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## Greater China Technology Hardware | Asia Pacific

## Analysis of Rubin rack BOM, component content, and ODM value-added

Rubin rack ASP is at ~US\$7.8M buying from ODMs; price point is higher buying from OEMs. Biggest downstream content increase comes from PCB (+233%), MLCC (+182%), ABF (+82%), Power (+32%), and Cooling (+12%). But ODM value-added will also increase 35-40%, contrary to market view.

**The Rubin rack will cost ~US\$7.8M:** This is the price hyperscalers will be paying for a Rubin rack from ODMs; the price of a Rubin rack will be even higher if bought from OEMs (i.e., Lenovo, Asustek, Giga-Byte, Dell, etc). Most components will enjoy a rise in content, driven by increased complexity, computing density, and power density, among other things. Within the downstream components made by companies we cover, we estimate that PCB content will increase the most vs. Blackwell (+233%), followed by MLCC (+182%), ABF substrates (+82%), power (+32%), and cooling (+12%).

**Rubin ODM value-added will also increase 35-40%:** Our bottom-up analysis aligns with what [Wistron's management said on its 4Q earnings call](#): that ODM value-added in dollar terms would increase for Rubin. The 35-40% increase is spread throughout the rack, with increased complexity across the computing board, computing tray, switch board, switch tray, cooling components, and rack-level assembly, as well as new boards to assemble/test. But there are other things ODMs can do that are not captured in our numbers. That said, based on the numbers that our analysis captures, the implied GM for a Rubin rack is ~1.9% (vs. ~2.7% for GB300). Again, however, we think investors should focus on the increase in absolute dollar profitability and not the decline in margins.

**More ODMs are talking about the consignment business model:** Hon Hai was the first to mention it, during [its 4Q25 call](#). And at its 1Q26 earnings call, [Quanta also mentioned that it expects some projects to shift over to a consignment business model in 2H26](#). It looks like this shift is slowly happening, and more customers are willing to help share the increased working capital burden. It remains unclear what percentage of projects will shift to consignment, but we do view this trend positively over the long-term.

**Our post-earnings ODM preference:** Wiwynn is our Top Pick in ODMs, followed by Wistron > Quanta > Hon Hai, based on upside to our price targets. Risk-reward for the ODM cohort still looks attractive at only ~13x CY27e P/E on average vs. the ~11.5x average over the past ~20 years. **For component suppliers, we like Delta, AVC, Unimicron, ZDT, and FIT.**

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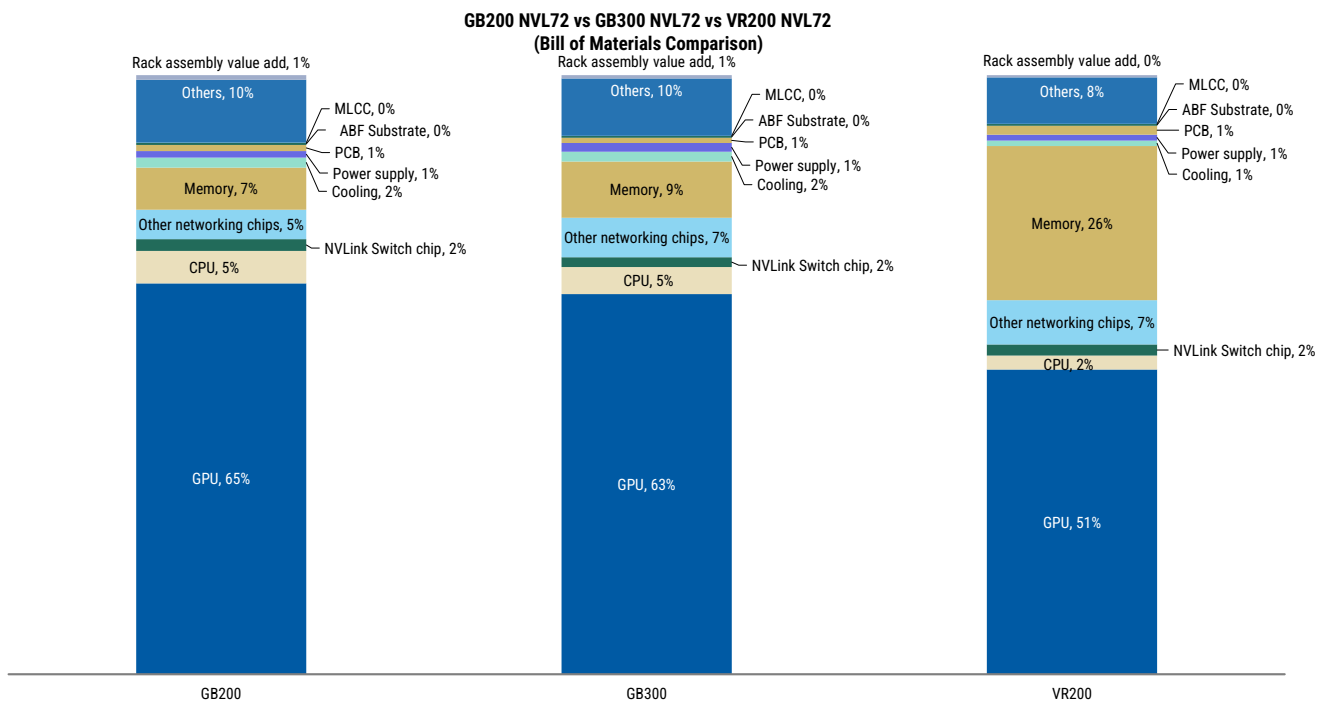
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# Bottom-Up Analysis of VR200 Rack BOM

