

China Technology Sector

Positive outlook for PCB/CCL sector amid cost pressure

Prismark raised FY21E global PCB industry sales forecast to 14% YoY from 8.6% YoY last Friday, due to stronger-than-expected widespread economic recovery and pent-up consumer demand post COVID-19. The strong growth is expected across all sectors and all regions compared to 2020. Given positive outlook for PCB sector, we expect upstream CCL suppliers will continue to deliver a solid year in FY21E. **Overall, we are positive on both PCB/CCL sector and we think CCL suppliers will outperform PCB manufacturers** given stronger bargaining power to transfer rising raw material costs in FY21E.

- **Global PCB sales to grow 14% YoY in FY21E, following 6.4% YoY in FY20**
According to Prismark, aggregate revenue of global top 40 PCB suppliers grew 29% YoY in 1Q21, reaching US\$17.8bn. Despite weak seasonality, 1Q21 revenue growth was strong across all sectors and all regions. Prismark revised up growth forecast to 14% YoY for FY21E from previous 8.6% YoY, and major growth drivers will come from solid market demand (telecom, consumer electronics, EV, etc.), technology upgrade and supply recovery.
- **We expect CCL suppliers will outperform PCB manufacturers on better margin outlook.** While we expect industry recovery to continue, we think concerns over the surge in material cost should not be ignored. From 2H20, raw material cost started to surge dramatically, and copper price topped \$10k per ton in May 2021 (new high since 2011). Although we expect Chinese government will take measures to curb commodity price hikes, we think material prices are likely to remain at high level in near term. We suggest to monitor key indicators (TC/RC, US Treasury yield) to track copper price movement. Considering bargaining power to transfer cost pressure, we expect CCL suppliers will outperform PCB manufacturers.
- **Maintain our positive view on Shengyi (600183 CH, BUY, TP RMB30.5).** We expect Shengyi to outperform given 1) its leading market share in rigid CCL market (global No.2); 2) its favorable product mix with greater CCL revenue (74% in FY21E) and 3) stronger bargaining power to transfer cost burden. We expect Shengyi will benefit from this upcycle with revenue/EPs growth of 29%/37% YoY in FY21E. We believe blended GPM will improve due to favorable product mix with higher CCL mix.
- **We maintain our conservative view on Shennan (002916 CH, HOLD, TP RMB82.7) due to cost pressure.** We think Shennan's IC substrate business will maintain robust revenue growth with 22% YoY in FY21E driven by strong demand for package substrate. However, bottom-line growth will be partially offset by its PCB segment given 1) lower ASP on PCB de-spec for 700MHz 5G BTS and 2) increasing material cost pressure. We will revisit our rating if 1) more details of next 5G BTS tenders are out, 2) further development of new auto production line and 3) signs of easing material costs.

**OUTPERFORM
(Maintain)**

China Technology Sector

Lily Yang

(852) 3916 3716

lilyyang@cmbi.com.hk

Alex Ng

(852) 3900 0881

alexng@cmbi.com.hk

Share Performance (Shengyi)

	Absolute	Relative
1-mth	1.7%	-3.0%
3-mth	-4.1%	-6.7%
6-mth	-14.9%	-19.6%

Source: Bloomberg

Share Performance (Shennan)

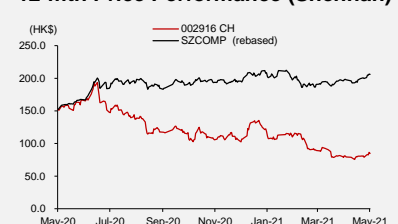
	Absolute	Relative
1-mth	9.9%	4.6%
3-mth	-21.5%	-24.9%
6-mth	-18.2%	-23.2%

Source: Bloomberg

12-mth Price Performance (Shengyi)



12-mth Price Performance (Shennan)



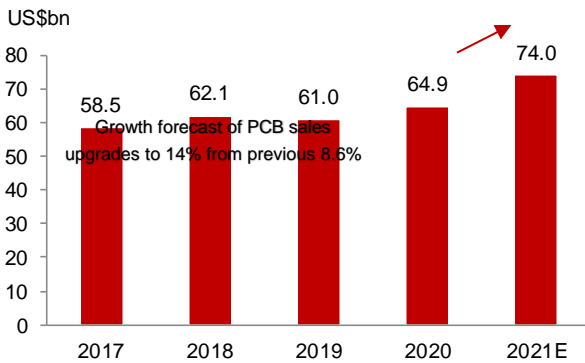
Source: Bloomberg

Recent Report:

