

# Semiconductors

## PCB sector: 1H24 earnings preview

Seven out of the 16 leading PCB manufacturers in China have announced profit alerts by mid-July, with an avg. 75% to 105% YoY and 21% to 43% QoQ increase in net profit for 2Q24. We think the strong performance is supported by inventory restocking and upgrade cycle driven by the AI boom. These positive announcements added momentum for the PCB sector, with an avg. 9% month-to-date increase in share price (for the seven companies with profit alerts announcements).

We believe the sector is recovering from the cyclical trough and is expected to deliver modest growth throughout 2024E (5.0% YoY per Prismark). According to Prismark, global PCB sales finally achieved YoY growth in 1Q24, after six quarters of consecutive declines. The PCB market is projected to grow both in sales value and board area sold in 2024.

However, the growth won't evenly distributed across end markets. Demands for AI servers and networking equipment remain strong, while other segments may fall behind, such as traditional wireless communication. For example, WUS (002463 CH, NR) stands out as a major beneficiary of the AI boom with a share price gain of 65.1% YTD. According to Bloomberg consensus, the company's revenue/NP are forecasted to grow by 28.7%/51.4% YoY in 2024E due to high AI exposure. WUS's AI server and HPC-related PCB products accounted for 21.1% of its total revenue in 2023.

China remains the global PCB manufacturing hub with 54% market share in 2023, according to Prismark. The output of China PCB market decreased 13.2% YoY to US\$37.8bn in 2023, affected by industry headwinds and supply chain diversification. We have selected 10 of the leading Chinese PCB players by sales value, with over 50% combined market share in China. Their aggregated revenue is expected to grow 17%/14% in 2024/25E per Bloomberg consensus, given 1) demand is expected to gradually recover, 2) downstream inventory correction has almost completed, and 3) a low base from 2023. We think these will propel China PCB market's recovery.

Among the key materials for PCB, copper price is likely to remain at its highs. 3M LME copper price has declined from its peak of US\$10.9k/t to US\$9.5k/t in recent months. We think the uncertainty surrounding the pace of demand recovery could lead to short-term price volatility. The price is expected to have support in the mid-term, considering the potential rate cuts by the Fed in September (based on our macro team's view) and large adoption of the material in energy transition. For PCB suppliers, the high material cost could pose a threat to those with limited bargaining power.

For the two companies under our coverage, we adjust our TP for Shengyi Tech (600183 CH, BUY) to RMB26.40 on higher valuation (28.8x 2024E P/E; previous: 22.5x P/E) and forecasts (higher estimates in sales volume/utilization and margin expansion). We revise up the valuation as we think 1) the PCB sector is recovering from the cyclical trough, 2) Shengyi Tech is one of the industry leaders (ranked No.2 in CCL market per Prismark) and will be a key beneficiary from the AI boom ([report](#)).

We adjust our TP for Shennan (002916 CH, HOLD) to RMB106.40 on 1) higher valuation (32.7x 2024E P/E, equal to 5-year historical forward P/E; previous: 27.0x) as the sector is bottoming out, and 2) revised-up estimates (higher utilization for Shennan's PCB segment). Shennan's share price is currently trading at 38x 2024E P/E, which has priced in all the positive catalysts and is rich in our view.

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(Maintain)**

### China Semiconductors Sector

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## 2Q24 earnings preview: seven out of the 16 leading Chinese PCB suppliers have announced profit alerts

As of 18 Jul 2024, seven out of the 16 leading PCB manufacturers in China have announced profit alerts, with an average 75% to 105% YoY and 21% to 43% QoQ increase in net profit for 2Q24. **The sector is recovering from the cyclical trough and is expected to deliver modest growth in 2024/25E.**

**We think the strong performance is supported by inventory restocking and the upgrade cycle driven by the AI boom.** These positive announcements added momentum for the PCB sector, with an avg. 9% month-to-date increase in share price (for the seven companies with profit alerts announcements).

**Figure 1: Seven out of the 16 leading PCB manufacturers in China have announced profit alerts**

Company	Ticker	YTD perf. %	Net profit (RMBmn)					2Q24E profit alert (RMBmn)	
			1Q23	2Q23	3Q23	4Q23	1Q24	Lower	Upper
Dongshan	002384 CH	<b>47.5</b>	472	353	508	632	289	N/A	N/A
YoY%			29%	-18%	-35%	-20%	-39%		
QoQ%			7%	5%	6%	6%	4%		
Avary Holding	002938 CH	<b>76.8</b>	419	393	1,032	1,443	497	N/A	N/A
YoY%			-29%	-53%	-44%	-17%	19%		
QoQ%			-76%	-6%	163%	40%	-66%		
Shengyi Tech	600183 CH	<b>27.5</b>	<b>248</b>	<b>307</b>	<b>344</b>	<b>265</b>	<b>392</b>	<b>508</b>	<b>558</b>
YoY%			-49%	-32%	32%	-21%	58%	65%	82%
QoQ%			-26%	24%	12%	-23%	48%	30%	42%
Shennan	002916 CH	<b>75.8</b>	<b>206</b>	<b>267</b>	<b>434</b>	<b>490</b>	<b>380</b>	<b>530</b>	<b>620</b>
YoY%			-41%	-34%	1%	7%	84%	98%	132%
QoQ%			-55%	30%	62%	13%	-23%	40%	63%
Kinwong	603228 CH	<b>30.6</b>	<b>212</b>	<b>192</b>	<b>296</b>	<b>236</b>	<b>318</b>	<b>320</b>	<b>384</b>
YoY%			20%	-34%	5%	-26%	50%	66%	100%
QoQ%			-34%	-9%	54%	-20%	35%	1%	21%
WUS	002463 CH	<b>65.1</b>	<b>200</b>	<b>292</b>	<b>460</b>	<b>559</b>	<b>515</b>	<b>565</b>	<b>645</b>
YoY%			-20%	3%	19%	27%	157%	93%	121%
QoQ%			-54%	46%	58%	22%	-8%	10%	25%
Victory Giant	300476 CH	<b>115.4</b>	125	220	241	86	210		
YoY%			-38%	-13%	30%	-43%	68%		
QoQ%			-17%	76%	10%	-64%	145%		
Honflex	300657 CH	<b>-22.6</b>	-74	-106	-61	-194	28		
YoY%			108%	1698%	-11%	-2%	-138%		
QoQ%			-62%	43%	-42%	217%	-115%		
Suntak	002815 CH	<b>-3.6</b>	157	150	92	10	119		
YoY%			0%	-4%	-49%	-93%	-24%		
QoQ%			10%	-5%	-38%	-90%	1132%		
Fastprint	002436 CH	<b>-34.1</b>	7	11	172	21	25		
YoY%			-96%	-93%	8%	187%	232%		
QoQ%			3%	41%	1534%	-88%	20%		
Goworld	000823 CH	<b>-9.8</b>	15	54	62	66	17		
YoY%			-80%	-46%	-49%	-45%	17%		
QoQ%			-88%	264%	15%	7%	-74%		
Olympic	603920 CH	<b>27.2</b>	<b>75</b>	<b>121</b>	<b>178</b>	<b>121</b>	<b>109</b>	<b>166</b>	<b>206</b>
YoY%			59%	40%	8%	-11%	45%	37%	70%
QoQ%			-45%	61%	48%	-32%	-10%	53%	90%
ASKPCB	002913 CH	<b>-10.3</b>	131	147	162	78	112		
YoY%			-12%	12%	21%	-172%	-15%		
QoQ%			-222%	12%	11%	-52%	43%		
Shengyi Elec.	688183 CH	<b>124.3</b>	<b>-4</b>	<b>14</b>	<b>-27</b>	<b>-7</b>	<b>26</b>	<b>67</b>	<b>84</b>
YoY%			-105%	-84%	-136%	-110%	-764%	394%	515%
QoQ%			-105%	-441%	-300%	-73%	-459%	153%	216%
Founder	600601 CH	<b>13.1</b>	<b>-21</b>	<b>69</b>	<b>71</b>	<b>16</b>	<b>77</b>	<b>50</b>	<b>95</b>

YoY%			-84%	-172%	-133%	12%	-474%	-27%	39%
QoQ%			-240%	-434%	3%	-77%	370%	-35%	24%
Bomin	603936 CH	-22.4	21	51	-15	-622	26		
YoY%			-48%	-26%	-175%	1171%	25%		
QoQ%			-143%	144%	-130%	3932%	-104%		
Aggregate			2,189	2,534	3,951	3,199	3,139		
YoY%								75%	105%
QoQ%								21%	43%

Source: Prismark, Bloomberg, Company filings, CMBIGM estimates  
Note: the seven companies that have issued 2Q24 profit alerts are marked in bold; data as of 18 Jul 2024.

