5
Operating Margin	25.9	30.0	29.1	29.3	29.7
Pretax Margin	28.3	33.8	31.2	30.5	30.9
Net Profit	23.7	27.7	26.1	25.6	25.9
Return (%)					
ROAE	29.1	21.2	30.6	38.9	34.9
ROAA	19.7	16.1	23.3	29.1	26.6
Gearing (%)					
Net Debt/Equity	(49.8)	(51.3)	(48.3)	(49.2)	(55.0)
Liabilities/Equity	35.0	28.3	33.8	33.6	29.4
Ratios (X)					
Current ratio	3.6	4.2	3.6	3.8	4.4
Quick ratio	2.9	3.3	2.8	2.9	3.4
Others					
AR/NR Turnover (days)	180	69	69	69	69
Inventory Turnover (days)	563	131	131	131	131
AP Turnover (days)	337	104	104	104	104
Cash Conversion (days)	406	97	97	97	97

FOCI: Estimate Revisions and Quarterly Financials

Factoring in actual 1Q26 results, we revise our 2026 EPS estimate to a loss, reduce 2027 by 2%, and cut 2028 fractionally. Weaker-than-expected 1Q26 and 2Q26 results were mainly due to ongoing capacity transition from the Hsinchu fab to the new Thailand fab as the company prioritizes its SiPh/CPO development. The SiPh/CPO new capacity line will also take some time, and pre-mass production preparation such as destructive testing conducted could also affect its gross margin, followed by gradual recovery. We also reflect the one-off expense from new share issuance impact on gross and operating profit in 1H26, as well as the impact on EPS from new share issuance.

We slightly lower our 2027-28 revenue assumptions for the traditional business, as the company will focus on CPO development and let go some low-margin business. However, our supply-chain checks indicate more than 10 customers are currently prototyping, with potential NRE revenue recognition in 2026 and mass production beginning in 2027 and 2028. We have not fully incorporated this upside into our model yet as we look for clearer evidence of product launches and shipment momentum – developments that would push our outlook toward the bull-case scenario.

Exhibit 33: FOCI: Estimate revisions

NT$ mn	New '26E	Old '26E	Diff.	New '27E	Old '27E	Diff.	New '28E	Old '28E	Diff.
Net sales	1,985	2,795	-29%	8,694	9,764	-11%	23,559	24,437	-4%
Gross profit	370	599	-38%	3,194	3,245	-2%	9,044	8,925	1%
Operating profit	(129)	72		2,184	2,219	-2%	6,443	6,429	0%
Pretax Income	(58)	94		2,214	2,241	-1%	6,454	6,457	0%
Net income	(45)	80		1,794	1,905	-6%	5,228	5,424	-4%
Reported EPS (NT$)	**(0.41)**	**0.70**		**16.36**	**16.76**	**-2%**	**47.68**	**47.72**	**0%**
Margins									
Gross margin	18.7%	21.4%		36.7%	33.2%		38.4%	36.5%	
Operating margin	-6.5%	2.6%		25.1%	22.7%		27.3%	26.3%	
Pretax margin	-2.9%	3.4%		25.5%	23.0%		27.4%	26.4%	
Net margin	-2.3%	2.9%		20.6%	19.5%		22.2%	22.2%	

