

China PCB Sector

Expect a weak 1Q23; Recovery may come in 2H23

Global PCB market: Instead of a normal strong quarter, the global PCB market was down 1.9% YoY and up only 2.3% QoQ in 3Q22. The quarterly results reflected a significant slowdown, which was attributed to 1) weaker consumer demand; 2) disruption in supply chain and logistics; and 3) slow inventory digestions of consumer electronics, etc. The sector is expected to remain weak in 4Q22-1Q23. Looking forward, **global PCB market is projected to grow 2.9% YoY in 2022 and decline by low single-digit in 2023.**

- **Industry demand outlook remains weak.** Over half of the PCB sales are from consumer electronic markets (21% from mobile, 17% from PC and 15% from other). The outlook for these markets is dim in 2023: 1) smartphone shipment to remain below pre-pandemic level, 2) PC shipment to fall 5.6% and 3) wearables shipment (such as TWS) largely affected by mobile market. The sluggish demand and excess inventory will weigh on the sector next year.

China PCB market: We expect economic activities to gradually pick up in 1H23 as controlled reopening measures are being carried out. During reopening, we would see some bumpy recovery with further increases in COVID cases, which is likely to trigger some short-term shock in supply chain. With more measures adjusted to smoothen the recovery, **we expect to see accelerated economic growth in China in 2H23.**

Given the high uncertainties during reopening and possible impact on business operations from potential surging COVID cases, **we assign MARKET-PERFORM recommendation to China PCB sector.** We will continue monitoring the sector closely and make necessary updates should any significant developments materialize.

- **Maintain HOLD on Shennan Circuit (002916 CH) and revise TP to RMB87.**
The Company's 3Q results confirmed our previous forecast that "3Q could be lower despite satisfactory 2Q results" ([link](#)). We maintain HOLD rating, considering 1) the flat domestic telecom sales outlook (~50% revenue contribution), 2) weak consumer spending and 3) a possible impact on operations and earnings as the path to recovery is expected to be bumpy. New TP is based on 25x FY23E P/E, ~1SD below avg. 2-yr historical forward P/E.
- **Maintain HOLD on Shengyi Tech (600183 CH) and revise TP to RMB14.8.**
The Company's 3Q results confirmed our previous forecast that "3Q22 sales are likely to experience YoY decline" ([link](#)). However, the magnitude was greater than expected. As the CCL sector is in a steep downcycle and the Company is facing lower utilization and margin squeeze, we cut our 2022/23E EPS forecasts by 16%/22% and maintain our cautious outlook. New TP equals to 20x FY23E P/E, ~1SD below avg. 2-yr historical forward P/E

MARKET PERFORM (Down)

China Technology Sector

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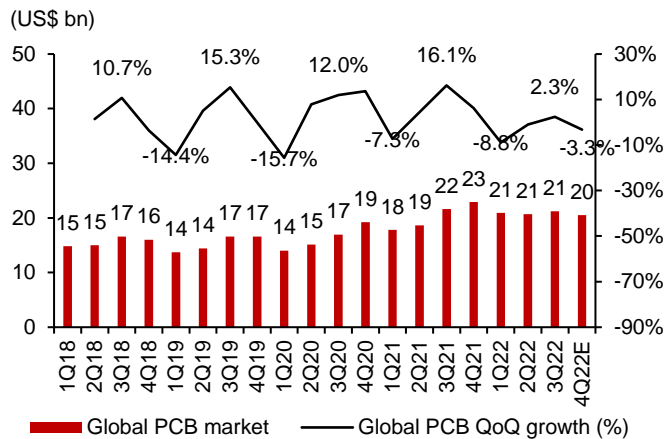
1. "Shennan Circuits (002916 CH) – 3Q could be lower despite satisfactory 2Q results" – 22 Aug 2022 ([link](#))
2. "Shengyi Technology (600183 CH) – 1H22 results miss; Maintain HOLD" – 17 Aug 2022 ([link](#))
3. "China Technology Sector – Positive outlook for PCB/CCL sector amid cost pressure" – 31 May 2021 ([link](#))

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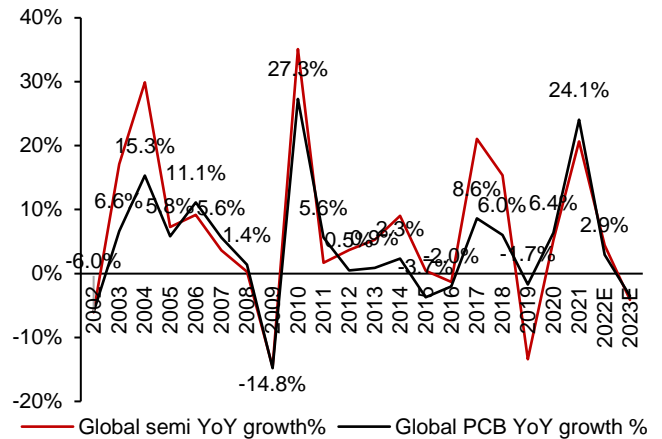
Focus Charts

Figure 1: Global PCB market delivered the lowest 3Q growth (QoQ) in 2022, reflecting a significant slowdown



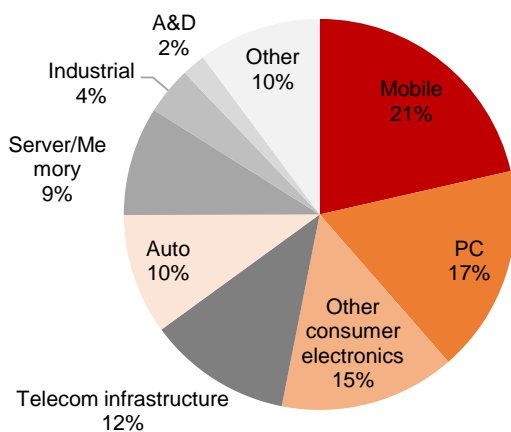
Source: Prismark, CMBIGM estimates

Figure 2: Global PCB market is expected to decline by low single-digit in 2023E, as consumer electronic market's outlook remains sluggish



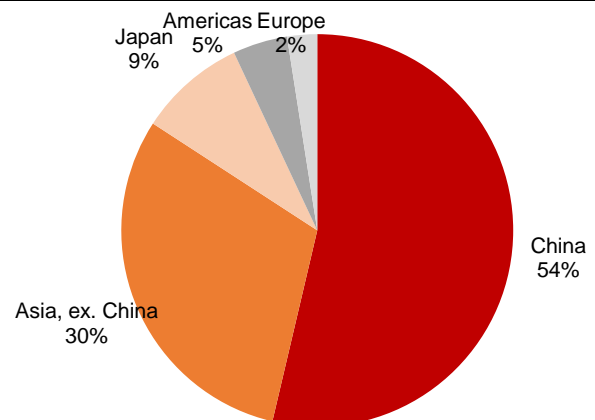
Source: WSTS, Prismark, CMBIGM estimates

Figure 3: Over 50% of global PCB sales were from consumer electronic market (2020)