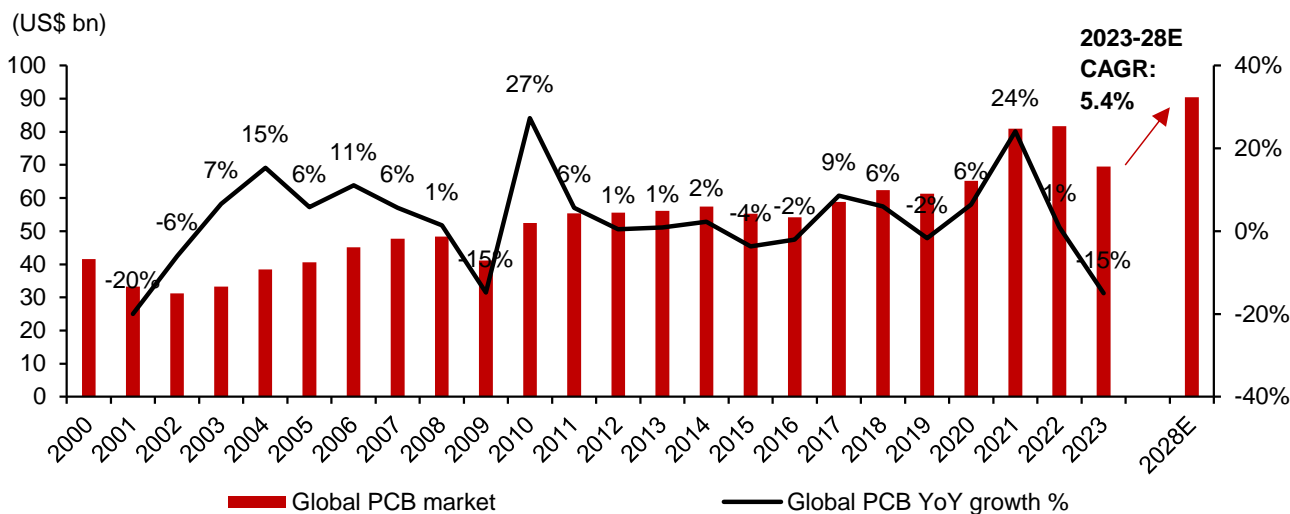
## Global PCB market: anticipate modest recovery in 2024

### Global PCB market finally achieved YoY growth in 1Q24, after six quarters of consecutive declines

According to Prismark, global PCB sales finally achieved YoY growth in 1Q24, after six quarters of consecutive declines. Another signal of the end of downward trajectory in addition to the QoQ growth in 3Q/4Q23 as we mentioned in our last report ([link](#)).

The PCB market is expected to grow both in value and board area sold in 2024. Prismark forecasted the global PCB market to grow 5.0% YoY in 2024; in the long term, the sector is expected to grow at a 5.4% 2023-28E CAGR.

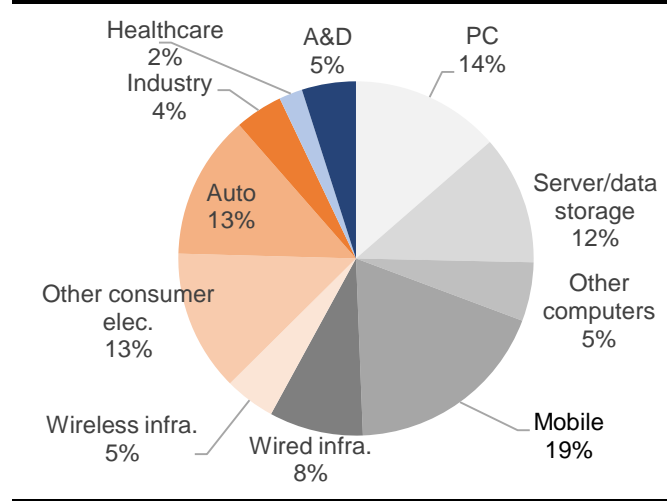
**Figure 2: Global PCB sales is expected to grow at a 5.4% 2023-28E CAGR**



Source: Prismark, CMBIGM

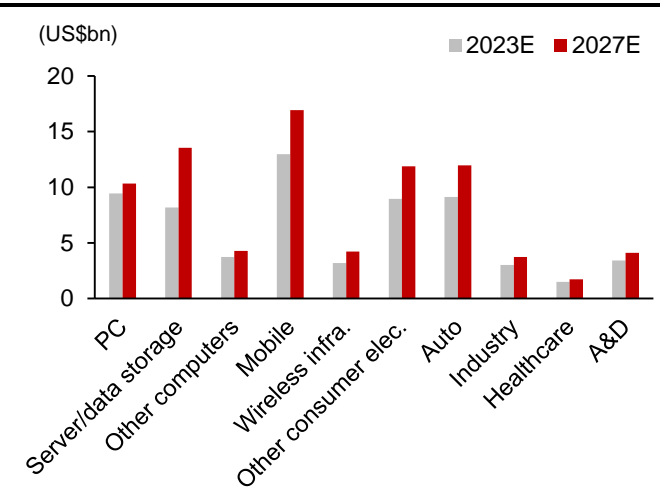
By application, strong demand for PCB comes from AI servers and networking equipment markets, particularly for high-density Interconnects (HDI) and high layer-count multi-layer boards (MLboards). These segments are projected to see high double-digit growth, per Prismark. Conversely, other segments may continue to face challenges. Low-end rigid boards and certain substrate products are likely to experience persist ASP pressures through 2H24 as non-AI related demand shall remain flat. Additionally, rising material costs could pose a threat to suppliers with limited bargaining power.

**Figure 3: PCB market sales breakdown by application (2023)**



Source: Prismark, CMBIGM

**Figure 4: Server market is expected to have the highest PCB demand growth CAGR (2023-27E) of 6.5%**



Source: Prismark, company filings, CMBIGM estimates

## The aggregate revenue of the world's 13 leading PCB manufacturers is forecasted to grow 6%/11% YoY in 2024/25E

The world's 13 leading PCB manufacturers, which accounted for ~45% of industry sales, reported an aggregate revenue decline of 16% YoY in 2023, mirroring the broader market's challenges in 2023 with a 15% YoY decline in PCB industry sales.

Looking ahead, Bloomberg consensus indicates an optimistic turnaround for the 13 leading public PCB companies. Their revenues combined are anticipated to increase by 5.6% and 10.9% YoY in 2024/25E.