**We estimate that a Rubin rack will cost ~US\$7.8M, if bought from the ODMs:** A big portion of the increase in rack cost is from memory prices, which have increased materially since Nvidia first launched GB200 NVL72. With the old memory prices, memory was only 5-10% of GB200 NVL72 rack bill of materials – but with the increased memory content and significantly higher pricing now, we estimate that memory is now 25-30% of the VR200 rack bill of materials. This drives the GPU content down from ~65% in GB200 to ~51% for VR200. This rack ASP is our estimate for what the ODMs will charge/receive from the cloud customers, but the pricing from the OEMs (i.e., Lenovo, Asustek, Giga-Byte, Dell, etc.) will be even higher, after including brand profit and other charges, which will vary by company.

**Hyperscalers could be buying the SOCAMM themselves:** Our base case is that Nvidia will buy the SOCAMM that goes onto the Rubin compute board, and resell at a 70% GM. In this base case scenario, the Rubin rack ASP would be ~US\$7.8M, as mentioned above and throughout the note. However, in the scenario where the SOCAMMs are acquired by the hyperscalers directly, the rack ASP would drop to ~US\$6.7M for a Rubin rack.

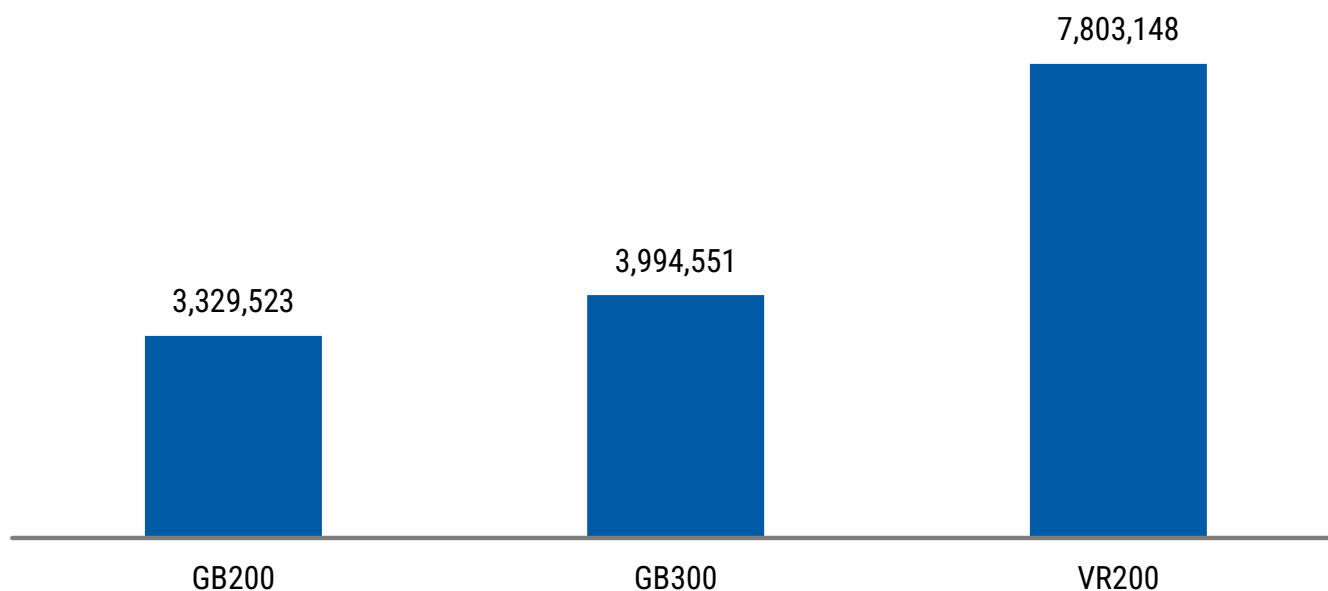
**Exhibit 1:** Owing to recent increase in memory prices, memory will become 25%+ of the rack BOM for Rubin



Source: Morgan Stanley Research estimates.

**Exhibit 2:** We estimate the new upcoming VR200 rack ASP to be ~US\$7.8mn

## Nvidia NVL72 Rack ASP (US\$)



Source: Morgan Stanley Research estimates.

**Memory is not the only component showing a content increase:** In our coverage, cooling components, power supply, PCB, ABF substrates, and MLCC, among others, are also all showing content increases. Other than a meaningful increase in memory content for the Rubin, for downstream components made by companies under our coverage, we see the biggest content increase for PCB (+233%), followed by MLCCs (+182%), ABF substrates (+82%), power supply (+32%), and cooling (+12%). And we believe the pure rack assembly value-added will also increase, ~30%, driven by increased complexity of the rack design.

**Exhibit 3:** We estimate that a single VR200 NVL72 rack will cost ~US\$7.8M

Nvidia NVL72 Bill of Materials	GB300	VR200	Diff.
GPU	\$2,520,000	\$3,960,000	57%
CPU	\$180,000	\$180,000	0%
NVLink Switch chip	\$64,800	\$144,000	122%
Other networking chips	\$261,000	\$576,000	121%
Memory	\$373,939	\$2,001,600	435%
Cooling	\$64,610	\$72,080	12%
Power supply	\$57,600	\$76,000	32%
PCB	\$35,100	\$116,730	233%
ABF Substrate	\$11,160	\$20,340	82%
MLCC	\$1,530	\$4,320	182%
Others	\$402,412	\$623,278	55%
Rack assembly value add	\$22,400	\$28,800	29%
<b>Total</b>	<b>\$3,994,551</b>	<b>\$7,803,148</b>	<b>95%</b>

Source: Morgan Stanley Research estimates.