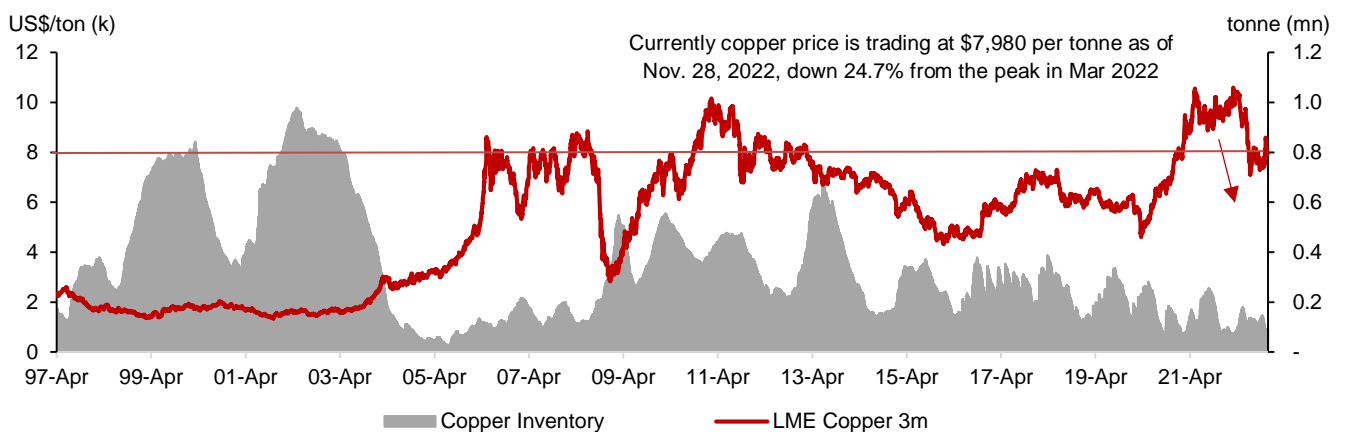
Source: Company filings, Prismark, CMBIGM estimates

Figure 4: China: the predominant PCB manufacturing site with over 50% share (2020)



Source: Counterpoint, CMBIGM estimates

Figure 5: Copper price dropped ~25% from the peak on concerns over global economy slowdown



Source: Wind, CMBIGM estimates

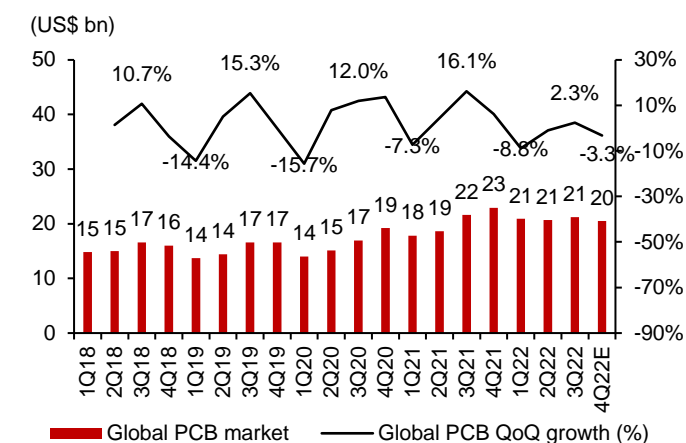
Global PCB market: review and outlook

A tough 2H22: 3Q results reflected a significant slowdown; 4Q will remain weak

Instead of a normal strong quarter, the global PCB market was down 1.9% YoY and up only 2.3% QoQ in 3Q22. The quarterly results reflected a significant slowdown, which was attributed to 1) weaker consumer demand; 2) disruption in supply chain and logistics; and 3) slow inventory digestions of consumer electronics, etc.

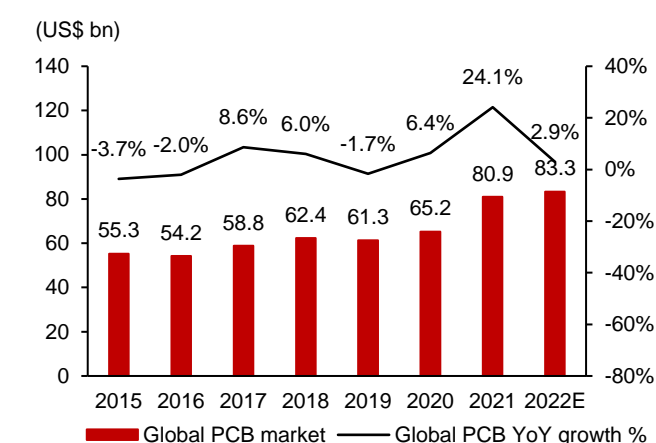
PCB market will continue to show weakness in 4Q22. Based on Prismark's Nov. report, **global PCB market is expected to reach US\$83.3bn in 2022, with 2.9% YoY growth** (vs. 24.1% in 2021), which means **4Q sales will be down 10.6% YoY and 3.3% QoQ**.

Figure 6: Global PCB market delivered the lowest 3Q growth (QoQ) in 2022, reflecting a significant slowdown



Source: Prismark, CMBIGM estimates

Figure 7: Global PCB market growth is expected to reduce to 2.9% in 2022 (vs. 24.1% in 2021)



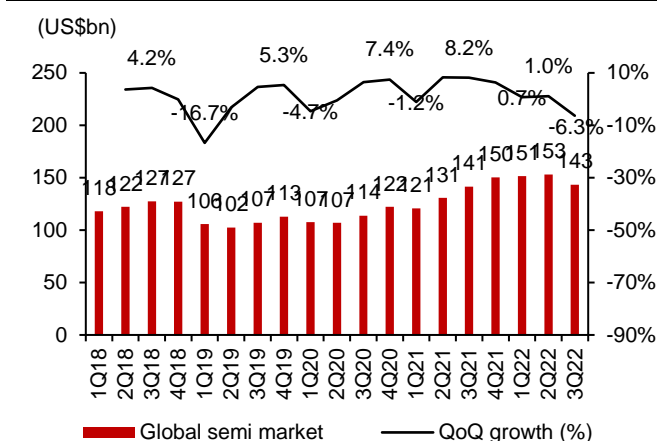
Source: Prismark, CMBIGM estimates

Challenges persist into 2023

WSTS updated its latest semi market forecasts on 29 Nov 2022: “Following a strong growth of 26.2% in the year 2021...the **Worldwide Semiconductor Market is expected to slow to 4.4% growth in 2022, followed by a decline of 4.1% in 2023.**” A significant revision from August forecast of 13.9% growth in 2022 and 4.6% growth in 2023, mainly due to soaring inflation and dampened consumer spending.

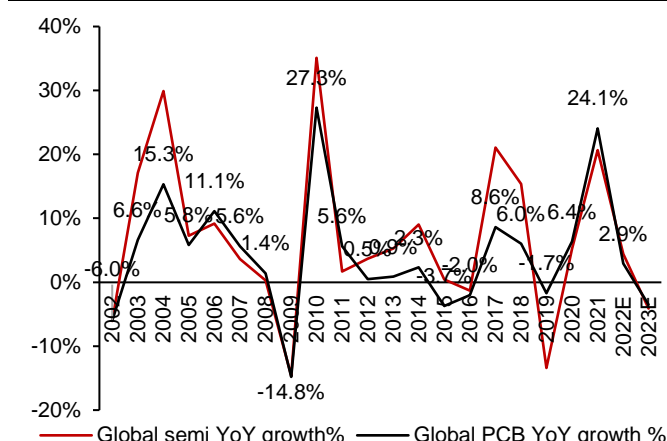
We think the 4.1% decline in semi market could be a good reference for PCB market, given the positive correlation between these two data (Figure 9). Therefore, we expect **global PCB market will decline by low single-digit in 2023.**

Figure 8: Global semi sales dropped 6.3% QoQ in 3Q22



Source: WSTS, CMBIGM estimates

Figure 9: Global PCB market to decline by low single-digit in 2023E



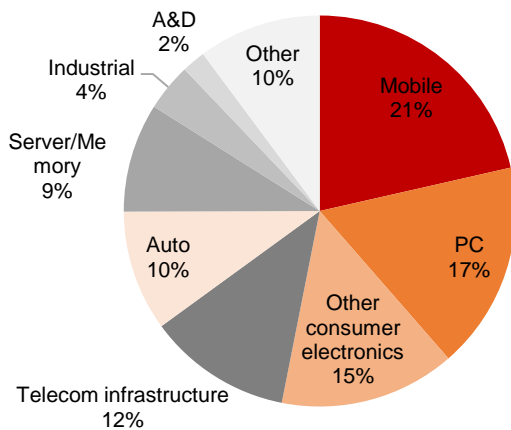
Source: WSTS, Prismark, CMBIGM estimates

PCB demand outlook remains weak

Over half of the PCB sales are from consumer electronic markets (21% from mobile, 17% from PC and 15% from other). Consumer electronic market is set continue to suffer in 1H23. The sluggish demand and excess inventory will continue to weigh on the PCB sector.