1. Shengyi Tech - 1Q21 results confirmed CCL upcycle; Maintain BUY – 30 Apr 2021
2. Shennan Circuits - Margin pressure to persist on rising material cost; Maintain HOLD – 14 Apr 2021
3. China 5G Technology - Picking structural winners amid uncertainties; Initiate at Outperform – 18 Dec 2020

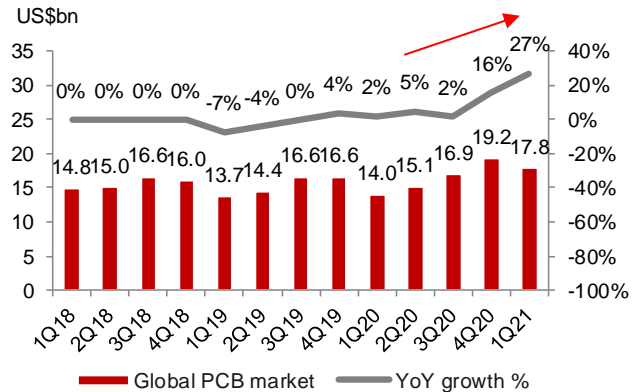
Focus Charts

Figure 1: Global PCB market to grow at 14% YoY



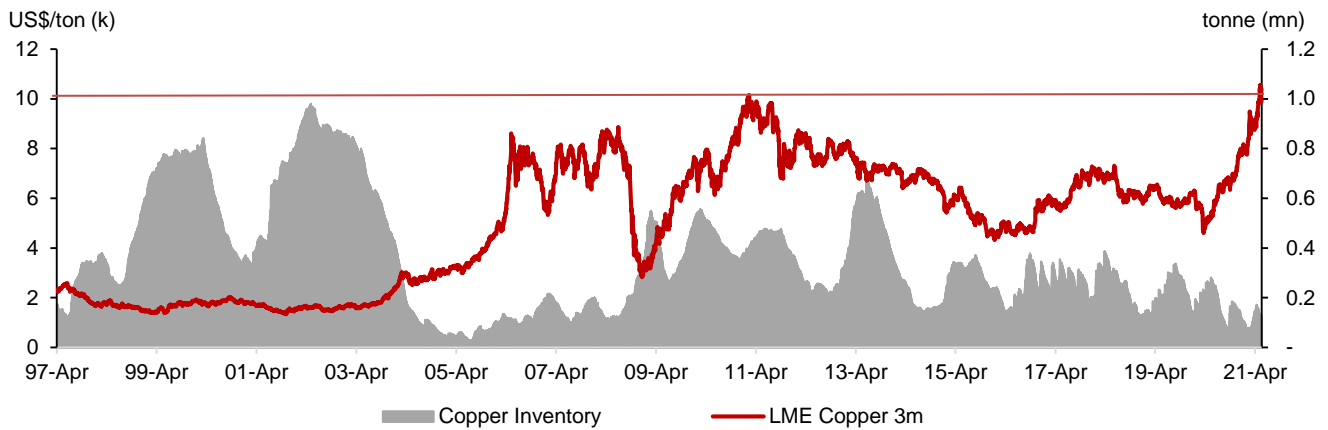
Source: SCI99, CMBIS estimates

Figure 2: Global PCB market rebounded since 2Q20



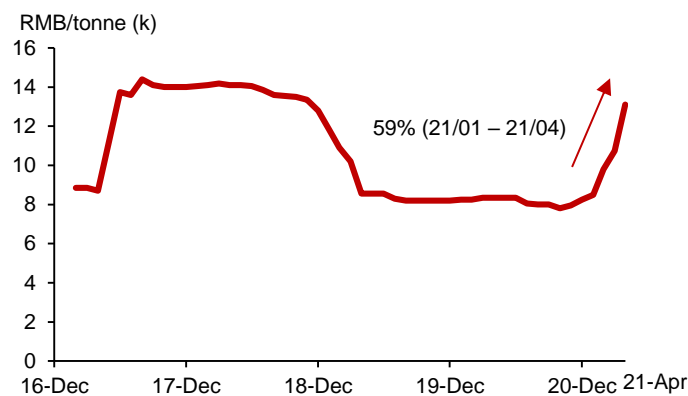
Source: Wind, CMBIS estimates

Figure 3: Copper price topped US\$10k in May 2021, reaching new high since 2011



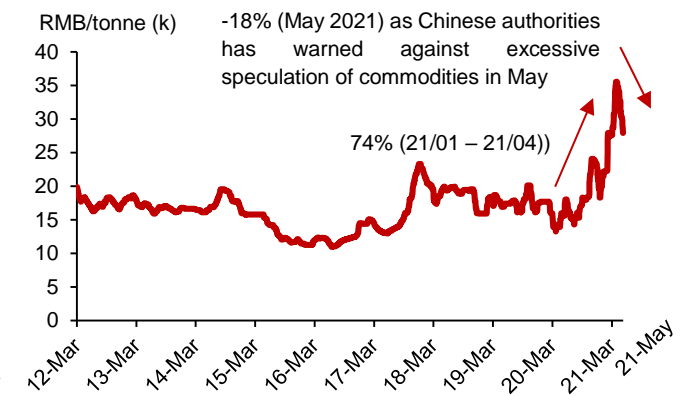
Source: Wind, CMBIS estimates

Figure 4: Glass fibre ASP surged 59% YTD (Apr 2021)