## Rubin PCB content is rising meaningfully

### Rubin PCB content is showing the biggest increase amongst downstream components:

Based on our supply chain checks, we see PCB content increasing massively, 233%+, for Rubin v. GB300. This would bring total PCB content up to ~US\$117K, vs only just ~US\$35K in GB300, which would be a big tailwind for the PCB suppliers, including Unimicron and ZDT in our coverage.

This meaningful jump in content is driven by an increase in PCBs, with the introduction of new modules like the ConnectX module and the midplane PCB, but there is an increase in layer count and CCL-grade for PCBs as well. For example, the computing board for Rubin is now a 26L board vs a 22L HDI PCB in GB300, and the CCL-grade is upgraded to M8 vs. M7 for Blackwell.

In addition, the dimensions of the computing board are also slightly larger in Rubin vs. Blackwell. Moreover, the switch tray PCB for Rubin is now a 32L PCB vs a 24L PCB for Blackwell.

All of this adds to the meaningful increase in PCB content. There is also a new midplane PCB in the computing tray (44L) that was previously not found in the GB300 rack, which also adds to the content growth.

**Exhibit 4:** VR200 PCB Content is 200%+ higher than that of GB300

PCB ASP per board (US\$)	GB300	VR200
Compute PCB	\$650	\$1,400
Switch PCB	\$800	\$1,450
Midplane PCB	\$0	\$1,500
BlueField PCB	\$0	\$255
ConnectX PCB	\$0	\$270
Other peripheral PCB	\$50	\$50
PCB Units per rack	GB300	VR200
Compute PCB	36x	36x
Switch PCB	9x	9x
Midplane PCB	0x	18x
BlueField PCB	18x	18x
ConnectX PCB	0x	72x
Other peripheral PCB	90x	45x
Total PCB Content per rack	GB300	VR200
Compute PCB	\$23,400	\$50,400
Switch PCB	\$7,200	\$13,050
Midplane PCB	\$0	\$27,000
BlueField PCB	\$0	\$4,590
ConnectX PCB	\$0	\$19,440
Other peripheral PCB	\$4,500	\$2,250
<b>Total PCB Content per rack</b>	<b>\$35,100</b>	<b>\$116,730</b>

Source: Morgan Stanley Research estimates.

## MLCC is showing a significant content increase

Based on our latest estimates, we estimate MLCC content for VR200 to be ~US\$4.3K:

This would present a quite meaningful increase vs. GB300 at only ~US\$1.5K, and could explain why high-end AI server MLCC demand is currently so strong and causing all the ODMs to aggressively try to secure and build as much inventory as possible, ahead of the Rubin rack ramp from 2H26 on wards.

Our checks indicate that the MLCC content per computing board and switch board is increasing quite meaningfully, with the computing board MLCC content showing a larger content increase. In addition, the newly introduced BlueField and ConnectX modules will also contribute to more MLCC content per rack.

**Exhibit 5:** VR200 MLCC content is 180%+ higher compared to GB300

MLCC content per board (US\$)	GB300	VR200
Compute PCB	\$25	\$90
Switch PCB	\$20	\$45
BlueField DPU Module	\$5	\$5
ConnectX Orchid Module	\$5	\$5
Other peripheral PCB	\$5	\$5
Units per rack	GB300	VR200
Compute PCB	36x	36x
Switch PCB	9x	9x
BlueField DPU Module	0x	18x
ConnectX Orchid Module	0x	72x
Other peripheral PCB	90x	45x
Total MLCC Content per rack	GB300	VR200
Compute PCB	\$900	\$3,240
Switch PCB	\$180	\$405
BlueField DPU Module	\$0	\$90
ConnectX Orchid Module	\$0	\$360
Other peripheral PCB	\$450	\$225
<b>Total MLCC Content per rack</b>	<b>\$1,530</b>	<b>\$4,320</b>

Source: Morgan Stanley Research estimates.

**We estimate that ABF substrate content is also growing, driven by higher ASP per substrate and increased number of substrates**

**We estimate that ABF substrate content for VR200 will increase ~82% vs. GB300:**

Aside from content increases for the substrates themselves per chip, such as for the Rubin GPU and Vera CPU vs. its predecessor, there is also an increased number of substrates used per Rubin rack. This is because there are 2x more NVLink and ConnectX chips in the Rubin system vs. the Blackwell system. According to Morgan Stanley analyst Shoji Sato, the Rubin GPU ABF substrate ASP will rise to ~US\$200 per chip, which is up 100% vs. Blackwell at ~US\$100 of substrate content per chip.

**Exhibit 6:** VR200 ABF Substrate content is 80%+ higher compared to GB300

ABF Substrate ASP per chip (US\$)	GB300	VR200
GPU	\$100	\$200
CPU	\$50	\$60
NVSwitch ASIC	\$30	\$30
BlueField DPU	\$30	\$30
ConnectX chip	\$30	\$30
ABF Units per rack	GB300	VR200
GPU	72x	72x
CPU	36x	36x
NVSwitch ASIC	18x	36x
BlueField DPU	18x	18x
ConnectX chip	36x	72x
Total ABF Content per rack	GB300	VR200
GPU	\$7,200	\$14,400
CPU	\$1,800	\$2,160
NVSwitch ASIC	\$540	\$1,080
BlueField DPU	\$540	\$540
ConnectX chip	\$1,080	\$2,160
<b>Total ABF Content per rack</b>	<b>\$11,160</b>	<b>\$20,340</b>

Source: Morgan Stanley Research estimates.