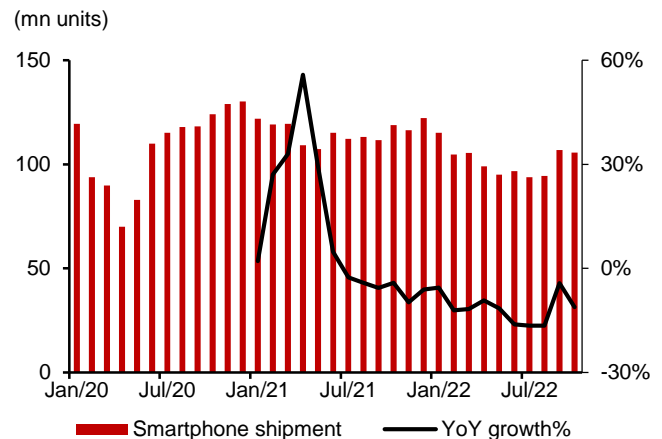
- **Smartphone shipment is expected to fall 9.1% YoY in 2022 and see a recovery of 2.8% growth for 2023** (IDC). However, the 2023 shipment forecast is still below pre-pandemic level (2018/19).
- **PC shipment** is likely to experience steep decline of 14.9% YoY in 2022 and decrease further by 5.6% in 2023 (Bloomberg/IDC). The pessimistic outlook is largely due to concerns over weaker consumer demand (macroeconomic pressures, inflation and receded benefits from stay-at-home economy).
- **Wearables market** took a stronger hit as consumer spending slowed and we think its outlook remains gloomy.

Figure 10: Over 50% of global PCB sales were from consumer electronic market (2020)



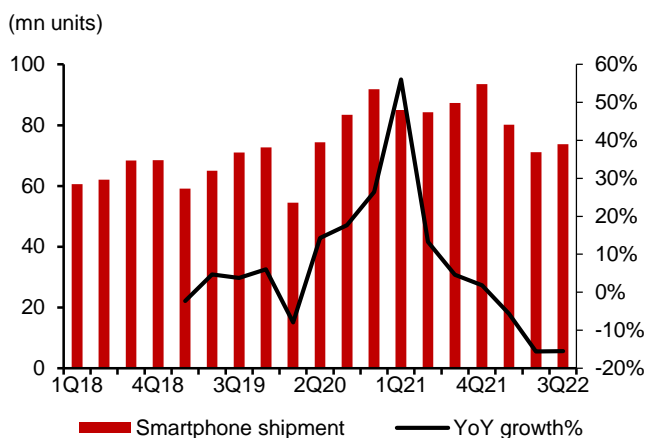
Source: Company filings, Prismark, CMBIGM estimates

Figure 11: Monthly smartphone shipment declined 11.5% YoY on average during Jan-Oct 2022



Source: Counterpoint, CMBIGM estimates

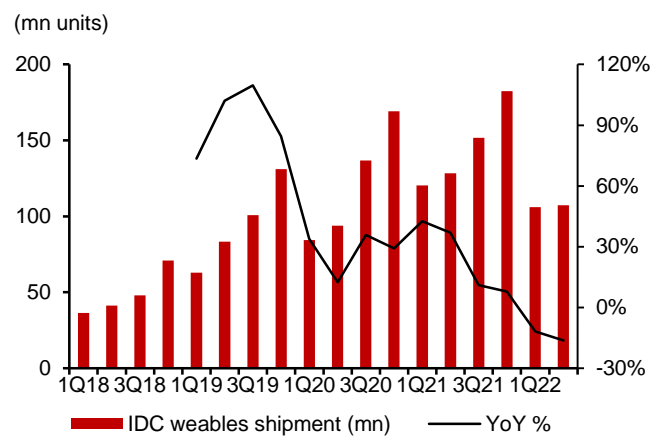
Figure 12: Global PC shipment fell 12.3% YoY in 9M22



Source: Bloomberg, IDC, CMBIGM estimates

Note: PC includes desktop, workstation and notebook

Figure 13: Global wearables shipment dropped 14.1% YoY in 6M22

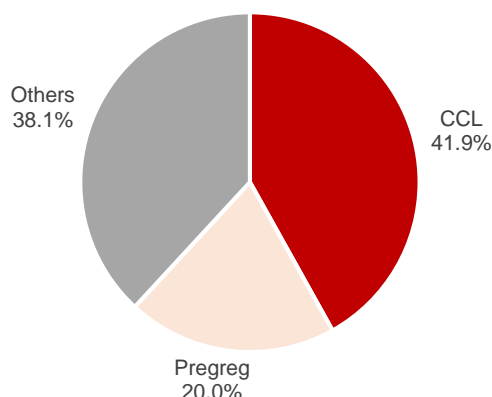


Source: Bloomberg, IDC, CMBIGM estimates

Copper price is likely to remain stable in 1H23

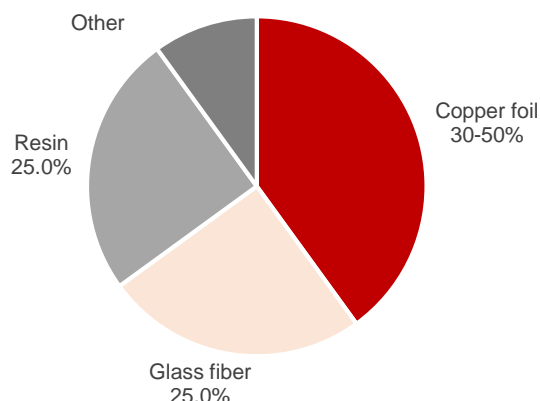
PCB's largest cost is CCL (c.30-70% depending on the type of PCB), of which copper foil (30-50%), glass fiber (~25%) and resin (~25%) are the top contributors. Therefore, **Copper is a key material for PCB.**

Figure 14: CCL is key material of PCB (2019)



Source: Shengyi Electronics, CMBIGM estimates

Figure 15: CCL material cost breakdown (2020)