**Figure 5: 13 leading global PCB manufacturers**

Company	Ticker	Revenue (US\$m)			YoY growth (%)		
		2023	2024E	2025E	2023	2024E	2025E
Zhen Ding	4958 TT	4,858	5,129	5,570	-15.5%	5.6%	8.6%
Unimicron	3037 TT	3,338	3,694	4,651	-29.2%	10.7%	25.9%
Dongshan Precision	002384 CH	4,752	5,155	5,776	1.2%	8.5%	12.0%
TTM	TTMI US	2,240	2,366	2,504	-10.4%	5.6%	5.9%
Compeq	2313 TT	2,152	2,332	2,586	-16.1%	8.4%	10.9%
Tripod	3044 TT	1,889	2,040	2,266	-14.5%	8.0%	11.0%
Shennan	002916 CH	1,910	2,195	2,525	-8.2%	14.9%	15.0%
AT&S	ATS AV	1,630	1,726	2,448	-19.9%	5.9%	41.9%
Kinwong	603228 CH	1,519	1,735	2,033	-2.8%	14.2%	17.2%
Ibiden	4062 JP	2,717	2,333	2,647	-15.2%	-14.1%	13.5%
WUS	002463 CH	1,262	1,584	1,897	1.8%	25.5%	19.8%
Nanya	8046 TT	1,356	1,177	1,542	-37.5%	-13.2%	31.0%
Shinko	6967 JT	1,501	1,398	1,533	-35.4%	-6.8%	9.6%
<b>Top 13 total</b>		<b>31,124</b>	<b>32,865</b>	<b>36,446</b>	<b>-16.0%</b>	<b>5.6%</b>	<b>10.9%</b>
Aggregate market share %		44.8%	45.0%				
Global PCB sales		69,516	72,971				
<b>Global PCB market YoY growth</b>					<b>-15.0%</b>	<b>5.0%</b>	

Source: Prismark, Bloomberg, company filings, CMBIGM

Note: revenue forecasts are Bloomberg consensus

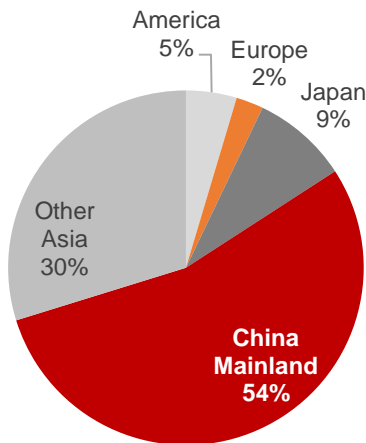
## China PCB market: global share to remain over 50% despite industry headwinds and supply chain diversification challenges

### China's market share is expected to remain above 50% despite of supply chain diversification

**China remains the predominant global PCB manufacturing hub with 54% market share in 2023, per Prismark.** The output of China PCB market decreased 13.2% YoY to US\$37.8bn in 2023, affected by an overall weak industry demand and supply chain diversification.

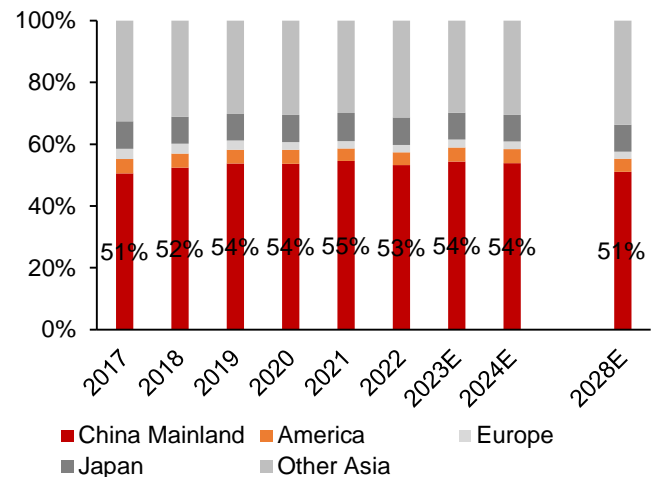
**Despite the headwinds, China will maintain its largest share in PCB manufacturing.** Per Prismark, China PCB output is forecasted to grow 4.1% YoY to US\$39.3bn in 2024, and maintain the same growth CAGR of 4.1% during 2023 and 2028E (vs. 5.4% 2023-28E CAGR globally). China's market share is expected to decrease slightly to 51% by the end of 2028.

**Figure 6: China remains the predominant PCB manufacturing hub with over 50% share (2023)**



Source: Prismark, CMBIGM

**Figure 7: China's market share is expected to decrease slightly due to supply chain diversification**



Source: Prismark, CMBIGM



## The aggregate revenue of the 10 leading PCB manufacturers in China is forecasted to grow 17%/14% in 2024/25E

We exclude six PCB manufacturers from the 16 leading Chinese PCB manufacturers by sales that do not have sufficient Bloomberg coverage and forecast information. We think the rest 10 PCB manufacturers can be regarded as an indicator for China PCB market, given their aggregate revenue accounted for more than half of the total China PCB sales or ~30% of global PCB sales in 2023.

**The aggregate estimated revenue of the 10 players suggests 16.6%/14.4% YoY revenue growth in 2024E/25E**, given: 1) demand is expected to gradually recover, 2) downstream inventory correction has almost completed, and 3) a low base from 2023. **We think these will propel China PCB market's recovery.**

**Figure 8: China PCB market outlook based on selected China PCB manufacturers**

Company	Ticker	Revenue (RMBmn)			YoY growth (%)		
		2023	2024E	2025E	2023	2024E	2025E
Dongshan Precision	002384 CH	33,651	37,432	41,941	6.6%	11.2%	12.0%
Avary Holding	002938 CH	32,066	35,768	39,819	-11.4%	11.5%	11.3%
Shengyi Tech	600183 CH	16,586	19,234	21,863	-7.9%	16.0%	13.7%
Shennan	002916 CH	13,526	15,952	18,353	-3.3%	17.9%	15.0%
Kinwong	603228 CH	10,757	12,617	14,786	2.3%	17.3%	17.2%
WUS	002463 CH	8,938	11,469	13,741	7.2%	28.3%	19.8%
Victory Giant	300476 CH	7,931	11,277	13,536	0.6%	42.2%	20.0%
Suntak	002815 CH	5,772	6,305	6,976	-1.7%	9.2%	10.6%
Fastprint	002436 CH	5,360	6,592	8,043	0.1%	23.0%	22.0%
Olympic	603920 CH	4,519	5,503	6,454	2.0%	21.8%	17.3%
<b>Total</b>		<b>139,108</b>	<b>162,148</b>	<b>185,511</b>	<b>-2.2%</b>	<b>16.6%</b>	<b>14.4%</b>
~Equiv. US\$mn		19,644	22,344	25,563			
<b>China PCB market sales (US\$mn)</b>		<b>37,794</b>	<b>39,344</b>		<b>-13.2%</b>	<b>4.1%</b>	
<b>Global PCB market sales (US\$mn)</b>		<b>69,516</b>	<b>72,971</b>		<b>-15.0%</b>	<b>5.0%</b>	
<b>% of global PCB market sales</b>		<b>28.3%</b>	<b>30.6%</b>				
<b>% of China PCB market sales</b>		<b>52.0%</b>	<b>56.8%</b>				

Source: Prismark, Bloomberg, company filings, CMBIGM

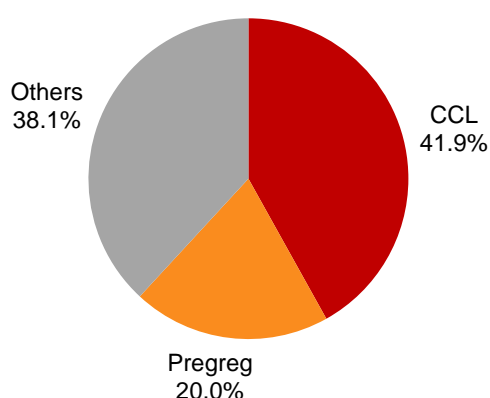
Note: revenue forecasts are from Bloomberg consensus