### Clear AI server power upgrade path

Our latest supply chain checks suggest that besides the standard 110kW power shelf to be featured in the Vera Rubin platform, one US CSP is adopting HVDC standalone power rack in the Vera Rubin platform. For large-scale adoption, we expect 800V DC to be adopted in Nvidia's Rubin Ultra platform, scheduled for 2H27. Delta is also working with at least three US CSP customers on HVDC platform adoption in ASIC power rack projects, with initial rollout expected starting 2H26.

**Exhibit 7:** AI server power solution roadmap to 800 VDC architecture

Server power supply design	Current				2026		2027	
	Power shelf				HVDC Standalone power rack			
AC-DC conversion	400V AC >> 50V DC	400V AC >> 50V DC	400V AC >> 50V DC	400V AC >> 50V DC	400V AC >> 800V DC	400V AC >> 800V DC		
Nvidia AI GPU generation	GB200	GB300	GB300	Vera Rubin	Vera Rubin CPX version	Vera Rubin Ultra		
Nvidia AI server rack architecture	Oberon	Oberon	Oberon	Oberon	Oberon	Kyber		
Power wattage per server rack	120kW	140kW	140kW	200kW+	380kW+	600kW		
Power wattage per PSU	5.5kW	8kW	12kW	18.3kW	18.3kW	30kW		
Power value per AI server rack	US\$36,000 (x)	US\$57,600	US\$69,120	US\$76,000	US\$398,160	>10x		
Power value per watt	US\$0.3	US\$0.41	US\$0.49	US\$0.38	US\$1.05	...		

Source: Morgan Stanley Research

### Liquid cooling content value growth

Vera Rubin server racks will be fully liquid-cooled: the fan-less design would increase the

offering value per tray via incremental addition of tray manifolds, QD usage, and cold plate design in bottom-half components, such as switch poles and peripheral components.

Assuming that Vera Rubin racks' computing trays continue to adopt the Bianca board design, we expect the cold plate content value for the computing board half of the tray to decrease in view of the design standardization. Our channel checks suggest that the design change in gold plating has not been fully confirmed.

Along with rack manifolds equipped per rack, we forecast that the total thermal content value per rack amounts to US\$72,080.

**Exhibit 8:** Liquid cooling component value for Vera Rubin computing tray and switch tray

Thermal value per Vera Rubin NVL 144 rack		
	unit	BoM (US\$)
<b>Compute tray (Bianca)</b>		
Cold plate module - Compute Board		\$ 400
- # per compute tray	2	\$ 800
NVQD		\$ 20
- # per compute tray	4	\$ 80
Tray manifold		\$ 1,000
Cold plate module - Bottom Half		\$ 150
- # per compute tray	3	\$ 450
NVQD		\$ 20
- # per compute tray	16	\$ 320
Floating mount		50
- # per compute tray	2	\$ 100
Thermal value per compute tray		\$ 2,750
- # of compute tray per rack	18	
Thermal value for compute tray per rack		\$ 49,500
<b>Switch tray</b>		
Cold plate module		\$ 200
- # per switch tray	2	\$ 400
NVQD		\$ 20
- # per compute tray	18	\$ 360
Floating mount		50
- # per compute tray	2	\$ 100
Others		\$ 60
Thermal value per compute tray		\$ 920
- # of switch tray per rack	9	
Thermal value for switch tray per rack		\$ 8,280
<b>total thermal content value per rack</b>		<b>\$ 57,780</b>

Source: Morgan Stanley Research estimates

**Exhibit 9:** VR200 Cooling Content (ex-Side-car CDU) is 12%+ higher than that of GB300

Cooling content (US\$)	GB300	VR200
Cooling (In-tray only)	\$50,310	\$57,780
Rack Manifold	\$13,500	\$13,500
Rack-level other cooling	\$800	\$800
<b>Total cooling (ex-Side-car CDU)</b>	<b>\$64,610</b>	<b>\$72,080</b>
Side-car CDU	\$50,000	\$50,000
<b>Total cooling</b>	<b>\$114,610</b>	<b>\$122,080</b>

Source: Morgan Stanley Research estimates.

## Other than components, ODM value-added is increasing

**We also estimate ODM value-added increasing 35-40% for Rubin vs. Blackwell racks:**

We think this is contrary to the market view. We believe that the market expects ODM value-added to decline for Rubin, owing to the "standardization" of the computing tray. But our analysis suggests a different outcome. We see the ODM value-added increasing thanks not only to increased complexity but also additional modules introduced in the new Rubin system, for ODMs to assemble and test.

Overall, we see a ~38% increase in ODM value-added. But there could also be other components within the rack that the ODMs may be able to provide, something that is not captured in our analysis here.

**What does this imply for ODM GM?** This implies that the ODM GM for GB300 is US \$108,213/US\$3,994,551 = ~2.7% GM, and for VR200, it is US\$149,646/US\$7,803,148 = ~1.9% GM. Because these racks are becoming more expensive, the *margin* that the ODMs are able to earn is declining, but we think the *absolute dollar profitability* is what is important, and that is increasing, from GB300 to VR200.