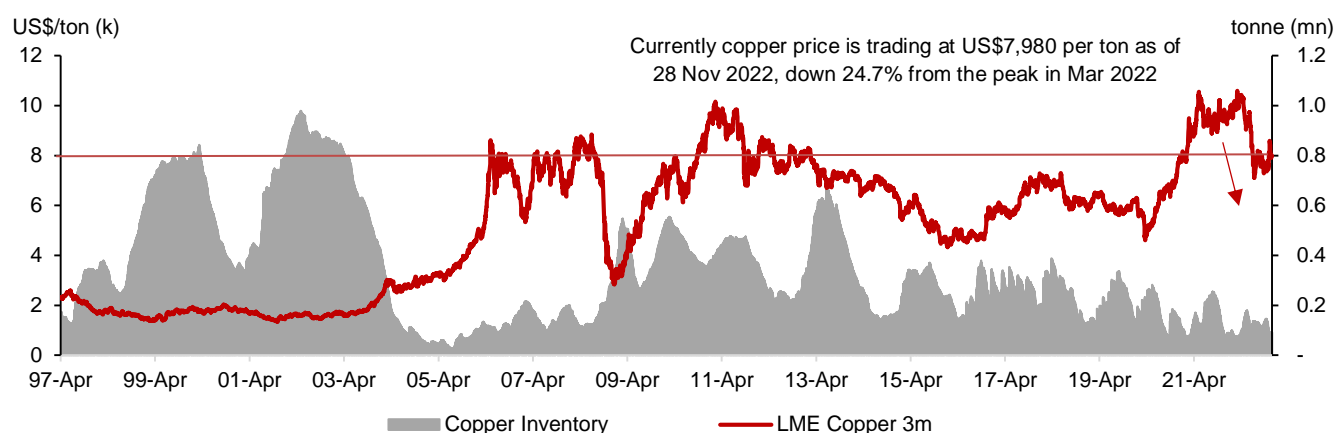


Source: Shengyi Electronics, CMBIGM estimates

In 2021, we saw the **raw materials cost went up dramatically**, with copper price topped US\$10k/ton in May 2021 (new high since 2011). The strong momentum was **driven by 1) increasing demand** due to global economy rebound (especially from EV market as copper is a major component in electric motors, batteries, inverters, wiring and in charging stations) and **2) tight supply** affected by new waves of COVID-19 labor issues and environmental considerations.

We predicted the CCL upcycle in our May 2021 report ([link](#)) and anticipated CCL suppliers (i.e., Shengyi Tech/600183 CH) to **benefit from this upcycle with solid revenue growth and margin expansion**. PCB manufacturers, on the other hand, were expected to experience top line growth with margin erosion.

Figure 16: Copper price dropped 24.7% from the peak in March 2022



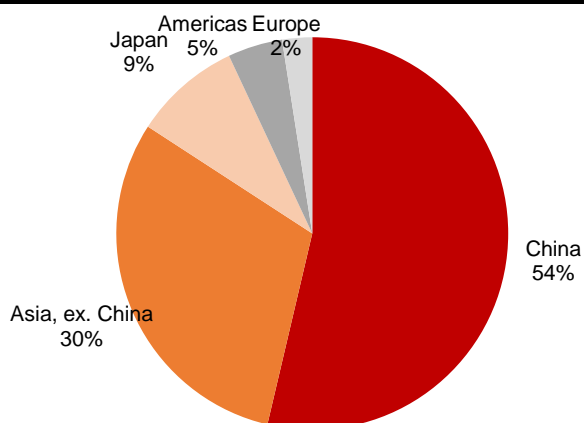
Source: Wind, CMBIGM estimates

In 2022, Copper price remained at its high until 2Q and began to fall on growing recession fears since Jun. **CCL sector also entered into downcycle.** CCL suppliers are facing revenue decline, lower utilization and margin squeeze now. **Looking forward, we expect CCL sector to remain in challenges.** For PCB manufacturers, they also suffered from decreasing end market demand which hurt top line growth. However, their margins were lifted as material cost pressure eased.

China PCB Supply Chain Outlook: Expect continued weakness in 1H23; wait for recovery in 2H23

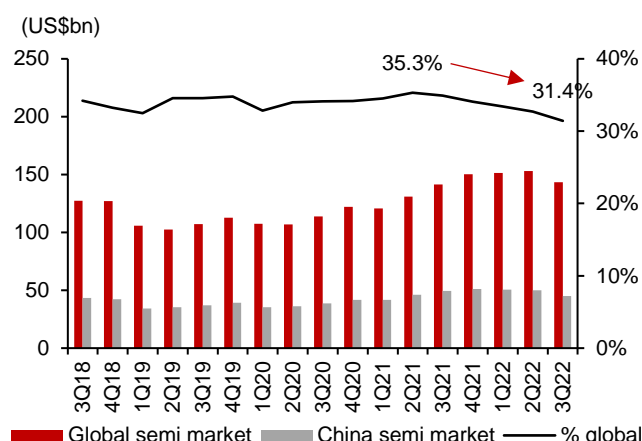
China is the predominant PCB manufacturing site with over 50% market share. In 2022, China PCB manufacturers have been negatively affected by industry headwinds and supply chain diversification. We think this regional market is losing shares based on the quarterly semi sales data (see the positive correlation between semi and PCB sales in Figure 9).

Figure 17: China: the predominant PCB manufacturing site with over 50% share (2020)



Source: Company filings, Prismark, CMBIGM estimates

Figure 18: China semi sales accounted for less of the global semi market



Source: IMF, WSTS, Prismark, CMBIGM estimates

Looking into 2023, we expect economic activities to gradually pick up in China in 1H as gradual reopening measures are being carried out. As reopening makes progress, we would see some bumpy recovery with further increases in COVID cases, which lead to some short-term shock in supply chain. With more measures adjusted to smooth the recovery progress, we expect to see accelerated economic growth in China in 2H23.

In addition, considering China's economic resilience, advantage in skilled labor and most important of all, closer distance to the largest end market, **we expect supply chain diversification will have a short-term impact on the regional industry vitality. In the long term, we believe the disruption in supply chain will ease as China moves to re-opening.**

Given the high uncertainties during reopening and possible impact on business operations from potential surging COVID cases, we assign Market Perform recommendation to China PCB sector. We will watch closely on the reopening progress and will update once there is any significant moves.

Maintain HOLD on Shennan Circuit (002916 CH, TP RMB87)

Headwinds to persist in 1H23

Shennan's 3Q22 revenue declined 9.3% YoY and 3.9% QoQ, dragged by 1) slowdown of domestic 5G telecom capex, 2) delayed upgrade for Eagle stream platform and 3) soft consumer demand. **The slowdown was within our expectations**, as we previously predicted that "3Q could be lower despite satisfactory 2Q results" ([link](#)). We believe 4Q sales will be similar (3% QoQ), which means **the full year revenue will grow only 1.2% YoY in 2022**.

Since material price has dropped from the peak in 2022, GPM improved to 26% in 9M22. We expect **GPM to remain stable during 2023**.

Figure 19: Operating financials

RMBmn	FY20	FY21	1Q22	2Q22	3Q22	4Q22E	FY22E	FY23E	FY24E
Revenue	11,600	13,943	3,316	3,656	3,514	3,629	14,114	15,108	17,475
...YoY	10.2%	20.2%	21.7%	15.8%	-9.3%	-13.3%	1.2%	7.0%	15.7%
...QoQ			-20.8%	10.3%	-3.9%	3.3%			
...Seasonality			23%	26%	25%	26%			
Cost of sales	8,530	10,637	2,427	2,698	2,623	2,684	10,432	11,164	12,888
Gross profit	3,071	3,306	888	958	891	944	3,682	3,944	4,587
...YoY	10.0%	7.6%	39.1%	24.1%	-6.4%	0.1%	11.4%	7.1%	16.3%
GPM (%)	26.5%	23.7%	26.8%	26.2%	25.4%	26.0%	26.1%	26.1%	26.2%
SG&A	647	776	218	244	212	233	908	942	1,080
...% of rev	5.6%	5.6%	6.6%	6.7%	6.0%	6.4%	6.4%	6.2%	6.2%
R&D	645	782	193	208	214	213	829	872	1,017
...% of rev	5.6%	5.6%	5.8%	5.7%	6.1%	5.9%	5.9%	5.8%	5.8%
Other exp.	154	130	97	67	(3)	50	210	272	317
...% of rev	1.3%	0.9%	2.9%	1.8%	(0.1%)	1.4%	1.5%	1.8%	1.8%
Operating profit	1,625	1,617	380	439	467	448	1,735	1,859	2,172
...YoY	14.7%	-0.5%	37.2%	30.5%	-8.2%	-9.4%	7.3%	7.2%	16.8%
OPM (%)	14.0%	11.6%	11%	12%	13%	12%	12.3%	12.3%	12.4%
Net profit	1,430	1,481	348	404	430	411	1,593	1,705	1,993
...YoY	16.0%	3.5%	42.8%	33.1%	-6.7%	-72.2%	7.6%	7.0%	16.9%
...QoQ			-24.5%	16.2%	6.3%	-4.3%			
NPM (%)	12.3%	10.6%	10.5%	11.1%	12.2%	11.3%	11.3%	11.3%	11.4%