## Copper price has retreated from previous high, but is expected to remain volatile in the near-term and have support in the mid-term

Price of copper has dropped from the previous high in May 2024 and now is hovering around US\$9,500/tonne. **Prismark believes the rising material costs could pose a threat to suppliers with limited bargaining power.**

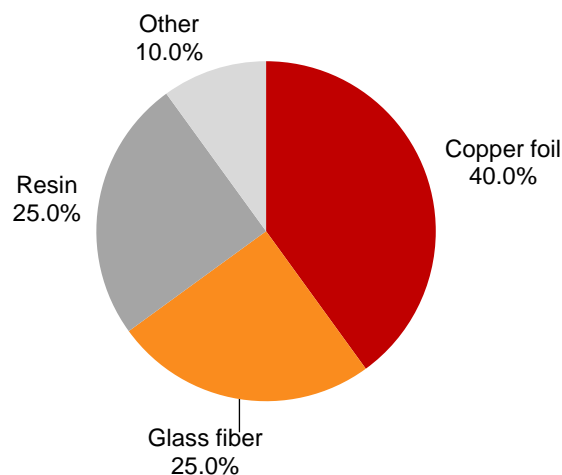
Copper is a key material for PCB. The largest material cost is CCL (approx. 30-70% depending on the type of PCB), of which copper foil (30-50%), glass fiber (~25%) and resin (~25%) are the biggest cost contributors. The reliance on copper as a primary material underscores the sensitivity of PCB manufacturing costs to fluctuations in copper prices.

**Figure 9: CCL is a key material of PCB**



Source: Shengyi Electronics, CMBIGM

**Figure 10: CCL material cost breakdown**

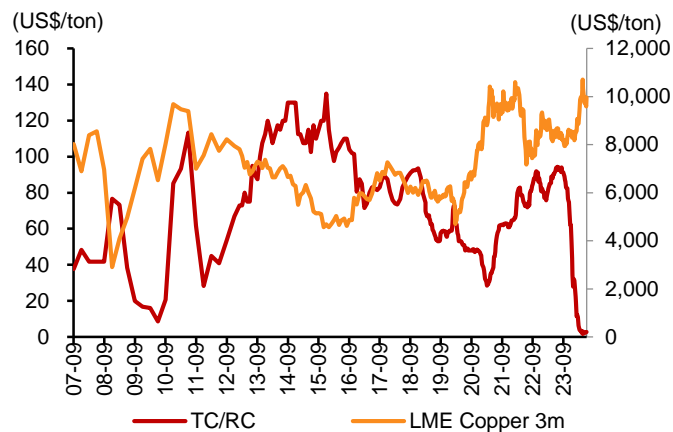


Source: Shengyi Electronics, CMBIGM

**We highlighted an imminent potential increase in copper price in March ([report](#))** when we observed China's copper concentrate TC index reached a historical low at US\$11/tonne. The copper concentrate TC index, a key indicator for copper price, dropped by more than 90% in April from six months earlier due to copper supply shortage and smelters' capacity expansion. During this period, there was also widespread speculation regarding potential cuts to US interest rates later in 2024. **These factors altogether put upward pressure on copper prices.**

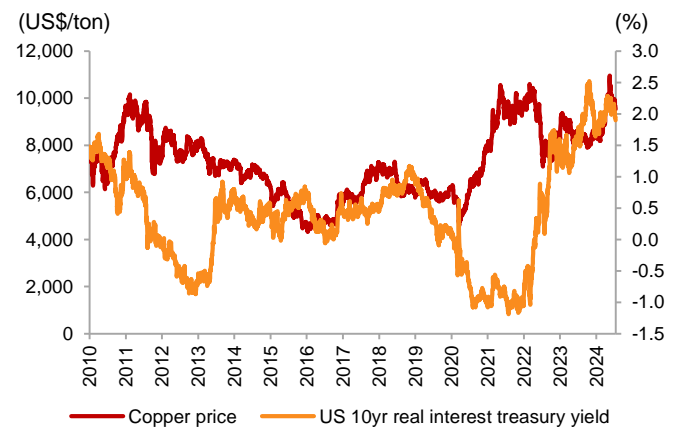
After our last report ([link](#)), we noticed the TC index furthered declined, dropping to as low as US\$1.7/tonne in May 2024. As of July 5th, 2024, the TC/RC index rebounded to US\$2.7/tonne (95% decline YTD and 33% decline in the past three months).

Figure 11: Copper prices vs. TC/RC trend



Source: Wind, CMBIGM

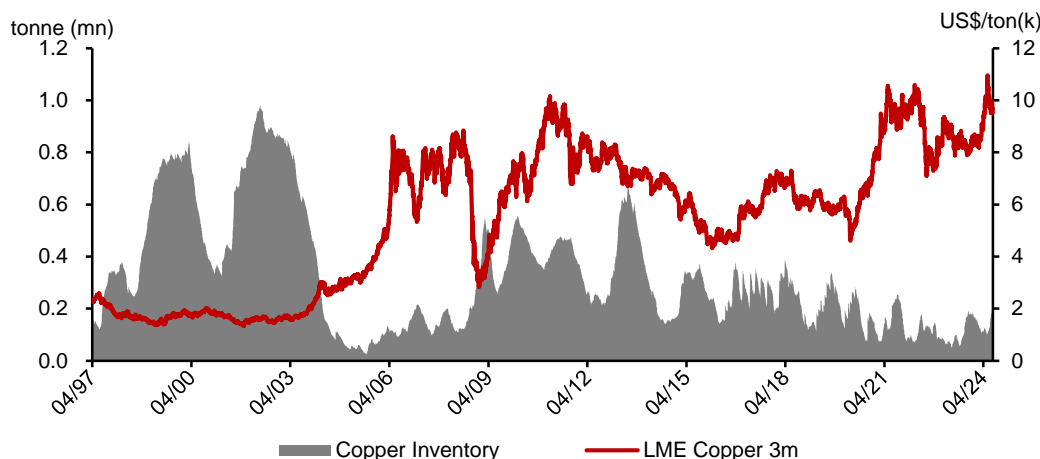
Figure 12: Copper prices vs. US 10-yr interest rates



Source: Wind, CMBIGM

LME copper price (3M) has been steady climbing since the beginning of 2024, increasing by 18% YTD or 6% in the past three months. It reached as high as US\$10,958/tonne in May 2024. The rise was mainly due to 1) low supply due to mining disruptions, 2) increasing demand from resumed economic activities, clean energy transitions and AI demand, and 3) anticipation for potential US interest rate cuts.

Figure 13: LME 3M copper price peaked in May 2024



Source: Wind, CMBIGM

**Looking forward, copper price is likely to remain high.** We think the uncertainty surrounding the pace of demand recovery could lead to short-term price volatility. The price is expected to have support in the mid-term, considering the potential rate cuts by the Fed in September and large adoption of the material for energy transition.

## Shengyi Tech (600183 CH, BUY, TP: RMB26.40)

We expect Shengyi Tech to have a strong recovery this year, with projected revenue/NP growth of 24.1%/85.8% YoY to RMB20.6bn/RMB2.2bn in 2024E driven by favorable product mix and demand recovery from a low base in 2023. We expect gross margin to expand to 22.2%/23.0% in 2024/25E (vs. 19.2%/21.3% in 2023/1Q24), and net margin to increase to 10.5%/11.9% during the same period (vs/ 7.0%/8.9% in 2023/1Q24).

We revise up our 2024/25E forecasts by 5%/3% for revenue and 4%/7% for net profit. The increase in forecast reflects 1) our higher estimates in sales volume of CCL/PCB products (higher utilization and recovering demand for high-end PCB products), and 2) margin expansion due to improving GPM and operational efficiency.