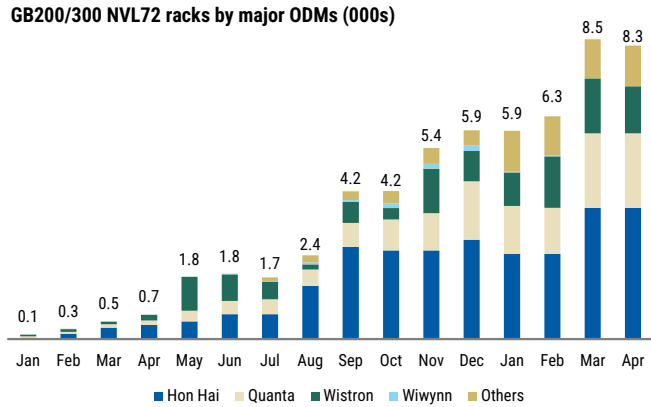
- However, we did mention above that there is a scenario where the SOCAMMs are bought by the customer directly. Under this scenario, the rack ASP would fall to ~US\$6.7M (down from ~US\$7.8M). Under this scenario, ODM GM would rise to ~2.2% (up from ~1.9%).

**Exhibit 10:** Our bottom-up analysis on ODM value-added per rack

ODM Value-Add per rack	GB300	VR200
Compute Board Assembly/Test	\$12,096	\$16,200
Compute Tray Assembly/Test	\$28,800	\$32,400
Switch Board Assembly/Test	\$2,475	\$3,150
Switch Tray Assembly/Test	\$2,700	\$3,150
Rack Assembly/Test	\$22,400	\$28,800
BF DPU Assembly/Test	\$1,170	\$1,170
CX/Orchid Module Assembly/Test	\$0	\$3,600
Other peripheral boards	\$3,150	\$1,260
Cooling components	\$12,922	\$14,416
Others	\$22,500	\$45,500
<b>Total ODM Value-Add</b>	<b>\$108,213</b>	<b>\$149,646</b>

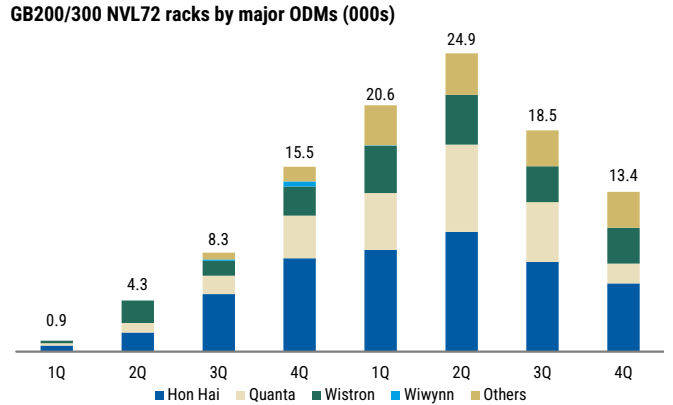
Source: Morgan Stanley Research estimates.

**Exhibit 11:** Monthly GB200/300 Rack Output (January 2025 to present)



Source: Morgan Stanley Research estimates.