Source: Company data, CMBIGM estimates

Comments by segment:

PCB business:

- **Telecom (~50%):** Domestic demand is expected to remain flat, while overseas sales to grow as some countries resume 5G deployment.
- **Datacenter (13-14%):** Market weakness (lower domestic investment and delayed upgrade of Eagle stream platform) has begun to weigh on sales since 3Q22. Mass shipment of new platform may resume since 2Q23.
- **Industrial and healthcare (~10%):** We think that the sales from this market will be affected by macroeconomic pressure. Industrial demand may pick up after China's full reopening.
- **Auto (~5%):** We expect auto PCB may continue to show decent growth in the future, driven by increasing penetration of vehicle electrification and automation. New capacity is ramping up (Nantong factory phase III).

Substrate:

- **Consumer:** We think that demand weakness will remain an overhang in 2023.
- **Memory:** Demand is relatively strong. New capacity is ramping up (Wuxi factory).
- **Computing:** New capacity is estimated to contribute in 2024.

Figure 20: Revenue breakdown by applications

RMBmn	FY20	FY21	1H22	2H22E	FY22E	FY23E	FY24E
PCB	8,311	8,737	4,432	4,501	8,934	9,616	10,811
...YoY	7.6%	5.1%	19.6%	-10.5%	2.3%	7.6%	12.4%
...%	72%	63%	64%	63%	63%	64%	62%
PCBA	1,160	1,940	707	736	1,443	1,485	1,646
...YoY	-4.2%	67.2%	4.9%	-41.9%	-25.6%	2.9%	10.8%
...%	10%	14%	10%	10%	10%	10%	9%
Substrate	1,544	2,415	1,366	1,435	2,801	2,978	3,885
...YoY	32.7%	56.3%	24.8%	8.7%	16.0%	6.3%	30.5%
...%	13%	17%	20%	20%	20%	20%	22%
Other	585	851	466	470	936	1,030	1,133
...YoY	38.4%	45.4%	15.2%	5.3%	10.0%	10.0%	10.0%
...%	5%	6%	7%	7%	7%	7%	6%
Total	11,600	13,943	6,972	7,142	14,114	15,108	17,475
...YoY	10.2%	20.2%	15.8%	-13.3%	1.2%	7.0%	15.7%
Gross Margin							
PCB	28.4%	25.3%	27.3%	26.7%	27.0%	27.0%	27.0%
PCBA	14.6%	12.6%	17.6%	16.4%	17.0%	17.0%	17.0%
Substrate	28.1%	29.1%	30.3%	29.7%	30.0%	30.0%	30.0%
Other	18.2%	17.7%	20.7%	18.6%	19.6%	19.6%	19.6%
Total GPM	26.5%	23.7%	26.5%	25.7%	26.1%	26.1%	26.2%

Source: Company data, CMBIGM estimates

Maintain HOLD on Shennan Circuit (002916 CH) and revise TP to RMB87

We think that Shennan is doing its best to navigate through macro uncertainties. However, we maintain HOLD rating, considering 1) the flat domestic telecom sales outlook, 2) weak consumer spending and 3) the possible impact on operations due to a bumpy path to recovery in 2023. We lowered our FY22/23E EPS forecasts by 7%/16%. We revised TP to RMB87 (from RMB96.6), based on 25x FY23E P/E, ~1SD below avg. 2-yr historical forward P/E. Valuation slightly increased from previously 23.5x as we think market sentiment could be the lowest in 2022.

Potential downside risks include: 1) worse-than-expected global economy that curbs consumer spending, 2) higher-than-expected material prices that weigh on margin, 3) longer-than-expected impact from pandemic.

Potential upside: 1) stronger recovery in consumer demand, 2) resumed 5G deployment and Eagle Stream platform upgrade.

Figure 21: Earnings revision

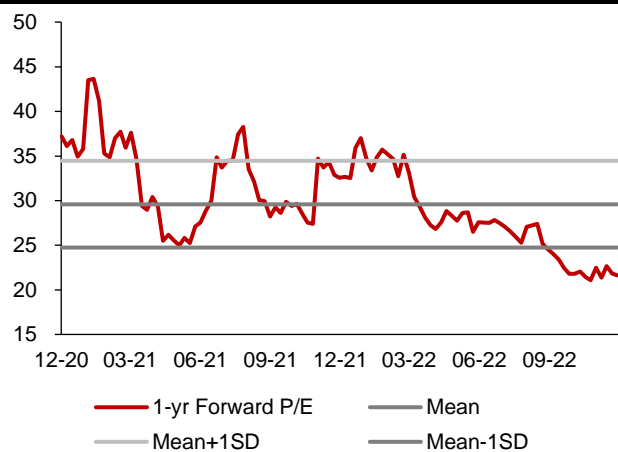
RMBmn	New			Old			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	14,114	15,108	17,475	15,017	17,417	20,066	-6%	-13%	-13%
Gross Profit	3,682	3,944	4,587	3,944	4,554	5,267	-7%	-13%	-13%
Operating Profit	1,753	1,879	2,195	1,885	2,242	2,630	-7%	-16%	-17%
Net profit	1,610	1,723	2,014	1,730	2,055	2,411	-7%	-16%	-16%
EPS (RMB)	3.29	3.52	4.12	3.54	4.20	4.93	-7%	-16%	-16%
Gross Margin	26.1%	26.1%	26.2%	26.3%	26.1%	26.2%	-0.2 ppt	0 ppt	0 ppt
Operating Margin	12.4%	12.4%	12.6%	12.6%	12.9%	13.1%	-0.1 ppt	-0.4 ppt	-0.5 ppt
Net Margin	11.4%	11.4%	11.5%	11.5%	11.8%	12.0%	-0.1 ppt	-0.4 ppt	-0.5 ppt

Source: Company data, CMBIGM estimates

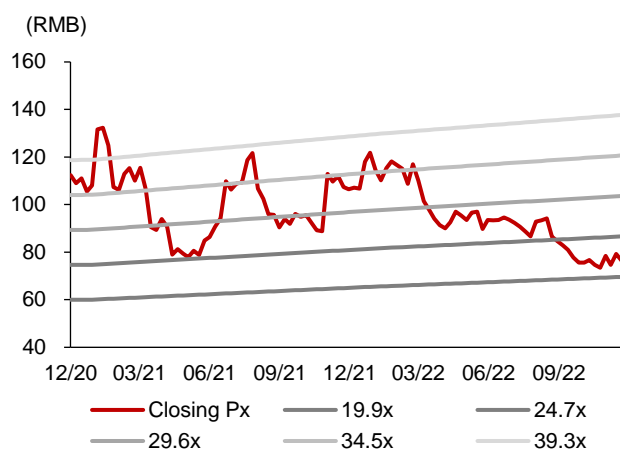
Figure 22: CMBIGM estimates vs consensus