We maintain BUY rating with TP revised up to RMB26.40 (previous: RMB19.69), based on 28.8x 2024E P/E (vs. previous 22.5x), 10% higher than the stock's 5-year historical forward P/E of 26.1x. We revise up the valuation as we think 1) the PCB/CCL sector is recovering from the cyclical trough, 2) Shengyi Tech is one of the industry leaders (ranked No.2 in [China's or global?] CCL market per Prismark) and will be a key beneficiary of the AI boom ([report](#)), and 3) 2024-26E EPS CAGR is projected at 28.1%, implying a PEG ratio close to 1.

Figure 14: Earnings Summary

(YE 31 Dec)	FY22A	FY23A	FY24E	FY25E	FY26E
Revenue (RMB mn)	18,014	16,586	20,585	24,658	27,131
YoY growth (%)	(11.1)	(7.9)	24.1	19.8	10.0
Gross margin (%)	22.0	19.2	22.2	23.0	23.9
Operating profit (RMB mn)	1,785.0	1,272.5	2,402.9	3,253.6	3,942.2
YoY growth (%)	(46.2)	(28.7)	88.8	35.4	21.2
Net profit (RMB mn)	1,530.8	1,164.0	2,162.2	2,927.9	3,547.8
YoY growth (%)	(45.9)	(24.0)	85.8	35.4	21.2
EPS (Reported) (RMB)	0.66	0.50	0.92	1.24	1.50
P/E (x)	34.0	44.9	24.5	18.1	14.9
ROE (%)	11.5	8.5	14.9	18.8	21.5

Source: Company data, CMBIGM estimates

Figure 15: CMBIGM estimates vs. consensus

RMB mn	CMBI estimates			Consensus			Diff (%)		
	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Revenue	20,585	24,658	27,131	19,234	21,863	24,625	7%	13%	10%
Gross profit	4,561	5,676	6,476	4,277	5,078	5,854	7%	12%	11%
Net profit	2,162	2,928	3,548	1,842	2,336	2,804	17%	25%	27%
EPS (RMB)	0.92	1.24	1.50	0.78	0.99	1.19	17%	25%	26%
Gross margin	22.2%	23.0%	23.9%	22.2%	23.2%	23.8%	-0.1 ppt	-0.2 ppt	0.1 ppt
Net margin	10.5%	11.9%	13.1%	9.6%	10.7%	11.4%	0.9 ppt	1.2 ppt	1.7 ppt

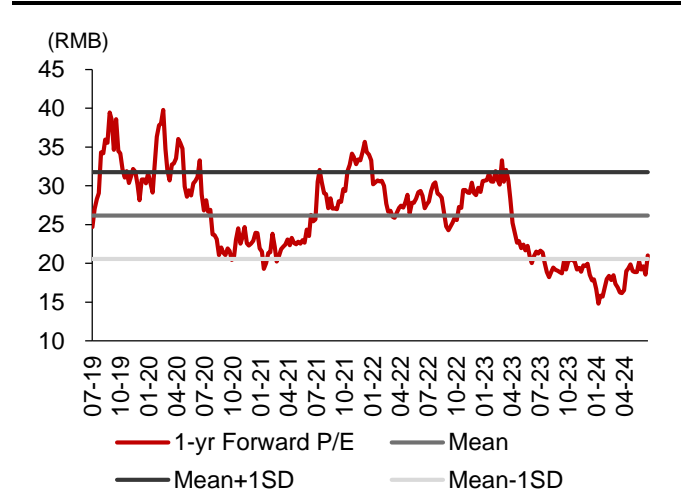
Source: Bloomberg, CMBIGM estimates

Figure 16: Earnings revision

RMB mn	New			Old			Diff (%)		
	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Revenue	20,585	24,658	27,131	19,570	23,952	NA	5%	3%	NA
Gross profit	4,561	5,676	6,476	4,322	5,514	NA	6%	3%	NA
Net profit	2,162	2,928	3,548	2,034	2,706	NA	6%	8%	NA
EPS (RMB)	0.92	1.24	1.50	0.88	1.16	NA	4%	7%	NA
Gross margin	22.2%	23.0%	23.9%	22.1%	23.0%	NA	0.1 ppt	0 ppt	NA
Net margin	10.5%	11.9%	13.1%	10.4%	11.3%	NA	0.1 ppt	0.6 ppt	NA