**Exhibit 12:** Quarterly GB200/300 Rack Output (C1Q25-4Q26e)

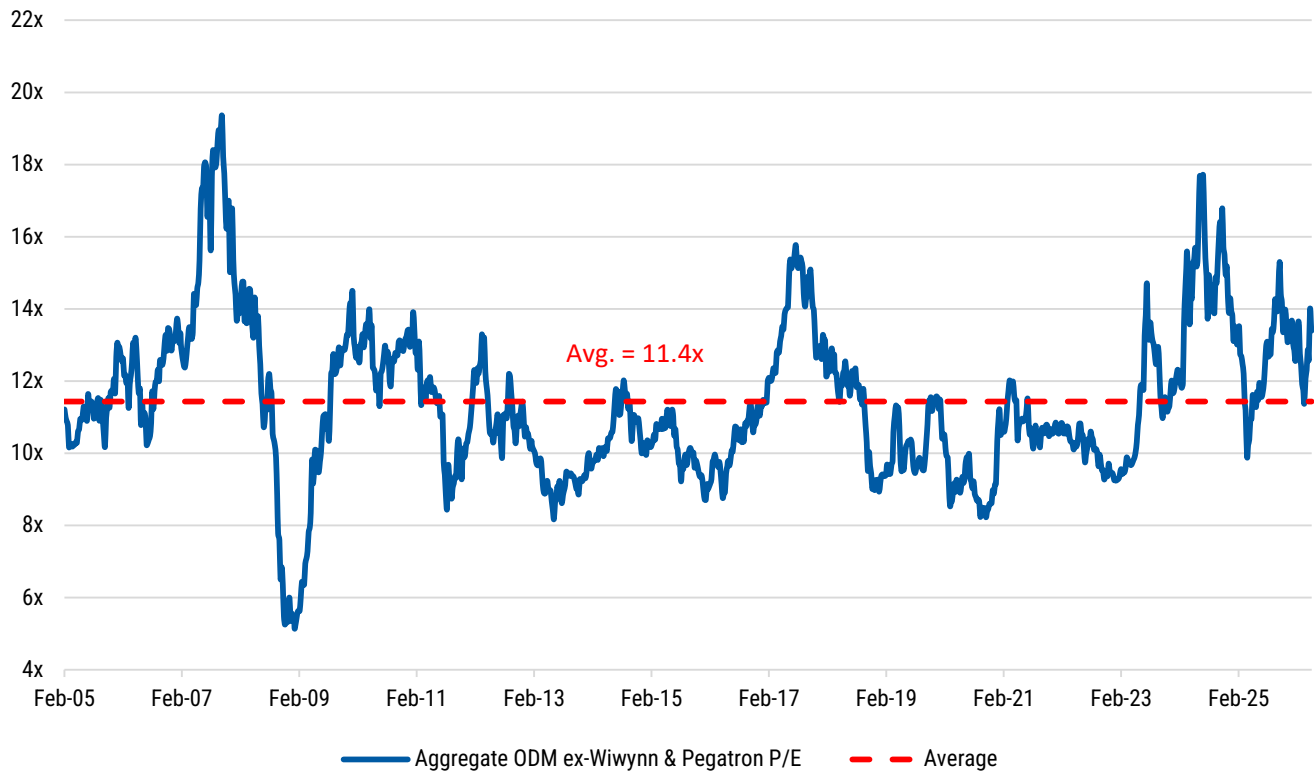


Source: Morgan Stanley Research estimates.

**Exhibit 13:**

Historical P/E valuation for Taiwan's ODMs in aggregate

**Aggregate ODM (ex-Wiwynn & Pegatron) P/E**



Source: FactSet, Morgan Stanley Research.

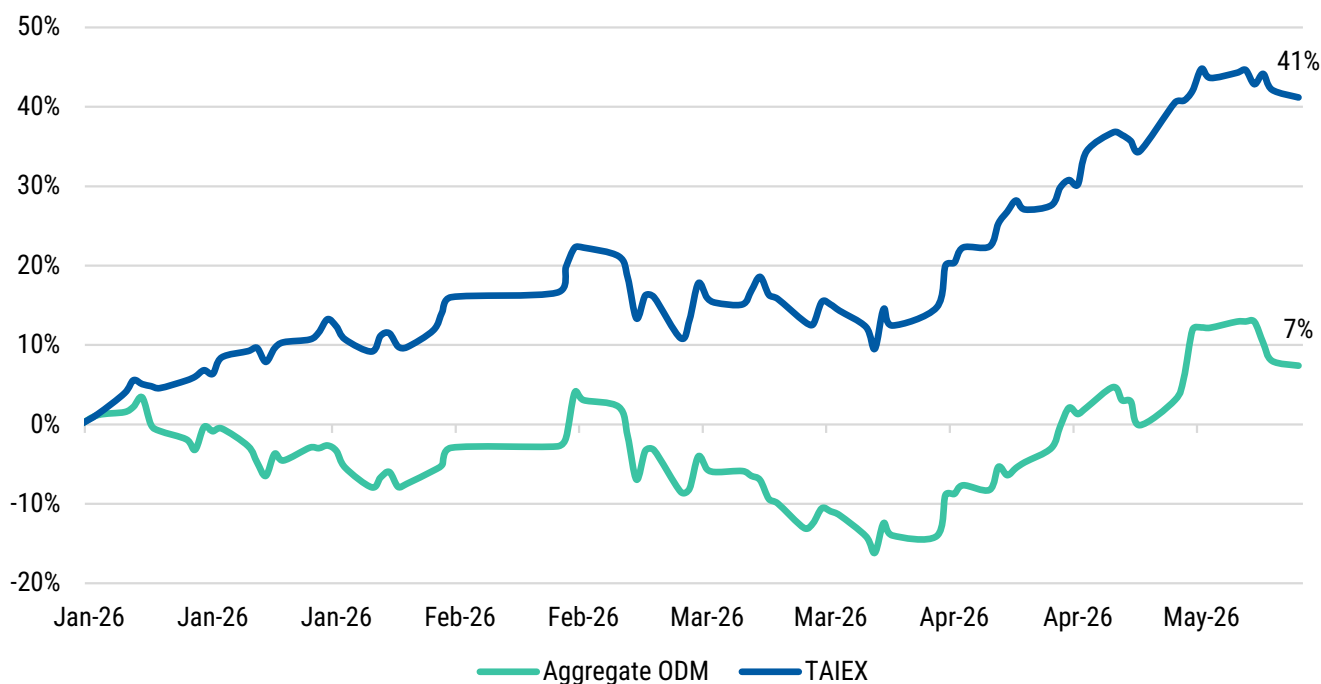
**Exhibit 14:** AI revenue exposure by different ODMS (2025 vs 2026e)

AI Exposure	CY25	CY26
Hon Hai	27%	32%
Quanta	50%	68%
Wistron	27%	35%
Wiwynn	48%	44%
Compal	<3%	8%
Pegatron	<3%	22%

Source: Morgan Stanley Research estimates.

**Exhibit 15:** ODMS have meaningfully underperformed the TAIEX YTD

### YTD Aggregate ODM vs. TAIEX Performance



Source: FactSet, TEJ.