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

Exhibit 34: FOCI: Quarterly financials

NT$ in million	1Q26	2Q26E	3Q26E	4Q26E	1Q27E	2Q27E	3Q27E	4Q27E	1Q28E	2Q28E	3Q28E	4Q28E	2024	2025	2026E	2027E	2028E
Total Revenues	382	400	496	718	934	1,392	2,311	4,058	4,400	5,239	6,241	7,680	1,364	1,892	1,985	8,694	23,559
Sequential Change	-2.2%	4.8%	23.9%	44.9%	30.1%	49.0%	66.0%	75.6%	8.4%	19.1%	19.1%	23.0%					
Change vs Year Ago	-6.7%	-31.5%	-2.4%	83.9%	144.6%	247.8%	366.3%	464.9%	370.9%	276.4%	170.1%	89.3%	7.2%	38.7%	4.9%	338.1%	171.0%
Cost of Sales	375	363	372	516	639	920	1,462	2,479	2,759	3,254	3,838	4,665	1,185	1,537	1,614	5,500	14,515
Percent of Revenues	98%	91%	75%	72%	68%	66%	63%	61%	63%	62%	61%	61%	87%	81%	81%	63%	62%
Gross Profit	7	37	123	203	295	472	849	1,578	1,641	1,985	2,404	3,015	179	355	370	3,194	9,044
Percent of Revenues	1.9%	9.2%	24.9%	28.2%	31.6%	33.9%	36.7%	38.9%	37.3%	37.9%	38.5%	39.3%	13.1%	18.8%	18.7%	36.7%	38.4%
Incremental Margin	NM	163%	91%	36%	43%	39%	41%	42%	18%	41%	42%	42%	1%	33%	17%	42%	39%
Total Opex	163	101	111	124	164	231	255	361	446	559	786	811	273	354	500	1,010	2,601
Percent of Revenues	42.8%	25.3%	22.4%	17.3%	17.6%	16.6%	11.0%	8.9%	10.1%	10.7%	12.6%	10.6%	20.0%	18.7%	25.2%	11.6%	11.0%
R&D	72	77	82	87	100	150	150	200	260	310	460	460	147	212	317	600	1,490
Percent of Revenues	18.8%	19.2%	16.5%	12.1%	10.7%	10.8%	6.5%	4.9%	5.9%	5.9%	7.4%	6.0%	10.8%	11.2%	16.0%	6.9%	6.3%
General & administrative	73	13	15	17	50	60	70	100	120	170	220	220	96	110	117	280	730
Percent of Revenues	19.1%	3.2%	3.0%	2.3%	5.4%	4.3%	3.0%	2.5%	2.7%	3.2%	3.5%	2.9%	7.1%	5.8%	5.9%	3.2%	3.1%
Selling & marketing	19	12	14	21	14	21	35	61	66	79	106	131	29	32	65	130	381
Percent of Revenues	4.9%	2.9%	2.9%	2.9%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.7%	1.7%	2.2%	1.7%	3.3%	1.5%	1.6%
Operating Income	(156)	(64)	12	78	131	241	594	1,218	1,195	1,426	1,617	2,204	(93)	0	(129)	2,184	6,443
Percent of Revenues	-40.9%	-16.1%	2.5%	10.9%	14.1%	17.3%	25.7%	30.0%	27.2%	27.2%	25.9%	28.7%	-6.8%	0.0%	-6.5%	25.1%	27.3%
Change vs Year Ago	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total Non-operating Income(Loss)	22	17	17	17	8	8	8	8	3	3	3	3	37	22	72	30	12
Profit Before Taxes	(135)	(48)	29	95	139	249	601	1,225	1,198	1,429	1,620	2,207	(57)	23	(58)	2,214	6,454
Percent of Revenues	-35%	-12%	6%	13%	15%	18%	26%	30%	27%	27%	26%	29%	-4%	1%	-3%	25%	27%
Taxes	(28)	(10)	6	19	26	47	114	233	228	272	308	419	(8)	7	(12)	421	1,226
Tax Rate	20.5%	20.0%	20.0%	20.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	14.6%	29.0%	21.2%	19.0%	19.0%
Reported Income (TW GAAP)	**(107)**	**(38)**	**23**	**76**	**113**	**201**	**487**	**992**	**970**	**1,157**	**1,312**	**1,788**	**(48)**	**16**	**(45)**	**1,794**	**5,228**
Percent of Revenues	-28%	-10%	5%	11%	12%	14%	21%	24%	22%	22%	21%	23%	-4%	1%	-2%	21%	22%
Change vs Year Ago	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	NM	NM	NM	NM	191%
Reported EPS (NT$, TW GAAP)	**(0.98)**	**(0.35)**	**0.21**	**0.69**	**1.03**	**1.84**	**4.44**	**9.05**	**8.85**	**10.56**	**11.97**	**16.30**	**(0.47)**	**0.16**	**(0.41)**	**16.36**	**47.68**
Change vs Year Ago	-9215%	-317%	7%	-421%	n.a.	n.a.	1997%	1205%	762%	475%	169%	80%	NM	NM	NM	NM	191%

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

FOCI: Valuation Methodology

Our price target (base case scenario value) remains NT$708 as we essentially maintain our 2028 EPS forecast and RI parameters.

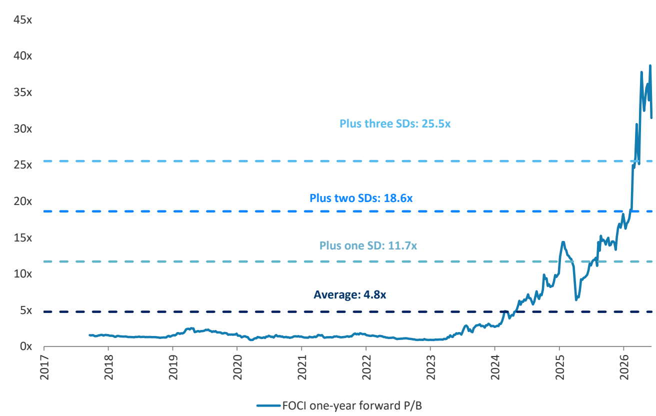
We keep our medium-term growth rate at 16%, in line with Asia optics peers (e.g., Landmark) at 15-16%, to reflect rapid development in CPO and silicon-photonics technology. We maintain our other assumptions: cost of equity of 12.9% (risk-free rate 2.0%, risk premium 6.9%), payout ratio of 61%, and terminal growth rate of 4.0%.