RMBmn	CMBIGM			Consensus			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	14,114	15,108	17,475	14,831	16,851	19,451	-5%	-10%	-10%
Gross Profit	3,682	3,944	4,587	3,802	4,320	5,021	-3%	-9%	-9%
Operating Profit	1,753	1,879	2,195	1,878	2,166	2,572	-7%	-13%	-15%
Net profit	1,610	1,723	2,014	1,633	1,890	2,257	-1%	-9%	-11%
EPS (RMB)	3.29	3.52	4.12	3.27	3.95	4.58	1%	-11%	-10%
Gross Margin	26.1%	26.1%	26.2%	25.6%	25.6%	25.8%	0.4 ppt	0.5 ppt	0.4 ppt
Operating Margin	12.4%	12.4%	12.6%	12.7%	12.9%	13.2%	-0.2 ppt	-0.4 ppt	-0.7 ppt
Net Margin	11.4%	11.4%	11.5%	11.0%	11.2%	11.6%	0.4 ppt	0.2 ppt	-0.1 ppt

Source: Company data, CMBIGM estimates

Figure 23: 12M forward P/E band

Source: Company data, CMBIGM estimates

Figure 24: 12M forward P/E Chart

Source: Company data, CMBIGM estimates

Maintain HOLD on Shengyi Tech (600183 CH, TP RMB14.8)

Shengyi Tech was hard hit by the slowdown in PCB market

Shengyi's 3Q22 revenue declined 22.4% YoY and 6.6% QoQ. The result confirmed our previous forecast that "Shengyi electronics' 3Q22 sales are likely to experience YoY decline, due to delayed 5G deployment and high base in 3Q21" ([link](#)). However, the magnitude was greater-than-expected.

For 4Q22, we believe that the quarter sales will drop 8% QoQ due to seasonality, which means the **full year revenue will fall 13.0% YoY to RMB17.6bn in 2022**. Historically, 3Q was normally the best quarter of the year, with an avg. of 26% revenue contribution pre-pandemic. For 2022, we estimate 3Q's contribution will be roughly 24% and 2H sales are likely to be lower than 1H.

Figure 25: Operating financials

RMBmn	FY20	FY21	1Q22	2Q22	3Q22	4Q22E	FY22E	FY23E	FY24E
Revenue	14,687	20,274	4,768	4,607	4,302	3,966	17,642	18,617	21,821
...YoY	10.9%	38.0%	5.8%	-13.5%	-22.4%	-19.0%	-13.0%	5.5%	17.2%
...QoQ			-2.6%	-3.4%	-6.6%	-7.8%			
...Seasonality			27%	26%	24%	22%			
Cost of sales	10,754	14,837	3,640	3,538	3,486	3,218	13,882	14,560	16,671
Gross profit	3,933	5,437	1,127	1,069	816	749	3,761	4,057	5,150
...YoY	11.5%	38.2%	-10.5%	-31.8%	-43.9%	-35.4%	(30.8%)	7.9%	26.9%
GPM (%)	26.8%	26.8%	23.6%	23.2%	19.0%	18.9%	21.3%	21.8%	23.6%
SG&A	899	1,142	252	242	240	214	948	974	1,146
...% of rev	6.1%	5.6%	5.3%	5.2%	5.6%	5.4%	5.4%	5.2%	5.3%
R&D	711	964	224	251	224	204	902	919	1,096
...% of rev	4.8%	4.8%	4.7%	5.4%	5.2%	5.1%	5.1%	4.9%	5.0%
Other exp.	233	15	58	23	66	(24)	124	184	128
...% of rev	1.6%	0.1%	1%	1%	2%	-1%	0.7%	1.0%	0.6%
Operating profit	2,090	3,316	593	553	286	355	1,786	1,981	2,779
...YoY	15.8%	58.6%	-12.2%	-45.2%	-74.3%	-31.9%	-46.1%	10.9%	40.3%
OPM (%)	14.2%	16.4%	12.4%	12.0%	6.6%	8.9%	10.1%	10.6%	12.7%
Net profit	1,681	2,830	482	453	261	322	1,518	1,710	2,382
...YoY	16.0%	68.4%	-11.4%	-48.0%	-71.7%	-34.4%	-46.3%	12.7%	39.2%
...QoQ			-1.6%	-6.1%	-42.3%	23.1%			
NPM (%)	11.4%	14.0%	10.1%	9.8%	6.1%	8.1%	8.6%	9.2%	10.9%

Source: Company data, CMBIGM estimates

CCL sector is in downcycle

By segment, we estimated that CCL and PCB sales fell at a similar QoQ rate in 3Q22 (-7.4% and -6.6%, respectively). However, CCL sales decreased significantly on a YoY basis (-24.0% vs. -15.9% for PCB).

We also noticed that GPM was lowered to 19.0% from 23.2% in 2Q22 and 26.8% in 2021. PCB's GPM was relatively stable (23.5% in 3Q22 vs. 24.0%/23.9% in 1Q22/2Q22), suggesting the margin erosion was mainly from CCL segment.

We believe the results reflect that the **CCL sector is in a steep downcycle as supply shortages ease and material prices drop. We believe the mgmt. was trying to keep up CCL's utilization with lower ASP, which lead to margin squeeze.**

Figure 26: Revenue breakdown by application

RMBmn	FY20	FY21	1H22	2H22E	FY22E	FY23E	FY24E
CCL	10,849	16,190	7,281	6,524	13,805	14,424	16,737
...YoY	8.5%	49.2%	-8.3%	-20.9%	-14.7%	4.5%	16.0%
...%	74%	80%	158%	164%	78%	77%	77%
PCB	3,558	3,508	1,730	1,499	3,228	3,631	4,467
...YoY	17.0%	-1.4%	6.5%	-20.4%	-8.0%	12.5%	23.0%
...%	24%	17%	38%	38%	18%	20%	20%
Other	280	577	-4,404	-4,056	609	561	617
...YoY	42.1%	106.0%	4.0%	-22.6%	5.5%	-7.8%	10.0%
...%	2%	3%	-96%	-102%	3%	3%	3%
Total	14,687	20,274	4,607	3,966	17,642	18,617	21,821
...YoY	10.9%	38.0%	-13.5%	-19.0%	-13.0%	5.5%	17.2%
Gross Margin							
CCL	25.5%	27.5%	22.7%	17.7%	20.3%	20.7%	22.7%
PCB	26.0%	17.6%	21.2%	20.2%	20.7%	22.6%	24.2%
Other	83.8%	64.7%	49.5%	45.0%	47.7%	45.0%	45.0%
Total GPM	26.8%	26.8%	23.4%	18.9%	21.3%	21.8%	23.6%

Source: Company data, CMBIGM estimates

Maintain HOLD on Shengyi Tech (600183 CH) and revise TP to RMB14.8

Maintain HOLD on Shengyi Tech (600183 CH) and revise TP to RMB14.8 from RMB19.2 ([link](#)). As the CCL sector is in a steep downcycle and the Company is facing lower utilization and margin squeeze, we cut our 2022/23E EPS forecasts by 32%/36%. New TP of RMB14.8 equals to 20x FY23E P/E, 1SD below avg. 2-yr historical forward P/E. Valuation was raised to 20x (1SD below) from prev. 16.6x (2SD below) as we think 1) previous valuation is too pessimistic given CCL sector experienced a sharp downcycle in 2022 from a record year in 2021; 2) domestic economic activities are likely to pick up as controlled reopening measures are expected to deploy starting from 1H23 (road could be bumpy with further increase in COVID cases) and accelerate in 2H23 (as reopening makes more progress, measures are being optimized), which could result in higher revenue contribution in 2H and valuation lift. Our EPS estimates are below consensus (-18%/-26% for 2022/23E) and it is too early for bottom-fishing. Maintain HOLD.