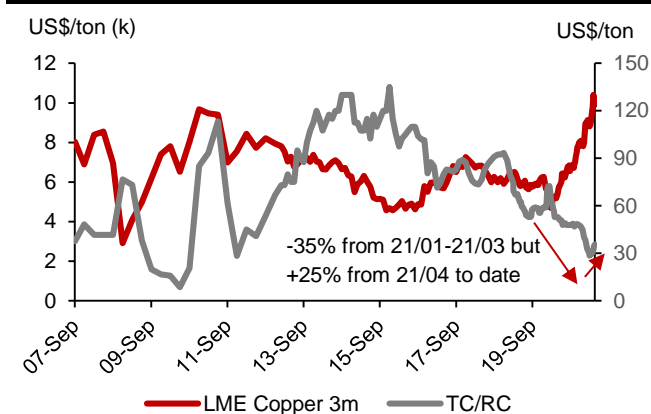
Source: SCI99, CMBIS estimates

Figure 5: Resin ASP dropped since May 2021



Source: Wind, CMBIS estimates

Figure 6: Opposite trend of TC/RC and copper prices



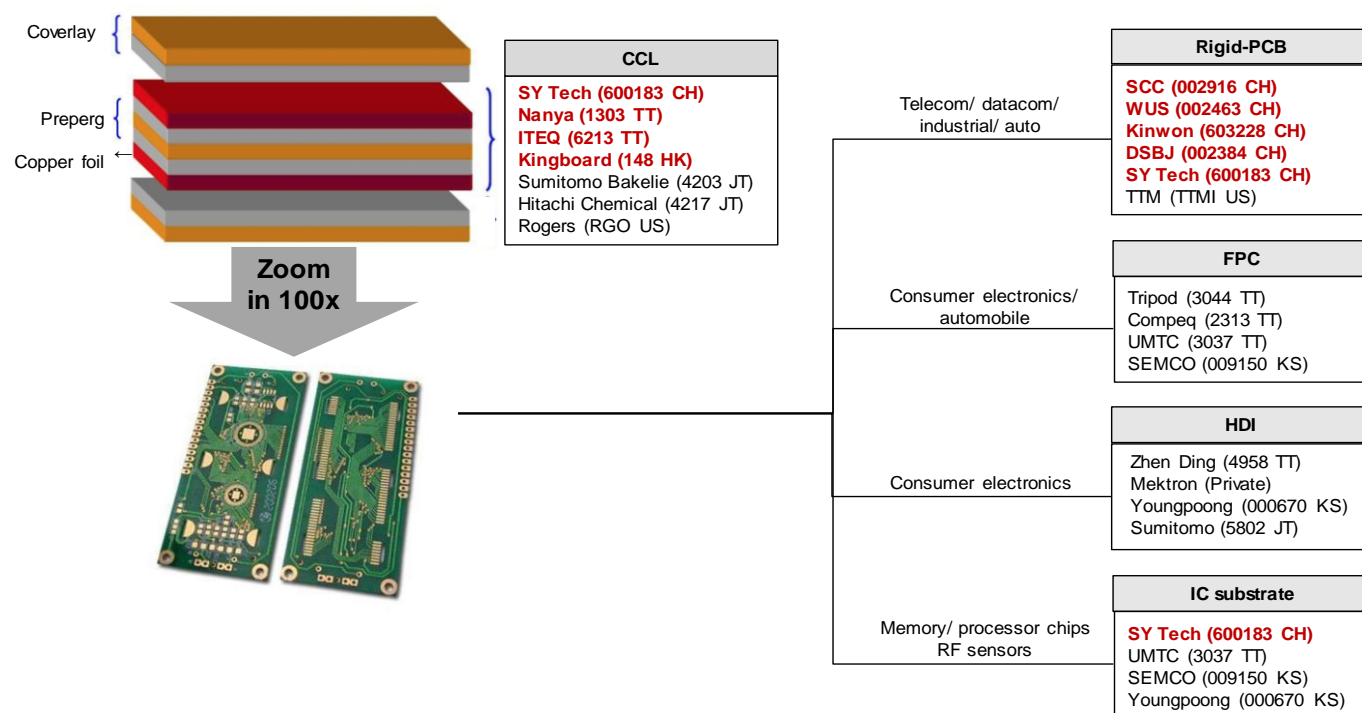
Source: SCi99, CMBIS estimates

Figure 7: Opposite trend of 10-yr US Treasury yield and copper prices



Source: Wind, CMBIS estimates

Figure 8: CCL/PCB supply chain



Source: CMBIS

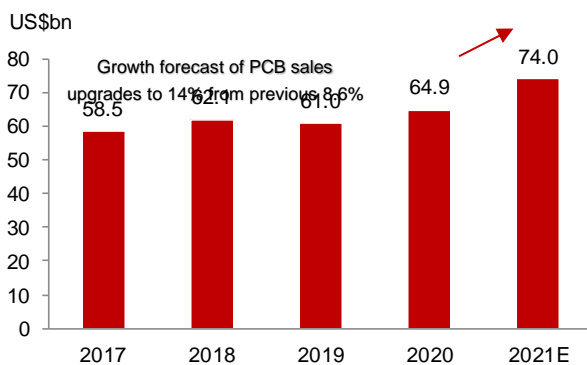
Sector updates

PCB/CCL sector: A strong year ahead

Prismark revised up FY21E PCB industry sales forecast last Friday to 14% YoY from 8.6% YoY, driven by widespread economic