**Exhibit 16:** Valuation comparison table for the ODMs

ODM Ticker	Company	Closing price (LC)		Rating	Price target	Market cap (US\$ mn)	EPS (LC)			Current P/E (X)			PT PEG (X)			P/B (X)			P/S (X)			EV/EBITDA			ROA (%)			ROE (%)		
		5/18/2026					26E	27E	28E	26E	27E	28E	26E	27E	28E	26E	27E	28E	26E	27E	28E	26E	27E	28E	26E	27E	28E	26E	27E	28E
2317.TW	Hon Hai	248.50		OW	310.00	109,152	16.38	19.90	23.03	15.2	12.5	10.8	0.74	0.58	0.69	1.7	1.6	1.5	0.4	0.3	0.3	6.7	5.6	4.8	4%	5%	5%	11%	13%	14%
2382.TW	Quanta	300.00		OW	385.00	36,709	24.66	28.80	30.80	12.2	10.4	9.7	0.45	0.62	1.41	3.7	3.1	2.6	0.3	0.3	0.3	10.1	8.5	7.7	6%	5%	5%	34%	32%	29%
3231.TW	Wistron	135.50		OW	210.00	14,067	13.95	18.11	21.30	9.7	7.5	6.4	0.18	0.25	0.36	1.5	1.3	1.1	0.1	0.1	0.1	3.0	2.4	1.9	4%	4%	4%	16%	18%	19%
6669.TW	Wiwynn	5,090.00		OW	7,500.00	27,319	357.51	466.82	539.38	14.2	10.9	9.4	0.47	0.36	0.61	5.8	4.4	3.5	0.6	0.4	0.4	9.7	7.7	6.2	17%	16%	16%	46%	46%	41%
2324.TW	Compal	28.25		UW	23.00	4,002	1.98	2.23	2.63	14.3	12.7	10.7	0.33	1.02	0.59	0.8	0.8	0.8	0.1	0.1	0.1	6.2	5.9	5.2	2%	2%	2%	6%	6%	7%
4938.TW	Pegatron	76.50		EW	85.00	6,335	5.39	7.61	8.04	14.2	10.0	9.5	164.08	0.24	1.69	0.8	0.7	0.7	0.2	0.1	0.1	3.6	2.8	2.8	2%	3%	2%	6%	7%	8%
2356.TW	Inventec	52.20		NC	--	5,938	3.05	3.59	4.02	17.1	14.5	13.0	0.63	0.82	1.11	2.5	2.5	2.0	0.2	0.2	0.2	10.9	10.9	10.9	3%	3%	NA	15%	17%	16%
Average										13.8	11.2	9.9	0.47	0.56	0.92	2.4	2.0	1.7	0.3	0.2	0.2	7.2	6.3	5.7	5%	5%	6%	19%	20%	19%
Median										14.2	10.9	9.7	0.47	0.58	0.69	1.7	1.6	1.5	0.2	0.2	0.2	6.7	5.9	5.2	4%	4%	4%	15%	17%	16%

Source: FactSet (for Inventec), Morgan Stanley Research estimates (for the other ODMs).

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(as of April 30, 2026)

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Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1546	42%	467	51%	30%	709	44%
Equal-weight/Hold	1568	43%	358	39%	23%	715	44%
Not-Rated/Hold	4	0%	0	0%	0%	1	0%
Underweight/Sell	555	15%	84	9%	15%	202	12%
Total	3,673		909			1627	

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

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**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.

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## INDUSTRY COVERAGE: Greater China Technology Hardware

COMPANY (TICKER)	RATING (AS OF)	PRICE* (05/19/2026)
<b>Andy Meng, CFA</b>		
AAC Technologies Holdings (2018.HK)	O (01/29/2024)	HK\$41.86
Accelink Technologies Co. Ltd. (002281.SZ)	U (05/12/2022)	Rmb230.89
BYD Electronics (0285.HK)	O (04/28/2023)	HK\$26.60
China TransInfo Technology Co Ltd (002373.SZ)	E (07/18/2023)	Rmb8.85
Dahua Technology Co. Ltd. (002236.SZ)	E (12/12/2024)	Rmb18.16
Eoptolink Technology Inc Ltd (300502.SZ)	O (02/27/2026)	Rmb572.50
Genius Electronic Optical Co. Ltd. (3406.TW)	E (04/23/2025)	NT\$550.00
Gosuncn Technology Group Co Ltd (300098.SZ)	U (11/07/2022)	Rmb6.00