Exhibit 35: FOCI: RI base

NT$million	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E
Total Equity	2,420	4,104	9,201	11,934	15,104	18,780	23,042	27,983	33,713	40,356	48,059	56,991
Net Profit	(45)	1,794	5,228	6,062	7,029	8,150	9,450	10,957	12,704	14,731	17,080	19,805
ROAE	NM	55.0%	78.6%	57.4%	52.0%	48.1%	45.2%	42.9%	41.2%	39.8%	38.6%	37.7%
Residual Income		1,018	2,695	4,088	4,661	5,312	6,058	6,916	8,745	11,409	13,198	15,269
Spread		42.0%	65.7%	44.4%	39.1%	35.2%	32.3%	30.0%	28.3%	26.8%	25.7%	24.8%
Ending Equity Capital	2,420											
PV of Forecast Period	28,517											
PV of Continuing Value	46,652											
Equity Value	77,588											
No. of Shares	110											
Projected Price	708											

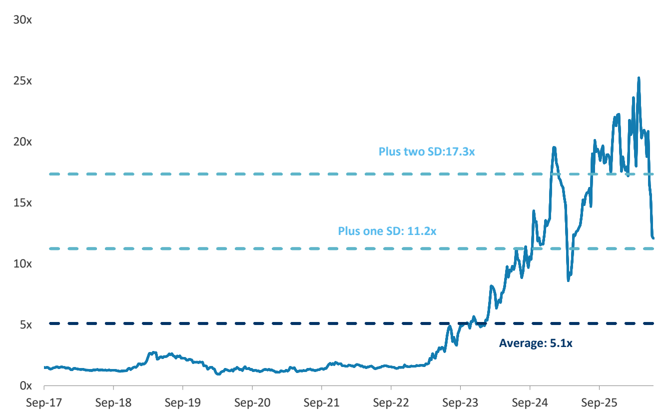
Source: Company data, Morgan Stanley Research (E) estimates

Exhibit 36: FOCI: P/B



Source: Company data, Factset, Morgan Stanley Research estimates

Exhibit 37: FOCI: P/S



Source: Company data, Factset, Morgan Stanley Research estimates

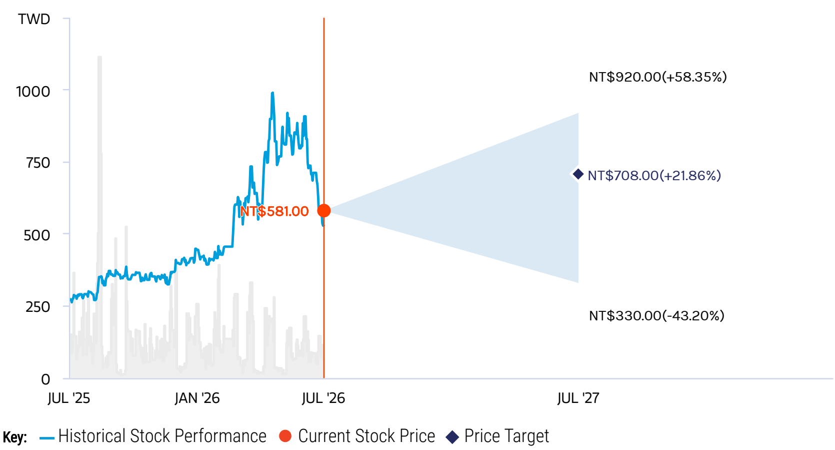
Risk Reward – FOCI Fiber Optic Communications Inc (3363.TWO)

New page for networking market; OW

PRICE TARGET NT$708.00

Base case, residual income model. Key assumptions: cost of equity of 12.9% (risk-free rate 2.0% and risk premium 6.9%), a payout ratio of 61%, a medium-term growth rate of 16%, and a terminal growth rate of 4.0%.

RISK REWARD CHART



Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- Co-packaged optics (CPO) is an advanced silicon photonics (SiPh) method that integrates optics and silicon on a single packaged substrate, aiming to reduce signal loss, power consumption, and cost.
- Given geopolitical benefits and close partnership with TSMC, we think FOCI is well positioned to provide CPO's fiber array units (FAU) and related services, leveraging its ReLFACon technology.
- SiPh/CPO technology is expected to be FOCI's main growth driver in the future. We see its sales contribution expanding from 7% in 2024 to 92% in 2028.
- The company is still growing at a fast pace and in transition. Thus, we expect FOCI stock to trade at 43x 2027e P/E vs. an EPS CAGR of 231% over 2023-27e.

Risk Reward Themes

Disruption:	*Positive*
Secular Growth:	*Positive*
Technology Diffusion:	*Positive*

View descriptions of Risk Rewards Themes here

BULL CASE NT$920.00

56x 2027e EPS

We assume: 1) 200% revenue CAGR, 2023-27e, from stronger-than-expected CPO development; 2) faster-than-expected CPO introduction; 3) gross margin improving to over 50% in 2027e thanks to scale effects and the company's technology competitiveness; and 4) >400% EPS CAGR, 2023-27e.

BASE CASE NT$708.00

43x 2027e P/E

We project: 1) 107% revenue CAGR, 2023-27e, on fast CPO development; 2) gross margin improves to over 37% in 2027e thanks to scale effects and the company's technology competitiveness; 3) 231% EPS CAGR, 2023-27e.