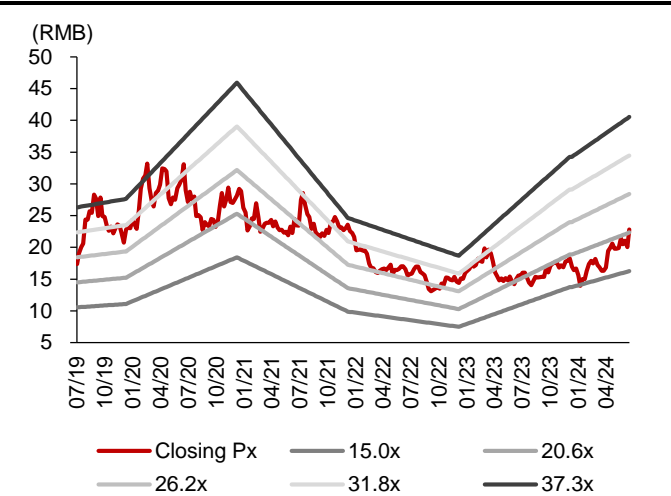
Source: Company data, CMBIGM estimates

Figure 17: 12M forward PE range



Source: Company data, CMBIGM estimates

Figure 18: 12M forward PE band



Source: Company data, CMBIGM estimates

## Financial Summary - Shengyi Tech

INCOME STATEMENT	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec (RMB mn)						
Revenue	20,274	18,014	16,586	20,585	24,658	27,131
Cost of goods sold	(14,837)	(14,045)	(13,395)	(16,024)	(18,981)	(20,655)
Gross profit	5,437	3,969	3,191	4,561	5,676	6,476
Operating expenses	(2,254)	(2,105)	(1,821)	(2,086)	(2,354)	(2,446)
Selling expense	(351)	(341)	(358)	(413)	(458)	(463)
Admin expense	(910)	(797)	(701)	(768)	(858)	(876)
R&D expense	(964)	(943)	(841)	(982)	(1,151)	(1,240)
Others	(28)	(24)	79	77	113	133
Operating profit	3,316	1,785	1,273	2,403	3,254	3,942
Other income	6	2	2	2	3	3
Other expense	(11)	(14)	(3)	(4)	(5)	(5)
Gain/loss on financial assets at FVTPL	50	(23)	(3)	(3)	(3)	(2)
Other gains/(losses)	47	(82)	(131)	(111)	(108)	(127)
EBIT	3,310	1,773	1,271	2,401	3,252	3,940
Interest income	46	56	49	49	46	48
Interest expense	(139)	(171)	(162)	(141)	(135)	(137)
Pre-tax profit	3,310	1,773	1,271	2,401	3,252	3,940
Income tax	(385)	(141)	(123)	(268)	(362)	(439)
After tax profit	2,925	1,632	1,149	2,134	2,889	3,501
Minority interest	95	101	(15)	(28)	(39)	(47)
Net profit	2,830	1,531	1,164	2,162	2,928	3,548
Gross dividends	1,389	1,053	1,060	1,968	2,665	3,230
BALANCE SHEET	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec (RMB mn)						
Current assets	14,720	14,232	13,999	15,075	17,235	18,124
Cash & equivalents	2,105	3,095	2,756	3,540	2,803	4,264
Restricted cash	181	11	19	39	39	39
Account receivables	7,628	6,809	6,669	6,875	8,670	8,396
Inventories	4,520	4,084	4,271	4,421	5,459	5,180
Prepayment	24	24	33	32	40	43
Other current assets	260	210	251	168	223	203
Non-current assets	9,711	10,963	10,958	10,636	10,426	10,103
PP&E	7,071	7,866	9,064	8,961	8,716	8,424
Right-of-use assets	73	44	22	16	10	4
Deferred income tax	158	220	269	274	296	302
Investment in JVs & assos	622	671	783	796	809	812
Intangibles	1,431	2,128	666	498	473	462
Goodwill	19	0	0	0	0	0
Financial assets at FVTPL	0	25	30	23	15	8
Other non-current assets	337	10	124	68	106	91
Total assets	24,431	25,196	24,957	25,711	27,661	28,227
Current liabilities	7,253	7,377	7,297	7,183	8,117	7,641
Short-term borrowings	1,693	1,558	1,465	1,478	1,444	1,342
Account payables	4,292	3,984	4,152	4,282	5,120	4,775
Tax payable	173	50	82	78	87	87
Other current liabilities	334	1,237	1,072	990	989	990
Contract liabilities	28	20	92	48	70	70
Accrued expenses	733	529	435	306	406	375
Non-current liabilities	2,312	2,522	1,959	1,739	1,833	2,040
Long-term borrowings	1,590	1,175	806	1,054	1,103	1,292
Bond payables	300	800	500	0	0	0
Obligations under finance leases	66	39	21	30	27	30
Deferred income	321	108	118	126	133	137
Other non-current liabilities	35	400	515	528	570	581
Total liabilities	9,565	9,899	9,256	8,921	9,950	9,681
Share capital	2,312	2,327	2,355	2,358	2,358	2,358
Retained earnings	5,370	5,366	5,357	6,445	7,405	8,287
Other reserves	5,415	5,805	6,272	6,299	6,299	6,299
Total shareholders equity	13,096	13,498	13,983	15,101	16,061	16,944
Minority interest	1,770	1,798	1,717	1,688	1,650	1,603
Total equity and liabilities	24,431	25,196	24,957	25,711	27,661	28,227

CASH FLOW	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec (RMB mn)						
Operating						
Profit before taxation	2,925	1,632	1,149	2,134	2,889	3,501
Depreciation & amortization	673	726	835	948	1,001	1,048
Tax paid	(37)	4	(34)	8	19	6
Change in working capital	(1,898)	104	494	(147)	(1,725)	230
Others	113	354	300	5	(140)	87
Net cash from operations	1,776	2,820	2,743	2,948	2,044	4,871
Investing						
Capital expenditure	(1,787)	(1,534)	(1,109)	(801)	(864)	(883)
Acquisition of subsidiaries/ investments	45	377	64	152	179	186
Net proceeds from disposal of short-term investments	(134)	(36)	(116)	(5)	5	5
Others	(4)	(0)	(2)	(3)	(13)	(3)
Net cash from investing	(1,880)	(1,193)	(1,162)	(656)	(692)	(695)
Financing						
Dividend paid	(1,161)	(1,619)	(1,287)	(1,200)	(2,103)	(2,802)
Net borrowings	404	800	(935)	(323)	14	87
Proceeds from share issues	2,254	192	318	15	0	0
Others	(99)	(21)	(15)	0	0	0
Net cash from financing	1,398	(648)	(1,919)	(1,508)	(2,089)	(2,715)
Net change in cash						
Cash at the beginning of the year	818	2,105	3,095	2,756	3,540	2,803
Exchange difference	(6)	11	(1)	0	0	0
Others	1,293	979	(338)	784	(737)	1,461
Cash at the end of the year	2,105	3,095	2,756	3,540	2,803	4,264

Source: Company data, CMBIGM estimates. Note: The calculation of net cash includes financial assets.

## Shennan Circuits (002916 CH, HOLD, TP: RMB106.4)

We expect Shennan to have a modest recovery this year, with projected revenue/NP growth of 18.8%/19.6% YoY from a low base in 2023. We expect gross margin to expand to 24.9%/25.4% in 2024/25E (vs. 23.4%/25.2% in 2023/1Q24), and net margin to slightly increase to 10.4%/11.7% during the same period (vs 10.3%/9.6% in 2023/1Q24).

We revise up our 2024/25E forecasts by 6%/5% for revenue and 4%/8% for net profit. The increase in forecast reflects 1) our view of a better-than-expected 1H24, for Shennan and the PCB sector and 2) higher utilization of Shennan's PCB segment capacity.

The sector's momentum is good, given seven out of the 16 leading PCB manufacturers in China have announced profit alerts so far, with an average 75% to 105% YoY and 21% to 43% QoQ increase in net profit for 2Q24.

Maintain HOLD rating with TP adjusted to RMB106.4 (previous: RMB79), based on 32.7x 2024E P/E (vs. previous 27.0x), corresponding to 5-year historical average forward P/E. We revise up the valuation as we think the PCB/CCL sector is recovering from the cyclical trough and Shennan is expanding its high-end FC-BGA capabilities. The company now has the mass production capability of manufacturing FC-BGA substrates with 14 layers or below and has samples of 14 layers and above being tested at client sites. The targeted valuation is 11% higher than peers average, which is reasonable given Shennan's domestic leading market position and the potential upside from FC-BGA's capabilities. However, the Company's share price is currently trading at ~38x 2024E P/E, which is rich in our view; therefore we maintain HOLD.

**Figure 19: Earnings Summary**

(YE 31 Dec)	FY22A	FY23A	FY24E	FY25E	FY26E
Revenue (RMB mn)	13,992	13,526	16,067	18,348	20,828
YoY growth (%)	0.4	(3.3)	18.8	14.2	13.5
Operating profit (RMB mn)	1,880.1	1,611.2	2,006.5	2,512.8	3,133.6
YoY growth (%)	(1.0)	(14.3)	24.5	25.2	24.7
Net profit (RMB mn)	1,641.2	1,398.1	1,671.9	2,138.0	2,693.2
YoY growth (%)	10.8	(14.8)	19.6	27.9	26.0
EPS (Reported) (RMB)	3.22	2.72	3.25	4.16	5.24
P/E (x)	38.4	45.5	38.0	29.7	23.6
ROE (%)	13.4	10.6	11.6	13.4	15.0

Source: Company data, CMBIGM estimates

**Figure 20: CMBIGM estimates vs. consensus**

RMB mn	CMBI estimates			Consensus			Diff (%)		
	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Revenue	16,067	18,348	20,828	16,183	18,772	21,737	-1%	-2%	-4%
Gross profit	4,006	4,667	5,448	4,063	4,772	5,612	-1%	-2%	-3%
Net profit	1,672	2,138	2,693	1,786	2,185	2,736	-6%	-2%	-2%
EPS (RMB)	3.25	4.16	5.24	3.46	4.16	5.26	-6%	0%	0%
Gross margin	24.9%	25.4%	26.2%	25.1%	25.4%	25.8%	-0.2 ppt	0 ppt	0.3 ppt
Net margin	10.4%	11.7%	12.9%	11.0%	11.6%	12.6%	-0.6 ppt	0 ppt	0.3 ppt