recovery and strong pent-up consumer demand as the pandemic is gradually controlled. The growth is expected to be strong across all sectors and all regions compared to 2020. Given positive outlook for PCB sector, we expect CCL suppliers will also have a great year in FY21E.

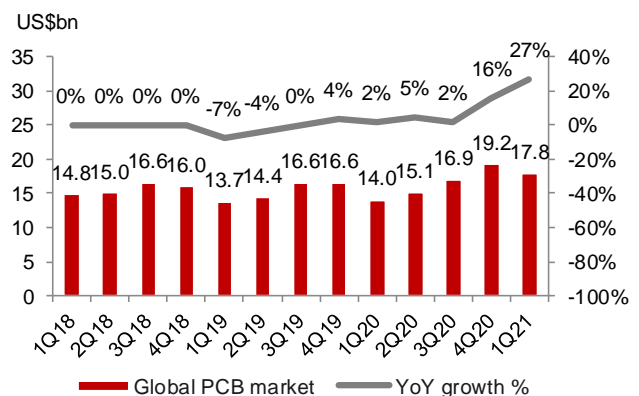
We are positive for PCB/CCL market outlook, given solid demand from end markets (telecom, consumer electronics, EV, etc.), technology upgrade and supply recovery. **We think CCL suppliers will outperform PCB manufacturers on better margin outlook**, given their stronger bargaining power to transfer rising raw material costs.