BEAR CASE NT$330.00

20x 2027e P/E

We assume: 1) 50% revenue CAGR, 2023-27e, given slower-than-expected CPO development; 2) slower-than-expected CPO introduction; and 3) gross margin falling below 10% in 2027 owing to the high bargaining power of customers.

Risk Reward – FOCI Fiber Optic Communications Inc (3363.TWO)

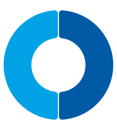
KEY EARNINGS INPUTS

Drivers	Dec 2025	Dec 2026e	Dec 2027e	Dec 2028e
Revenue from computing segment (NT$, mn)	1,198	1,108	1,313	1,454
Revenue from communication segment (NT$, mn)	326	215	329	356
Revenue from battery segment (NT$, mn)	109	650	7,032	21,724

INVESTMENT DRIVERS

- Silicon photonics and CPO

GLOBAL REVENUE EXPOSURE



40-50% APAC, ex Japan, Mainland China and India
40-50% Mainland China

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

RISKS TO PT/RATING

RISKS TO UPSIDE

- Faster-than-expected CPO introduction
- More intense geopolitical tension
- Significant AI/cloud capex increase

RISKS TO DOWNSIDE

- Slower-than-expected CPO introduction slower than expected
- Easing geopolitical tension
- Significant AI/cloud capex cuts

OWNERSHIP POSITIONING

Inst. Owners, % Active 75.6%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2026e

EPS (NT$) — (0.41)
Note: There are not sufficient brokers supplying consensus data for this metric

Sales / Revenue (NT$, mn) — 1,985
Note: There are not sufficient brokers supplying consensus data for this metric

EBITDA (NT$, mn) — 32
Note: There are not sufficient brokers supplying consensus data for this metric

Net income (NT$, mn) — (45)
Note: There are not sufficient brokers supplying consensus data for this metric

ROE (%) — (1.8)
Note: There are not sufficient brokers supplying consensus data for this metric

◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

FOCI: Financial Summary

Income Statement

NT$mn (Years End Dec)	2024	2025	2026E	2027E	2028E
Net sales	1,364	1,892	1,985	8,694	23,559
COGS	(1,185)	(1,537)	(1,614)	(5,500)	(14,515)
Gross profit	179	355	370	3,194	9,044
Operating expenses	(273)	(354)	(500)	(1,010)	(2,601)
Operating income	**(93)**	**0**	**(129)**	**2,184**	**6,443**
Non-operating income	37	22	72	30	12
Pre-tax income	(57)	23	(58)	2,214	6,454
Income tax	(8)	7	(12)	421	1,226
Reported net Income	**(48)**	**16**	**(45)**	**1,794**	**5,228**
Adj.wtd.avg.shrs(m)	88	88	110	110	110
Reported EPS (NT$)	**(0.47)**	**0.16**	**(0.41)**	**16.36**	**47.68**
Modelware EPS (NT$)	**(0.47)**	**0.16**	**(0.41)**	**16.36**	**47.68**

Balance Sheet

NT$mn (Years End Dec)	2024	NT$ 2,025	2026E	2027E	2028E
Cash	1,470	1,412	2,251	5,106	9,932
Mkt Securities	43	20	20	20	20
AR/NR	285	276	294	1,290	3,495
Inventory	288	409	366	1,246	3,289
Other	56	91	91	91	91
Current Assets	**2,141**	**2,207**	**3,022**	**7,752**	**16,826**
Long-term investments	0	0	0	0	0
Fixed assets	485	647	2,024	4,090	6,496
Deffered assets	51	56	56	56	56
Other assets	290	247	247	247	247
Total Assets	**2,967**	**3,157**	**5,349**	**12,145**	**23,625**
S/T borrowings	0	153	459	1,072	2,297
AP/NP	202	194	208	707	1,866
Other ST liabilities	146	175	175	175	175
LT debt	89	86	2,086	6,086	10,086
Other LT liabilities	0	0	0	0	0
Common shares	1,036	1,036	1,036	1,036	1,036
Total Liabilities	**437**	**608**	**2,928**	**8,040**	**14,424**
Additional capital	1,440	1,464	1,464	1,464	1,464
Retained earning	276	273	145	1,829	6,925
Other shareholders' equity	(222)	(225)	(225)	(225)	(225)
Total Equity	**2,531**	**2,549**	**2,420**	**4,104**	**9,201**
Total Liab. & Shrhldr's Equity	**2,967**	**3,157**	**5,349**	**12,145**	**23,625**