HIKVision Digital Technology (002415.SZ)	E (12/12/2024)	Rmb33.38
Largan Precision (3008.TW)	E (10/17/2025)	NT\$3,200.00
LianChuang Electronic Technology Co Ltd (002036.SZ)	U (06/12/2024)	Rmb8.83
OFILM Group Co Ltd (002456.SZ)	U (06/12/2024)	Rmb8.91
Q Technology (Group) Company Ltd (1478.HK)	U (03/23/2026)	HK\$8.50
Quectel Wireless Solutions Co Ltd (603236.SS)	E (10/09/2024)	Rmb75.94
Shanghai Conant Optical Co Ltd (2276.HK)	O (04/10/2026)	HK\$43.08
Shenzhen Transsion Holdings Co Ltd (688036.SS)	E (03/23/2026)	Rmb66.02
Sunny Optical (2382.HK)	E (03/23/2026)	HK\$62.65
Suzhou TFC Optical Communication Co Ltd. (300394.SZ)	E (11/06/2025)	Rmb363.00
Wingtech Technology Co Ltd (600745.SS)	U (05/18/2026)	Rmb16.84
Xiaomi Corp (1810.HK)	O (04/14/2021)	HK\$30.64
Yangtze Optical Fibre and Cable JSC Ltd (601869.SS)	U (10/13/2021)	Rmb397.90
Yangtze Optical Fibre and Cable JSC Ltd (6869.HK)	E (04/20/2023)	HK\$234.80
Yongxin Optics Co Ltd (603297.SS)	E (11/15/2022)	Rmb145.49
Zhejiang Crystal-Optech Co Ltd (002273.SZ)	O (11/15/2022)	Rmb38.54
Zhongji Innolight Co Ltd (300308.SZ)	++	Rmb1,030.00
ZTE Corporation (0763.HK)	E (03/11/2024)	HK\$24.72
ZTE Corporation (000063.SZ)	U (07/02/2021)	Rmb37.65
<b>Derrick Yang</b>		
Accton Technology Corporation (2345.TW)	O (06/06/2024)	NT\$2,355.00
Advantech (2395.TW)	O (01/20/2021)	NT\$465.00
AirTAC International (1590.TW)	O (04/16/2025)	NT\$1,405.00
AU Optronics (2409.TW)	E (02/10/2026)	NT\$18.75
Bizlink (3665.TW)	O (03/10/2025)	NT\$1,965.00
BOE Technology (000725.SZ)	O (09/06/2019)	Rmb4.31
Chenbro (8210.TW)	O (07/23/2025)	NT\$1,285.00
Chroma Ate Inc. (2360.TW)	O (10/05/2021)	NT\$2,065.00
E Ink Holdings Inc. (8069.TWO)	O (05/11/2026)	NT\$222.00
Ennostar Inc (3714.TW)	U (09/23/2022)	NT\$67.40
Hiwin Technologies Corp. (2049.TW)	O (03/30/2026)	NT\$359.50
Innolux (3481.TW)	E (04/07/2025)	NT\$36.95
King Slide Works Co. Ltd. (2059.TW)	O (11/08/2023)	NT\$4,500.00
Lens Technology (300433.SZ)	E (07/22/2020)	Rmb37.96
Radiant Opto-Electronics Corporation (6176.TW)	E (03/01/2024)	NT\$104.50
Sanan Optoelectronics (600703.SS)	U (08/21/2023)	Rmb16.85
TCL Corp. (000100.SZ)	E (04/07/2025)	Rmb4.30
Tianma Microelectronics (000050.SZ)	U (01/24/2018)	Rmb7.52
Wuhan Jingce Electronic Group Co Ltd (300567.SZ)	E (11/26/2021)	Rmb187.50
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Asustek Computer Inc. (2357.TW)	U (11/16/2025)	NT\$640.00
Compal Electronics (2324.TW)	U (04/23/2025)	NT\$27.60
FIT Hon Teng Ltd (6088.HK)	O (11/03/2025)	HK\$8.80
Giga-Byte Technology Co. Ltd. (2376.TW)	E (11/16/2025)	NT\$302.00
Gold Circuit Electronics Ltd. (2368.TW)	O (10/06/2022)	NT\$1,235.00
Inspur Electronic Information (000977.SZ)	E (08/28/2023)	Rmb72.23
Lenovo (0992.HK)	E (11/16/2025)	HK\$12.71
Lotes Co. Ltd. (3533.TW)	E (05/12/2025)	NT\$2,360.00
Nan Ya PCB (8046.TW)	O (02/23/2026)	NT\$829.00
Pegatron Corporation (4938.TW)	E (03/25/2026)	NT\$77.20
Quanta Computer Inc. (2382.TW)	O (05/01/2023)	NT\$290.00
Shengyi Technology Co Ltd. (600183.SS)	E (05/26/2022)	Rmb100.78
Shennan Circuits Co Ltd (002916.SZ)	E (08/24/2023)	Rmb332.30
Unimicron (3037.TW)	O (02/23/2026)	NT\$823.00

Wistron Corporation (3231.TW)	O (07/12/2023)	NT\$132.50
Wiwynn Corp (6669.TW)	O (11/10/2025)	NT\$4,910.00
Yageo Corp. (2327.TW)	O (10/28/2025)	NT\$520.00
Zhen Ding (4958.TW)	O (05/18/2026)	NT\$439.00
<b>Sharon Shih</b>		
Asia Vital Components Co. Ltd. (3017.TW)	O (07/30/2024)	NT\$2,340.00
Auras Technology Co Ltd (3324.TWO)	E (05/04/2023)	NT\$966.00
Catcher Technology (2474.TW)	U (11/17/2025)	NT\$183.00
Delta Electronics Inc. (2308.TW)	O (07/13/2017)	NT\$1,915.00
Fositek Corp (6805.TW)	O (06/25/2025)	NT\$1,720.00
Foxconn Industrial Internet Co. Ltd. (601138.SS)	O (07/10/2019)	Rmb68.56
Foxconn Technology (2354.TW)	U (04/23/2025)	NT\$57.50
GoerTek Inc (002241.SZ)	U (04/23/2025)	Rmb25.72
Hon Hai Precision (2317.TW)	O (03/15/2024)	NT\$240.00
LandMark Optoelectronics Corporation (3081.TWO)	E (03/26/2026)	NT\$2,490.00
Lingyi Itech Guangdong Co (002600.SZ)	U (04/23/2025)	Rmb16.91
Lite-On Technology (2301.TW)	E (01/15/2025)	NT\$204.00
Luxshare Precision Industry Co., Ltd. (002475.SZ)	O (10/24/2016)	Rmb72.40
Sunonwealth Electric Machine Industry Co (2421.TW)	E (02/23/2024)	NT\$143.00
Tong Hsing (6271.TW)	E (03/18/2019)	NT\$187.50
Visual Photonics Epitaxy Co Ltd (2455.TW)	E (09/11/2023)	NT\$400.50

Stock Ratings are subject to change. Please see latest research for each company.

\* Historical prices are not split adjusted.