Potential downside risks include: 1) worse-than-expected global economy that curbs consumer spending and increases ASP pressure, 2) margin squeeze with lower-than-expected utilization rate, 3) longer-than-expected impact from pandemic.

Potential upsides: 1) stronger recovery in consumer demand and 2) shortage in supply.

Figure 27: Earnings revision

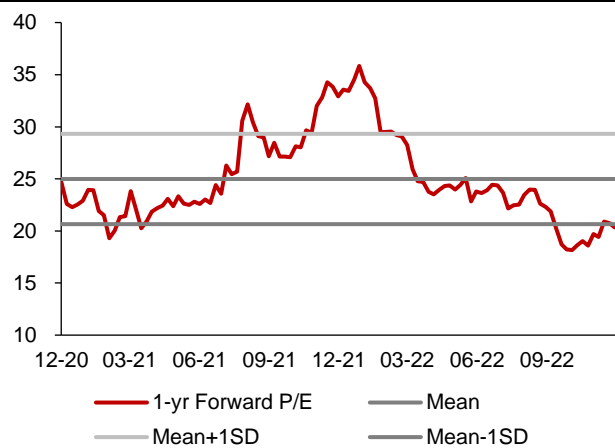
RMBmn	New			Old			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	17,642	18,617	21,821	20,264	22,738	25,717	-13%	-18%	-15%
Gross Profit	3,761	4,057	5,150	4,974	5,692	6,573	-24%	-29%	-22%
Operating Profit	1,786	1,981	2,779	2,726	3,234	3,877	-34%	-39%	-28%
Net profit	1,518	1,710	2,382	2,226	2,675	3,186	-32%	-36%	-25%
EPS (RMB)	0.66	0.74	1.03	0.96	1.16	1.38	-32%	-36%	-25%
Gross Margin	21.3%	21.8%	23.6%	24.5%	25.0%	25.6%	-3.2 ppt	-3.2 ppt	-2 ppt
Operating Margin	10.1%	10.6%	12.7%	13.5%	14.2%	15.1%	-3.3 ppt	-3.6 ppt	-2.3 ppt
Net Margin	8.6%	9.2%	10.9%	11.0%	11.8%	12.4%	-2.4 ppt	-2.6 ppt	-1.5 ppt

Source: Company data, Bloomberg, CMBIGM estimates

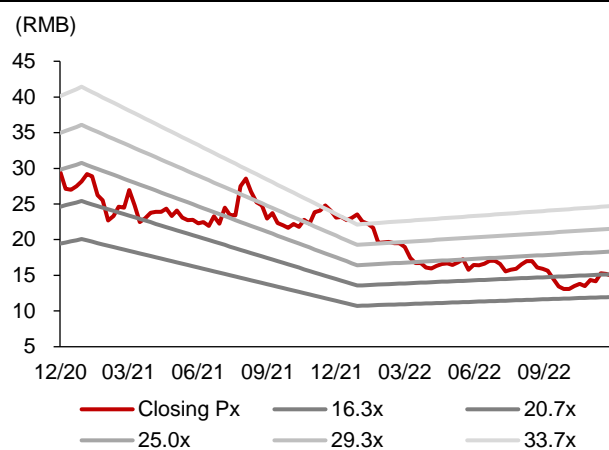
Figure 28: CMBIGM estimates vs consensus

RMBmn	CMBIGM			Consensus			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	17,642	18,617	21,821	18,181	20,851	24,011	-3%	-11%	-9%
Gross Profit	3,761	4,057	5,150	4,117	5,033	5,907	-9%	-19%	-13%
Operating Profit	1,786	1,981	2,779	2,074	2,605	3,176	-14%	-24%	-12%
Net profit	1,518	1,710	2,382	1,662	2,119	2,604	-9%	-19%	-9%
EPS (RMB)	0.66	0.74	1.03	0.80	1.00	1.12	-18%	-26%	-8%
Gross Margin	21.3%	21.8%	23.6%	22.6%	24.1%	24.6%	-1.3 ppt	-2.3 ppt	-1 ppt
Operating Margin	10.1%	10.6%	12.7%	11.4%	12.5%	13.2%	-1.3 ppt	-1.8 ppt	-0.5 ppt
Net Margin	8.6%	9.2%	10.9%	9.1%	10.2%	10.8%	-0.5 ppt	-1 ppt	0.1 ppt

Source: Company data, Bloomberg, CMBIGM estimates

Figure 29: 12M forward P/E band

Source: Company data, CMBIGM estimates

Figure 30: 12M forward P/E Chart

Source: Company data, CMBIGM estimates

Financial Summary – Shengyi Tech (600183 CH)

Income statement

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	14,687	20,274	17,642	18,617	21,821
Cost of sales	(10,754)	(14,837)	(13,882)	(14,560)	(16,671)
Gross profit	3,933	5,437	3,761	4,057	5,150
Selling exp	(179)	(231)	(217)	(221)	(264)
Admin exp	(720)	(910)	(731)	(753)	(882)
R&D exp	(711)	(964)	(902)	(919)	(1,096)
Finance costs	(114)	(102)	(74)	(53)	(54)
Other operating exp.	3,567	4,329	3,898	4,022	4,666
Operating profit	2,090	3,316	1,786	1,981	2,779
Other non-oper exp.	(7)	(6)	(2)	(4)	(3)
Pre-tax profit	2,083	3,310	1,784	1,978	2,776
Income tax expense	(283)	(385)	(164)	(182)	(255)
Minority interests	120	95	102	86	140
Net profit to shareholders	1,681	2,830	1,518	1,710	2,382

Cash flow summary

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Net profit	1,800	2,925	1,621	1,796	2,521
Depreciation/amortization	513	633	694	717	747
Change in working capital	(832)	(1,935)	1,879	(670)	(714)
Others	277	153	(199)	568	(284)
Net cash from operating	1,758	1,776	3,996	2,411	2,270
Capex	(1,761)	(1,787)	(1,363)	(1,463)	(1,587)
Other	(72)	(93)	188	127	120
Net cash from investing	(1,833)	(1,880)	(1,175)	(1,336)	(1,467)
Share issuance	189	2,254	0	0	0
Dividend paid	(1,101)	(1,161)	(1,560)	(926)	(1,018)
Other	696	305	829	(380)	238
Net cash from financing	(215)	1,398	(731)	(1,306)	(779)
Net change in cash	(290)	1,293	2,090	(231)	24
Cash at beginning of the year	1,051	818	2,105	4,195	3,964
Exchange difference	58	(6)	0	0	0
Cash at the end of the year	818	2,105	4,195	3,964	3,987

Balance sheet

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Current assets	9,716	14,720	13,958	14,921	16,435
Cash & equivalents	850	2,287	4,226	3,995	4,019
Account receivables	4,888	6,120	4,514	5,177	5,823
Inventory	2,519	4,520	3,847	4,370	4,764
Prepayment	20	24	35	29	39
Other current assets	1,439	1,769	1,335	1,349	1,790
Non-current assets	8,642	9,711	10,133	10,847	11,541
PPE	6,374	7,071	6,933	6,942	7,159
Deferred tax assets	120	158	160	169	185
Other non-current assets	2,148	2,482	3,040	3,736	4,197
Total assets	18,357	24,431	24,090	25,768	27,976
Current liabilities	6,804	7,253	6,883	7,522	7,821
ST borrowings	2,157	1,693	2,794	2,422	2,497
Account payables	2,903	3,296	2,504	3,081	3,314
Tax payable	125	173	69	128	109
Other current liabilities	1,619	2,091	1,517	1,891	1,901
Non-current liabilities	910	2,312	2,108	2,094	2,320
LT borrowings	605	1,590	1,318	1,310	1,473
Deferred tax liability	38	35	383	223	344
Other non-current	267	687	406	561	503
Total liabilities	7,714	9,565	8,990	9,616	10,141
Share capital	2,291	2,312	2,312	2,312	2,312
Reserve	2,795	4,078	4,078	4,078	4,078
Retained earnings	3,690	5,386	5,401	6,237	7,599
Other	1,113	1,322	1,437	1,567	1,749
Minority interest	754	1,770	1,872	1,958	2,098
Total equity	10,643	14,866	15,100	16,152	17,835
Total liabilities and equity	18,357	24,431	24,090	25,768	27,976