E = Morgan Stanley Research Estimates

Source: Morgan Stanley Research, Company Data

Cash Flow Statement

NT$mn (Years End Dec)	2024	2025	2026E	2027E	2028E
Cashflow from Operations	**70**	**(17)**	**154**	**659**	**2,501**
Net profits	(48)	16	(45)	1,794	5,228
Depreciation	100	107	161	241	362
Working Capital Change	(71)	(154)	39	(1,376)	(3,089)
Other adjustments	88	13	0	0	0
Cashflow from Investing	**19**	**(165)**	**(1,538)**	**(2,307)**	**(2,768)**
Capex	(55)	(55)	(1,538)	(2,307)	(2,768)
Change of LT Investment	170	43	0	0	0
Change of ST Investment	0	0	0	0	0
Other adjustments	(95)	(153)	0	0	0
Cashflow from financing	**453**	**122**	**2,223**	**4,503**	**5,093**
Increase in L/T debt	2	(3)	2,000	4,000	4,000
Increase in S/T debt	0	153	306	613	1,225
Cash Dividend Paid	(49)	0	(83)	(110)	(132)
Issuance of stock	522	0	0	0	0
Other adjustments	(21)	(28)	0	0	0
Exchange rate adjustment	15	3	0	0	0
Net change in cash	**557**	**-58**	**839**	**2,855**	**4,826**

Financial Ratios

	2024	NT$ 2,025	2026E	2027E	2028E
Growth(%)					
Turnover	7.2	38.7	4.9	338.1	171.0
Operating profits	60.3	-100.5	-26622.3	-1787.3	195.0
Pretax profits	-1091.4	-140.4	-353.0	-3937.1	191.5
Net profits	-500.3	-133.5	-380.8	-4044.4	191.5
EPS	-441.3	-133.4	-366.6	-4044.4	191.5
Margins (%)					
Gross Margin	13.1	18.8	18.7	36.7	38.4
Operating Margin	-6.8	0.0	-6.5	25.1	27.3
Pretax Margin	-4.1	1.2	-2.9	25.5	27.4
Net Profit	-3.5	0.9	-2.3	20.6	22.2
Return (%)					
ROAE	(2.1)	0.6	(1.8)	55.0	78.6
ROAA	(1.8)	0.5	(1.1)	20.5	29.2
Gearing (%)					
Net Debt/Equity	(58.1)	(49.4)	(74.0)	(98.3)	(83.0)
Liabilities/Equity	17.3	23.9	121.0	195.9	156.8
Ratios (X)					
Current ratio	6.2	4.2	3.6	4.0	3.9
Quick ratio	5.1	3.2	3.0	3.3	3.1
Others					
AR/NR Turnover (days)	75	54	54	54	54
Inventory Turnover (days)	82	83	83	83	83
AP Turnover (days)	49	47	47	47	47
Cash Conversion (days)	108	90	90	90	90

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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Global Stock Ratings Distribution

(as of June 30, 2026)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

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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	1544	42%	453	49%	29%	757	44%
Equal-weight/Hold	1577	43%	390	42%	25%	769	44%
Not-Rated/Hold	3	0%	1	0%	33%	1	0%
Underweight/Sell	544	15%	89	10%	16%	204	12%
Total	3,668		933			1731	

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.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next

12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

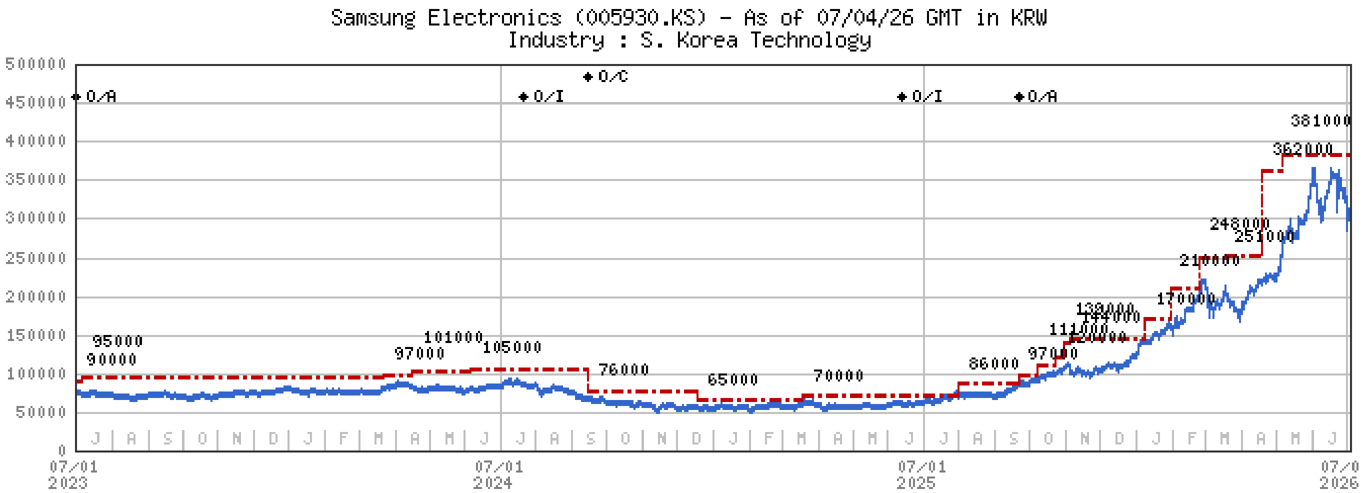
Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Stock Price, Price Target and Rating History (See Rating Definitions)