Figure 9: Global PCB market to grow at 14% YoY



Source: SC199, CMBIS estimates

Figure 10: Global PCB market rebound since 2Q20



Source: Wind, CMBIS estimates

Global PCB market to grow 14% YoY in FY21E, following 6.4% YoY in FY20. According to Prismark, aggregate revenue of top 40 PCB manufacturers grew at 29% YoY in 1Q21, reaching \$17.8bn. Despite weak seasonality, the growth was very strong across all sectors and all regions. Prismark revised up FY21E PCB industry growth forecast to 14% YoY from previous 8.6% YoY, and expect positive outlook for PCB market in 2021, given solid demand from end markets (telecom, consumer electronics, EV, etc.), technology upgrade and recovering supply.

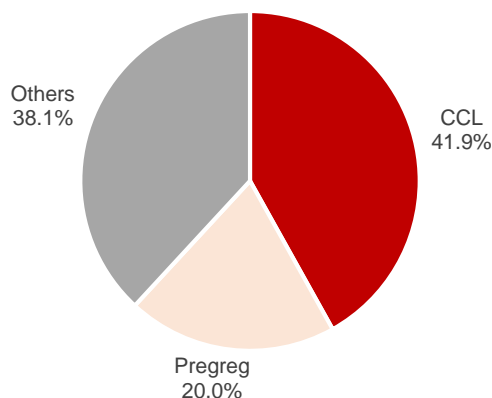
Benefited from strong growth in downstream PCB market, **CCL suppliers will continue** to deliver solid growth in FY21E, given industry upcycle and stronger bargaining power to transfer rising raw material costs, mainly due to a more concentrated CCL market compared to downstream PCB market (40 leading PCB suppliers accounted for ~50% industry sales).

We maintain our positive view on Shengyi (600183 CH) and conservative view on Shennan (002916 CH). We expect Shengyi to outperform given 1) its leading market share in rigid CCL market (global No.2); 2) its favorable product mix with greater CCL revenue (74% in FY21E) and 3) stronger bargaining power to transfer cost burden. We think Shennan's IC substrate business will maintain robust revenue growth with 22% YoY in FY21E driven by strong demand for package substrate. However, the bottom-line growth will be partially offset by its PCB segments given 1) lower ASP on PCB de-spec for 700MHz 5G BTS and 2) increasing material cost pressure.

PCB's near-term headwind from surging material costs

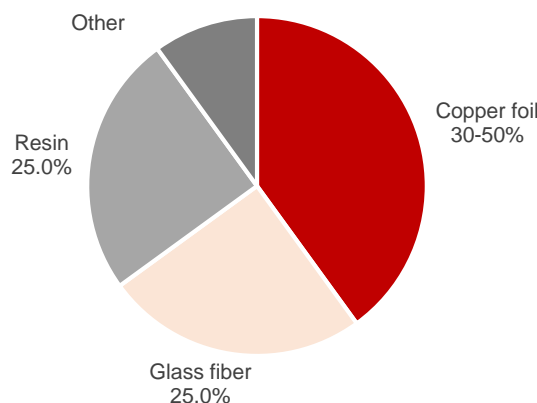
Copper is a key material for PCB. The largest material cost is CCL (approx. 30-70% depending on the type of PCB), of which copper foil (30-50%), glass fiber (~25%) and resin (~25%) are the biggest cost contributors, according to Shengyi Electronics ("SYE").

Figure 11: CCL is key material of PCB (2019)