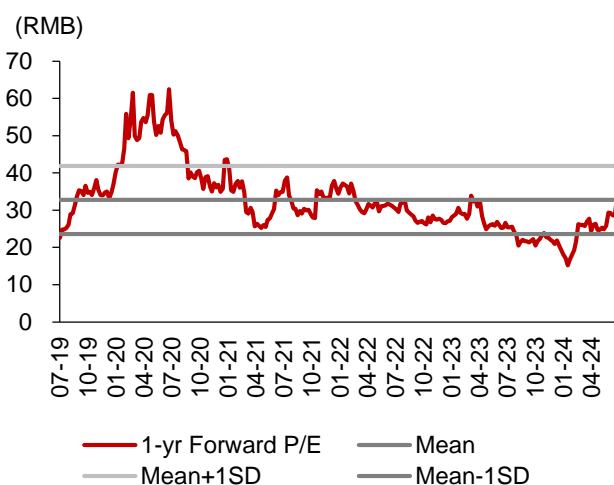
Source: Bloomberg, CMBIGM estimates



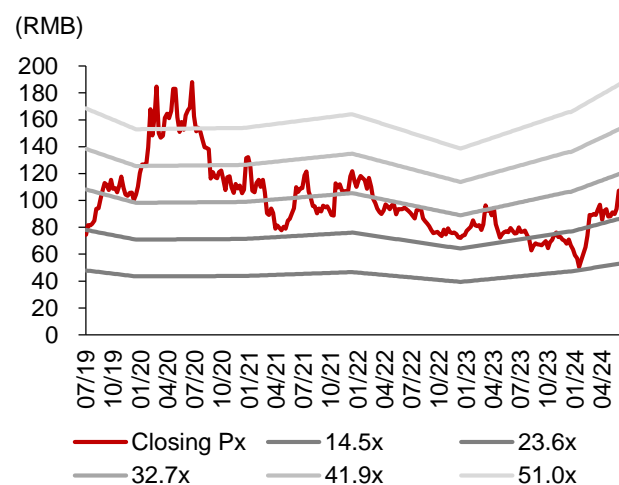
**Figure 21: Earnings revision**

RMB mn	New			Old			Diff (%)		
	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Revenue	16,067	18,348	20,828	15,212	17,408	19,794	6%	5%	5%
Gross profit	4,006	4,667	5,448	3,726	4,386	5,102	8%	6%	7%
Net profit	1,672	2,138	2,693	1,602	1,988	2,471	4%	8%	9%
EPS (RMB)	3.25	4.16	5.24	3.11	3.86	4.80	4%	8%	9%
<b>Gross margin</b>	24.9%	25.4%	26.2%	24.5%	25.2%	25.8%	0.4 ppt	0.2 ppt	0.4 ppt
<b>Net margin</b>	10.4%	11.7%	12.8%	10.5%	11.4%	12.5%	-0.1 ppt	0.2 ppt	0.3 ppt

Source: Company data, CMBIGM estimates

**Figure 22: 12M forward PE range**

Source: Company data, Bloomberg, CMBIGM

**Figure 23: 12M forward PE band**

Source: Company data, Bloomberg, CMBIGM

## Financial Summary - Shennan Circuits

INCOME STATEMENT	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec (RMB mn)						
Revenue	13,943	13,992	13,526	16,067	18,348	20,828
Cost of goods sold	(10,637)	(10,422)	(10,357)	(12,062)	(13,681)	(15,380)
Gross profit	3,306	3,571	3,170	4,006	4,667	5,448
Operating expenses	(1,406)	(1,691)	(1,558)	(1,999)	(2,154)	(2,314)
SG&A expense	(776)	(926)	(870)	(921)	(951)	(975)
R&D expense	(782)	(820)	(1,073)	(1,285)	(1,449)	(1,625)
Others	152	55	385	207	246	286
Operating profit	1,899	1,880	1,611	2,006	2,513	3,134
Other income	4	4	5	5	6	7
Other expense	(11)	(7)	(4)	(6)	(6)	(8)
Other gains/(losses)	(175)	(163)	(182)	(171)	(178)	(205)
Interest income	5	22	12	9	15	22
Interest expense	(91)	(92)	(66)	(87)	(97)	(104)
Others	(21)	77	23	58	66	75
Pre-tax profit	1,609	1,720	1,398	1,813	2,319	2,921
Income tax	(128)	(79)	(1)	(142)	(181)	(228)
After tax profit	1,481	1,641	1,398	1,672	2,137	2,693
Minority interest	0	0	(0)	(0)	(0)	(0)
Net profit	1,481	1,641	1,398	1,672	2,138	2,693

BALANCE SHEET	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec (RMB mn)						
Current assets	7,270	8,578	8,597	10,224	11,328	13,663
Cash & equivalents	620	1,913	853	1,196	2,235	2,904
Account receivables	2,732	2,770	3,091	3,688	3,651	4,452
Inventories	2,527	2,341	2,686	3,130	3,167	3,743
Prepayment	16	49	8	35	39	45
Other current assets	1,377	1,505	1,959	2,175	2,236	2,518
Non-current assets	9,522	12,149	14,010	15,030	16,031	17,182
PP&E	7,789	9,138	10,083	11,001	11,824	12,925
Right-of-use assets	44	37	26	17	8	(2)
Deferred income tax	91	208	272	304	330	372
Intangibles	407	557	544	548	555	565
Goodwill	0	0	0	0	0	0
Other non-current assets	1,191	2,209	3,085	3,160	3,315	3,323
Total assets	16,792	20,727	22,607	25,255	27,360	30,845
Current liabilities	5,948	6,708	6,425	7,611	7,896	9,208
Short-term borrowings	350	0	400	771	821	1,060
Account payables	1,881	1,638	2,037	2,392	2,406	2,819
Tax payable	78	31	42	47	50	57
Other current liabilities	3,141	4,484	3,291	3,734	3,899	4,459
Contract liabilities	70	93	212	173	183	208
Accrued expenses	428	462	443	495	537	605
Non-current liabilities	2,325	1,765	2,995	3,235	3,460	3,636
Long-term borrowings	1,368	1,175	2,407	2,578	2,748	2,833
Bond payables	0	0	0	0	0	0
Deferred income	317	356	372	415	450	507
Other non-current liabilities	640	235	217	242	262	296
Total liabilities	8,272	8,474	9,420	10,847	11,356	12,844
Share capital	489	513	513	513	513	513
Retained earnings	4,150	5,291	6,179	7,389	8,975	10,962
Other reserves	3,877	6,446	6,492	6,503	6,514	6,524
Total shareholders equity	8,517	12,249	13,184	14,405	16,001	17,999
Minority interest	3	3	3	3	3	2
Total equity and liabilities	16,792	20,727	22,607	25,255	27,360	30,845

CASH FLOW	2021A	2022A	2023A	2024E	2025E	2026E
<b>YE 31 Dec (RMB mn)</b>						
<b>Operating</b>						
Profit before taxation	1,481	1,640	1,398	1,672	2,137	2,693
Depreciation & amortization	863	1,062	1,272	1,387	1,590	1,793
Change in working capital	(363)	180	(364)	(235)	236	(409)
Others	361	281	268	(144)	32	(69)
<b>Net cash from operations</b>	<b>2,342</b>	<b>3,163</b>	<b>2,574</b>	<b>2,680</b>	<b>3,996</b>	<b>4,008</b>
<b>Investing</b>						
Capital expenditure	(2,658)	(3,378)	(3,250)	(2,388)	(2,589)	(2,920)
Acquisition of subsidiaries/ investments	(3)	0	0	0	0	0
Net proceeds from disposal of short-term investments	0	0	0	0	0	0
Others	181	(237)	(311)	33	34	36
<b>Net cash from investing</b>	<b>(2,481)</b>	<b>(3,614)</b>	<b>(3,561)</b>	<b>(2,355)</b>	<b>(2,555)</b>	<b>(2,884)</b>
<b>Financing</b>						
Dividend paid	(541)	(565)	(589)	(549)	(649)	(810)
Net borrowings	536	(242)	1,117	542	219	324
Proceeds from share issues	0	2,530	0	0	0	0
Others	266	(26)	(617)	11	11	11
<b>Net cash from financing</b>	<b>261</b>	<b>1,697</b>	<b>(89)</b>	<b>4</b>	<b>(419)</b>	<b>(474)</b>
<b>Net change in cash</b>						
Cash at the beginning of the year	504	620	1,912	851	1,194	2,234
Exchange difference	(7)	30	(0)	(0)	(0)	(0)
Others	122	1,263	(1,061)	344	1,039	669
<b>Cash at the end of the year</b>	<b>620</b>	<b>1,912</b>	<b>851</b>	<b>1,194</b>	<b>2,234</b>	<b>2,902</b>

Source: Company data, CMBIGM estimates. Note: The calculation of net cash includes financial assets.