Key ratios

YE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue mix					
CCL	10,849	16,190	13,805	14,424	16,737
PCB	3,558	3,508	3,228	3,631	4,467
Others	280	577	609	561	617
Growth (%)					
Revenue	10.9%	38.0%	-13.0%	5.5%	17.2%
Gross profit	11.5%	38.2%	-30.8%	7.9%	26.9%
Operating profit	15.8%	58.6%	-46.1%	10.9%	40.3%
Net profit	16.0%	68.4%	-46.3%	12.7%	39.2%
Profit & loss ratio (%)					
Gross margin	26.8%	26.8%	21.3%	21.8%	23.6%
Operating margin	14.2%	16.4%	10.1%	10.6%	12.7%
Net profit margin	11.4%	14.0%	8.6%	9.2%	10.9%
Balance sheet ratio					
Net debt/total equity (%)	18.0%	6.7%	Net	Net	Net
Current ratio (x)	1.4	2.0	2.0	2.0	2.1
Receivable turnover days	118	99	110	95	92
Inventory turnover days	(78)	(87)	(110)	(103)	(100)
Payable turnover days	(94)	(76)	(76)	(70)	(70)
Profitability (%)					
ROE	17.0%	21.6%	11.5%	12.1%	15.1%
ROA	9.2%	11.6%	6.3%	6.6%	8.5%
Per share data (RMB)					
EPS	0.74	1.23	0.66	0.74	1.03
DPS	0.00	0.60	0.32	0.36	0.50
BPS	4.35	5.67	5.72	6.14	6.81

Source: Company data, CMBIGM estimates

Financial Summary – Shennan Circuit (002916 CH)

Income statement

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	11,600	13,943	14,114	15,108	17,475
Cost of sales	(8,530)	(10,637)	(10,432)	(11,164)	(12,888)
Gross profit	3,071	3,306	3,682	3,944	4,587
Selling exp	(167)	(233)	(249)	(251)	(300)
Admin exp (excl. R&D)	(480)	(543)	(659)	(690)	(781)
R&D exp	(645)	(782)	(829)	(872)	(1,017)
Finance costs	(152)	(107)	(12)	(110)	(122)
Other operating exp.	2,889	3,354	3,696	4,009	4,634
Operating profit	1,625	1,617	1,735	1,859	2,172
Other non-oper exp.	(19)	(8)	(3)	(6)	(5)
Pre-tax profit	1,606	1,609	1,732	1,853	2,167
Income tax expense	(175)	(128)	(138)	(148)	(173)
Minority interests	1	0	1	1	1
Net profit	1,430	1,481	1,593	1,705	1,993

Cash flow

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Net profit	1,431	1,481	1,594	1,706	1,994
D&A	591	793	930	1,145	1,380
Change in working capital	(557)	(363)	(738)	56	(233)
Others	335	431	96	122	138
Net cash from operating	1,800	2,342	1,881	3,029	3,279
Capex	(2,486)	(2,658)	(3,257)	(3,048)	(2,684)
Other	(149)	178	(433)	168	229
Net cash from investing	(2,635)	(2,481)	(3,690)	(2,880)	(2,456)
Share issuance	0	0	2,500	0	0
Dividend paid	(453)	(541)	(588)	(641)	(686)
Other	383	802	138	53	(244)
Net cash from financing	(71)	261	2,050	(588)	(930)
Net change in cash	(905)	122	242	(439)	(107)
Cash at beginning of the year	1,441	504	620	861	422
Exchange difference	9	(31)	0	0	0
Cash at the end of the year	504	620	861	422	315

Balance sheet

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Current assets	5,941	7,270	8,380	8,665	9,068
Cash & equivalents	507	620	862	422	316
Account receivables	2,053	2,732	2,914	3,129	3,382
Inventory	2,206	2,527	2,561	2,822	3,039
Prepayment	6	16	25	19	26
Other current assets	1,169	1,377	2,018	2,272	2,305
Non-current assets	8,067	9,522	12,151	14,171	15,621
PPE	6,485	7,789	9,339	11,114	12,472
Deferred tax assets	72	91	165	154	183
Other non-current	1,509	1,642	2,647	2,903	2,967
Total assets	14,008	16,792	20,531	22,836	24,690
Current liabilities	4,932	5,948	6,633	7,745	8,028
ST borrowings	232	350	306	659	661
Account payables	1,515	1,881	1,835	2,080	2,157
Tax payable	22	78	46	79	70
Other current liabilities	3,163	3,639	4,445	4,927	5,140
Non-current liabilities	1,631	2,325	1,772	1,782	1,920
LT borrowings	1,059	1,368	1,232	1,240	1,303
Deferred tax liability	6	7	183	107	168
Other non-current	566	950	356	436	450
Total liabilities	6,563	8,272	8,404	9,528	9,948
Share capital	489	489	489	489	489
Reserve	3,660	3,675	6,175	6,175	6,175
Retained earnings	3,135	4,150	5,256	6,437	7,869
Other	158	202	202	202	202
Minority interest	3	3	4	5	5
Total equity	7,444	8,520	12,127	13,308	14,741
Total liabilities and equity	14,008	16,792	20,531	22,836	24,690

Key ratios

YE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue mix					
PCB	8,311	8,737	8,934	9,616	10,811
PCBA	1,160	1,940	1,443	1,485	1,646
Substrate	1,544	2,415	2,801	2,978	3,885
Growth (%)					
Revenue	10.2%	20.2%	1.2%	7.0%	15.7%
Gross profit	10.0%	7.6%	11.4%	7.1%	16.3%
Operating profit	14.7%	-0.5%	7.3%	7.2%	16.8%
Net profit	16.0%	3.5%	7.6%	7.0%	16.9%
Profit & loss ratio (%)					
Gross margin	26.5%	23.7%	26.1%	26.1%	26.2%
Operating margin	14.0%	11.6%	12.3%	12.3%	12.4%
Net profit margin	12.3%	10.6%	11.3%	11.3%	11.4%
Balance sheet ratio					
Net debt/total equity (%)	10.5%	12.9%	5.6%	11.1%	11.2%
Current ratio (x)	1.2	1.2	1.3	1.1	1.1
Receivable turnover days	65	63	73	73	68
Inventory turnover days	(79)	(81)	(89)	(88)	(83)
Payable turnover days	(66)	(58)	(65)	(64)	(60)
Profitability (%)					
ROE	19.2%	17.4%	13.1%	12.8%	13.5%
ROA	10.2%	8.8%	7.8%	7.5%	8.1%
Per share data (RMB)					
EPS	3.00	3.02	3.26	3.49	4.07
DPS	0.00	0.95	0.95	0.95	1.34
BPS	15.61	17.41	24.78	27.19	30.12

Source: Company data, CMBIGM estimates

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OUTPERFORM	: Industry expected to outperform the relevant broad market benchmark over next 12 months
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