Stock Rating History: 7/1/21 : O/A; 7/19/21 : O/I; 8/12/21 : O/C; 10/4/22 : O/A; 7/21/24 : O/I; 9/15/24 : O/C; 6/13/25 : O/I; 9/21/25 : O/A

Price Target History: 6/8/21 : 98000; 8/12/21 : 89000; 9/15/21 : 95000; 12/3/21 : 97000; 3/18/22 : 95000; 4/28/22 : 85000; 6/10/22 : 80000; 7/5/22 : 75000; 7/22/22 : 70000; 9/17/22 : 68000; 3/21/23 : 70000; 5/30/23 : 90000; 7/7/23 : 95000; 3/22/24 : 97000; 4/16/24 : 101000; 6/6/24 : 105000; 9/15/24 : 76000; 12/18/24 : 65000; 3/19/25 : 70000; 8/1/25 : 86000; 9/21/25 : 97000; 10/8/25 : 111000; 10/23/25 : 120000; 10/30/25 : 139000; 11/5/25 : 144000; 1/8/26 : 170000; 1/30/26 : 210000; 2/24/26 : 248000; 3/18/26 : 251000; 4/19/26 : 362000; 5/6/26 : 381000

Source: Morgan Stanley Research   Date Format : MM/DD/YY   Price Target   No Price Target Assigned (NA)

Stock Price (Not Covered by Current Analyst)   Stock Price (Covered by Current Analyst)

Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View

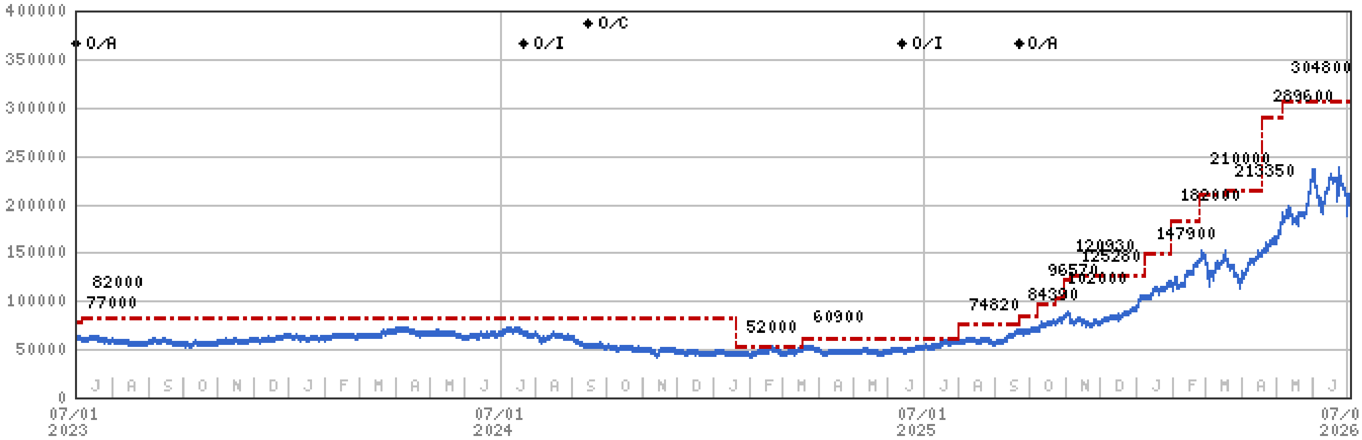
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)

Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Samsung Electronics (005935.KS) - As of 07/04/26 GMT in KRW
Industry : S. Korea Technology



Stock Rating History: 7/1/21 : O/A; 7/19/21 : O/I; 8/12/21 : O/C; 10/4/22 : O/A; 7/21/24 : O/I; 9/15/24 : O/C; 6/13/25 : O/I; 9/21/25 : O/A