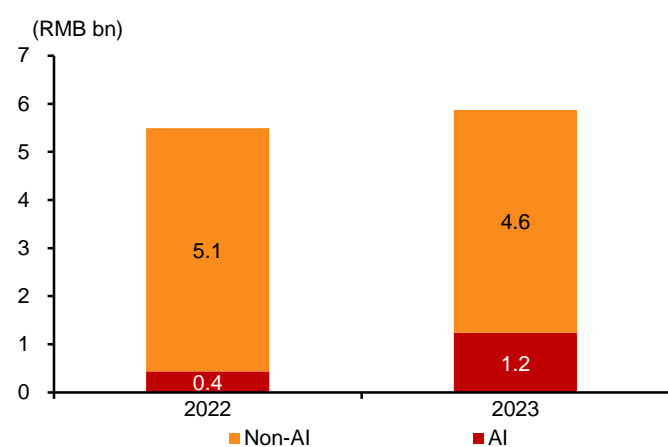
## WUS Printed Circuit (002463 CH, NR)

WUS reported its 1H24 earnings preview, with NP forecasted to increase by 119.2% - 135.5% YoY. The company attributed the strong growth to escalating high compute demand for its PCB products.

We think the demand for AI servers and networking equipment will remain strong and the Company is a key beneficiary of the AI boom. WUS's revenue from AI server and HPC-related PCB products as a percentage of total revenue grew from 7.9% in 2022 to 21.1% in 2023. We observed meaningful growth at 186.1% YoY in the company's AI revenue, which offset its non-AI revenue decline (-8.5% YoY) in 2023.

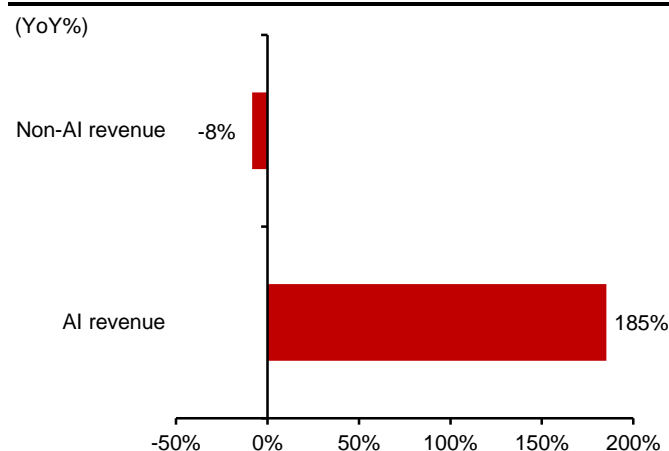
According to Bloomberg consensus, the company's revenue/NP are forecasted to grow by 28.7%/51.4% YoY in 2024E due to high AI exposure.

**Figure 24: Enterprise Communication segment revenue breakdown in 2023**



Source: Company data, CMBIGM

**Figure 25: AI revenue vs. non-AI revenue growth in 2023**



Source: Company data, CMBIGM

Figure 26: Peers table

Company	Ticker	Mkt Cap US\$ (mn)	Price (LC)	FY24E	P/E (x) FY25E	FY26E	FY24E	EPS (US\$) FY25E	FY26E
<b>Domestic Peers</b>									
Shengyi Tech	600183 CH	7,327	22.8	24.5	18.1	14.9	0.13	0.17	0.21
Shennan	002916 CH	8,666	123.6	38.0	29.7	23.6	0.45	0.57	0.72
Dongshan	002384 CH	6,056	26.4	18.6	15.1	12.5	0.19	0.24	0.29
Avary Holding	002938 CH	12,003	38.9	22.8	19.8	17.6	0.23	0.26	0.29
Kinwong	603228 CH	3,349	28.9	19.0	15.5	12.9	0.20	0.25	0.30
WUS	002463 CH	9,553	36.0	30.2	23.6	19.1	0.17	0.21	0.26
Victory Giant	300476 CH	4,604	39.5	28.7	22.5	18.8	0.19	0.24	0.29
Honflex	300657 CH	990	15.0	35.0	12.9	6.7	0.06	0.16	0.30
Suntak	002815 CH	1,315	9.0	-	-	-	NA	NA	NA
Fastprint	002436 CH	2,160	9.7	42.6	26.7	18.5	0.03	0.05	0.07
Goworld	000823 CH	613	8.5	-	-	-	NA	NA	NA
Olympic	603920 CH	2,020	22.7	22.3	18.9	17.5	0.14	0.16	0.18
ASKPCB	002913 CH	1,154	27.2	-	-	-	NA	NA	NA
Founder	600601 CH	1,833	3.3	45.6	35.4	26.6	0.01	0.01	0.02
Bomin	603936 CH	681	8.1	-	-	-	NA	NA	NA
<b>Average</b>				29.4	21.2	16.7	0.1	0.2	0.2
<b>Median</b>				28.7	19.8	17.6	0.2	0.2	0.3
<b>Overseas Peers</b>									
Zhen Ding	4958 TT	4,209	154.0	16.4	12.7	9.9	0.27	0.35	0.45
Unimicron	3037 TT	9,583	215.5	28.0	14.2	13.2	0.22	0.44	0.48
Ibiden	4062 JP	6,041	6,971.0	28.0	27.7	20.3	1.52	1.54	2.10
TTM	TTMI US	2,189	21.5	14.5	12.3	-	1.49	1.75	NA
Compeq	2313 TT	3,029	86.2	16.2	11.6	11.3	0.16	0.22	0.23
Tripod	3044 TT	3,335	211.0	13.4	11.5	9.5	0.48	0.55	0.67
AT&S	ATS AV	854	20.1	-	-	6.3	-0.84	-0.46	3.44
Shinko	6967 JP	4,892	5,681.0	35.3	23.6	18.1	1.04	1.52	1.98
Nanya	8046 TT	3,783	195.5	39.8	17.7	14.3	0.15	0.33	0.41
Meiko	6787 JP	1,133	7,030.0	16.8	13.8	12.0	2.65	3.06	3.53
Flexium	6269 TT	939	94.7	19.1	17.1	17.0	0.15	0.17	0.17
Gold Circuit	2368 TT	3,241	224.0	17.9	14.2	12.0	0.37	0.46	0.55
Kinsus	3189 TT	1,741	132.0	31.7	17.2	12.6	0.12	0.22	0.31
Simmtech	222800 KS	746	33,400.0	27.3	8.2	6.4	0.86	2.85	3.68
<b>Average</b>				23.4	15.5	12.5	0.62	0.93	1.38
<b>Median</b>				19.1	14.2	12.0	0.32	0.45	0.55

Source: Bloomberg, CMBIGM estimates

Note: 1) earnings forecasts for covered companies Shengyi Tech (600183 CH, BUY) and Shennan (002916 CH, HOLD) are from CMBIGM estimates; earnings forecasts for companies not under our coverage are based on Bloomberg consensus; 2) average and median of P/E ratio and EPS are calculated by excluding Shengyi Tech and Shennan; 3) data as of 18 July 2024

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