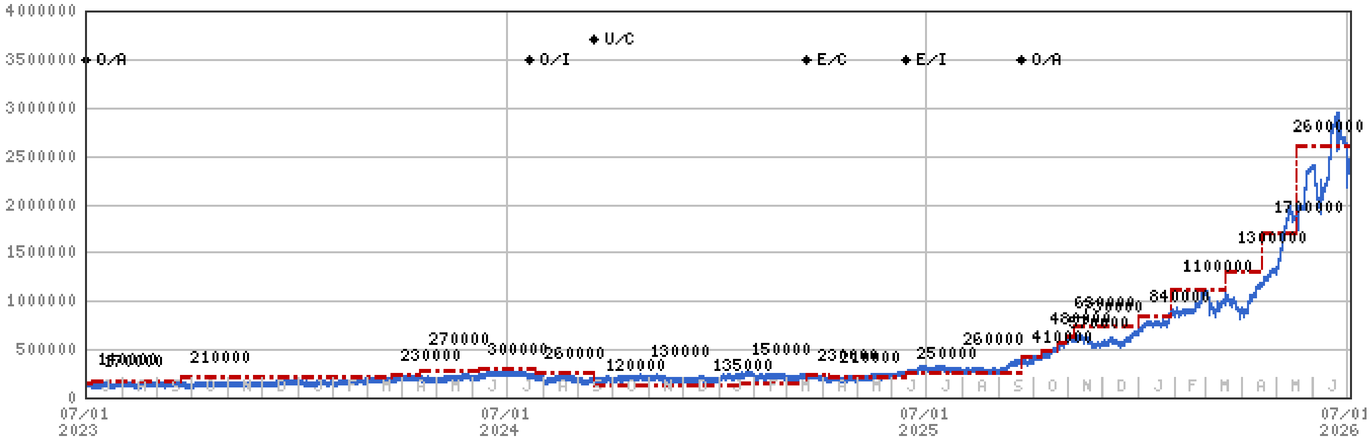
Price Target History: 6/8/21 : 84000; 8/12/21 : 77000; 9/15/21 : 82000; 12/3/21 : 83000; 3/18/22 : 82000; 4/28/22 : 73000; 6/10/22 : 69000; 7/5/22 : 65000; 7/22/22 : 60000; 9/17/22 : 58000; 3/21/23 : 60000; 5/30/23 : 77000; 7/7/23 : 82000; 1/20/25 : 52000; 3/19/25 : 60900; 8/1/25 : 74820; 9/21/25 : 84390; 10/8/25 : 96570; 10/23/25 : 102000; 10/30/25 : 120930; 11/5/25 : 125280; 1/8/26 : 147900; 1/30/26 : 182000; 2/24/26 : 210000; 3/18/26 : 213350; 4/19/26 : 289600; 5/6/26 : 304800

Source: Morgan Stanley Research   Date Format : MM/DD/YY   Price Target -- No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst) —
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

SK hynix (000660.KS) - As of 07/04/26 GMT in KRW
Industry : S. Korea Technology



Stock Rating History: 7/1/21 : O/A; 7/19/21 : O/I; 8/12/21 : U/C; 12/3/21 : E/C; 2/11/22 : O/C; 7/22/22 : E/C; 10/4/22 : O/A; 7/21/24 : O/I; 9/15/24 : U/C; 3/19/25 : E/C; 6/13/25 : E/I; 9/21/25 : O/A

Price Target History: 6/8/21 : 156000; 8/12/21 : 80000; 9/15/21 : 88000; 12/3/21 : 110000; 12/23/21 : 125000; 1/24/22 : 130000; 1/28/22 : 136000; 2/11/22 : 155000; 3/18/22 : 150000; 4/27/22 : 130000; 6/10/22 : 120000; 7/5/22 : 110000; 7/22/22 : 105000; 10/4/22 : 130000; 12/7/22 : 120000; 3/21/23 : 110000; 5/30/23 : 140000; 7/7/23 : 170000; 9/21/23 : 210000; 3/22/24 : 230000; 4/16/24 : 270000; 6/6/24 : 300000; 7/25/24 : 260000; 9/15/24 : 120000; 10/24/24 : 130000; 12/18/24 : 135000; 1/20/25 : 150000; 3/19/25 : 230000; 4/7/25 : 210000; 6/13/25 : 250000; 7/24/25 : 260000; 9/21/25 : 410000; 10/8/25 : 480000; 10/23/25 : 570000; 10/29/25 : 630000; 11/5/25 : 730000; 1/2/26 : 840000; 1/30/26 : 1100000; 3/18/26 : 1300000; 4/19/26 : 1700000; 5/18/26 : 2600000

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target -- No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

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INDUSTRY COVERAGE: Greater China Technology Semiconductors

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/03/2026)
Charlie Chan		
ACM Research Inc (ACMR.O)	O (03/07/2023)	US$97.77
Advanced Micro-Fabrication Equipment Inc (688012.SS)	O (11/06/2023)	Rmb413.69
Advanced Wireless Semiconductor Co (8086.TWO)	U (07/14/2025)	NT$144.00
Alchip Technologies Ltd (3661.TW)	O (05/14/2021)	NT$4,650.00
ASE Technology Holding Co. Ltd. (3711.TW)	O (09/15/2024)	NT$682.00
Cambricon Technology Corporation (688256.SS)	O (04/27/2026)	Rmb1,353.00
Global Unichip Corp (3443.TW)	O (06/24/2026)	NT$5,040.00
GlobalWafers Co Ltd (6488.TWO)	E (05/19/2026)	NT$1,255.00
Gudeng Precision (3680.TWO)	O (11/25/2025)	NT$539.00
Hua Hong Semiconductor Ltd (1347.HK)	E (03/12/2026)	HK$178.00
Iluvatar CoreX Semiconductor Co., Ltd. (9903.HK)	O (04/27/2026)	HK$641.00
King Yuan Electronics Co Ltd (2449.TW)	O (03/03/2023)	NT$335.00
Maxscend Microelectronics Co Ltd (300782.SZ)	U (01/11/2021)	Rmb98.39
MediaTek (2454.TW)	O (11/28/2025)	NT$4,195.00
MetaX Integrated Circuits (688802.SS)	E (04/27/2026)	Rmb738.38
Nanya Technology Corp. (2408.TW)	O (05/28/2026)	NT$409.50
NAURA Technology Group Co Ltd (002371.SZ)	O (11/06/2023)	Rmb816.00
OmniVision Integrated Circuits Group Inc (603501.SS)	E (11/17/2025)	Rmb102.30
Phison Electronics Corp (8299.TWO)	E (02/25/2026)	NT$2,295.00
SG Micro Corp. (300661.SZ)	E (11/03/2025)	Rmb139.60
Silergy Corp. (6415.TW)	U (05/19/2026)	NT$605.00

SMIC (0981.HK)	O (10/21/2025)	HK$77.60
TSMC (2330.TW)	O (02/07/2022)	NT$2,445.00
UMC (2303.TW)	O (05/19/2026)	NT$170.50
Vanguard International Semiconductor (5347.TWO)	E (01/14/2026)	NT$193.50
WIN Semiconductors Corp (3105.TWO)	U (07/14/2025)	NT$411.00
Daisy Dai, CFA		
ASMPT Ltd (0522.HK)	O (07/24/2025)	HK$204.80
China Resources Microelectronics Limited (688396.SS)	U (03/02/2026)	Rmb83.60
Elan Microelectronics Corp (2458.TW)	O (10/03/2025)	NT$184.00
Empyrean Technology Co Ltd (301269.SZ)	E (01/17/2025)	Rmb102.77
Hangzhou Silan Microelectronics Co. Ltd. (600460.SS)	U (08/25/2025)	Rmb47.25
Hygon Information Technology Co., Ltd. (688041.SS)	O (07/03/2026)	Rmb325.40
Innoscience (2577.HK)	E (10/13/2025)	HK$60.65
JCET Group Co Ltd (600584.SS)	E (01/16/2026)	Rmb90.88
Shanghai Fudan Microelectronics (1385.HK)	O (03/07/2025)	HK$30.92
SICC Co Ltd (688234.SS)	O (03/20/2026)	Rmb145.60
StarPower Semiconductor Ltd (603290.SS)	E (05/14/2026)	Rmb129.35
Unigroup Guoxin Microelectronics Co Ltd (002049.SZ)	U (01/10/2023)	Rmb81.76
Universal Scientific Ind. (Shanghai) (601231.SS)	O (11/05/2025)	Rmb30.59
Yangjie Technology (300373.SZ)	O (06/10/2022)	Rmb129.46
Daniel Yen, CFA		
AP Memory Technology Corp (6531.TW)	O (07/11/2025)	NT$987.00
ASMedia Technology Inc (5269.TW)	U (10/03/2025)	NT$1,530.00
Aspeed Technology (5274.TWO)	O (06/09/2025)	NT$17,265.00
Egis Technology Inc (6462.TWO)	E (01/28/2026)	NT$117.50
Espressif Systems (688018.SS)	O (05/15/2023)	Rmb120.11
GigaDevice Semiconductor Beijing Inc (603986.SS)	O (05/15/2025)	Rmb677.77
Macronix International Co Ltd (2337.TW)	O (09/18/2025)	NT$142.50
Montage Technology Co Ltd (6809.HK)	O (03/18/2026)	HK$382.60
Montage Technology Co Ltd (688008.SS)	O (03/18/2026)	Rmb266.80
Novatek (3034.TW)	U (02/04/2026)	NT$538.00
Nuvoton Technology Corporation (4919.TW)	U (11/10/2025)	NT$176.50
Parade Technologies Ltd (4966.TWO)	O (05/27/2026)	NT$654.00
Powerchip Semiconductor Manufacturing Co (6770.TW)	O (10/27/2025)	NT$73.40
Realtek Semiconductor (2379.TW)	E (01/30/2026)	NT$783.00
Shenzhen Goodix Technology Co Ltd (603160.SS)	U (07/14/2025)	Rmb59.03
Winbond Electronics Corp (2344.TW)	O (05/28/2026)	NT$184.50
WPG Holdings (3702.TW)	O (03/16/2026)	NT$110.00
WT Microelectronics Co. Ltd. (3036.TW)	O (01/27/2026)	NT$221.50
Duan Liu		
Dosilicon Co Ltd (688110.SS)	U (09/06/2024)	Rmb178.80
Shenzhen Longsys Electronics Co Ltd (301308.SZ)	E (02/25/2026)	Rmb618.02
Tiffany Yeh		
AllRing Tech Co. (6187.TWO)	O (09/23/2025)	NT$1,030.00
FOCI Fiber Optic Communications Inc (3363.TWO)	O (01/15/2025)	NT$581.00
Himax Technologies Inc (HIMX.O)	E (02/04/2026)	US$13.15
Hon Precision (7769.TW)	O (04/17/2026)	NT$6,865.00
MPI Corporation (6223.TWO)	O (04/17/2026)	NT$7,380.00
Silicon Motion (SIMO.O)	O (05/06/2024)	US$300.71
WinWay Technology Co Ltd (6515.TW)	O (04/17/2026)	NT$9,900.00

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.