Source: Shengyi Electronics, CMBIS estimates

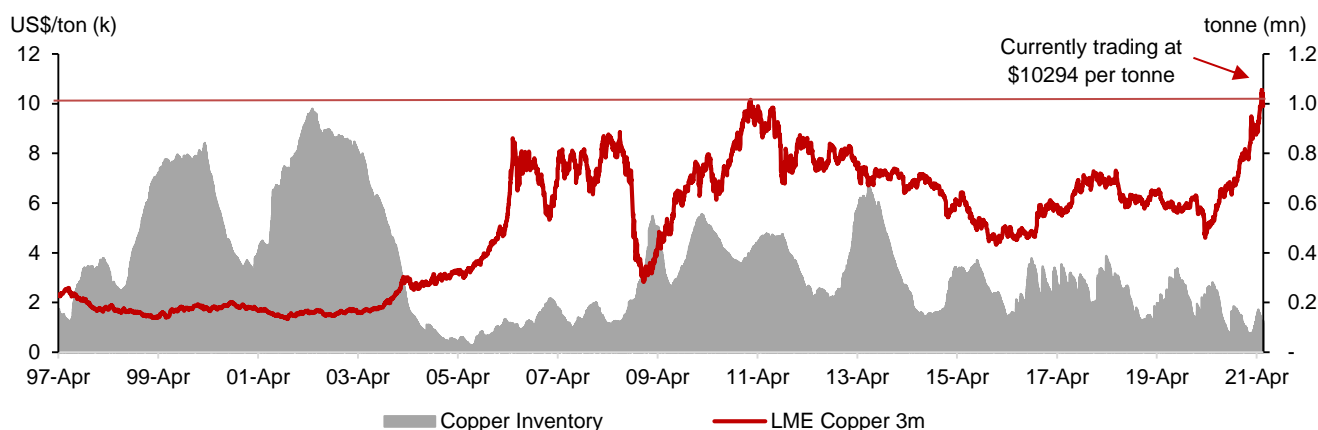
Figure 12: CCL material cost breakdown (2020)



Source: Shengyi Electronics, CMBIS estimates

Since last year, we have seen the **raw materials cost going up dramatically**, with copper price topped \$10k/ton in May 2021 (new high since 2011). The strong momentum is **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. Car manufacturers see electrifying copper as "the metal of future" and **2) tight supply** due to new wave of COVID-19 labor issues and environmental considerations.

Figure 13: Copper price topped \$10k in May 2021, reaching new high since 2011

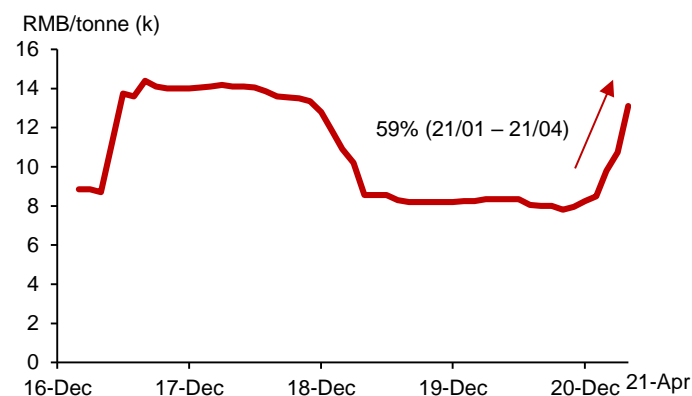


Source: Wind, CMBIS estimates

For **glass fiber and resin**, both prices are also at their highs. During the first four months in 2021, glass fiber/resin prices were up 59%/74%. Resin's price dropped slightly since May 2021, mainly due to Chinese authorities' warnings against excessive speculation of commodities. It signaled that **the government would like to curb the surging material cost**, as it has increased companies' burdens and hurt the economy growth. According to

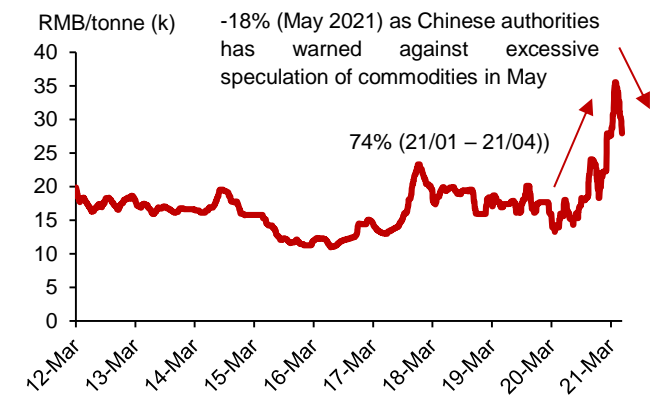
our macroeconomic team's view on China Economy¹, April economic numbers have already suggested moderating pace of economic recovery.

Figure 14: Glass fiber ASP surged 59% YTD (Apr 2021)



Source: SCI99, CMBIS estimates

Figure 15: Resin ASP dropped since May 2021



Source: Wind, CMBIS estimates

¹ CMBI Macro (18 May 2021): "China Economy in Apr–Consumption growth moderated" by DING Wenjie, PhD.

Material price to remain high in near-term; CCL suppliers will outperform PCB manufacturers on better margin outlook

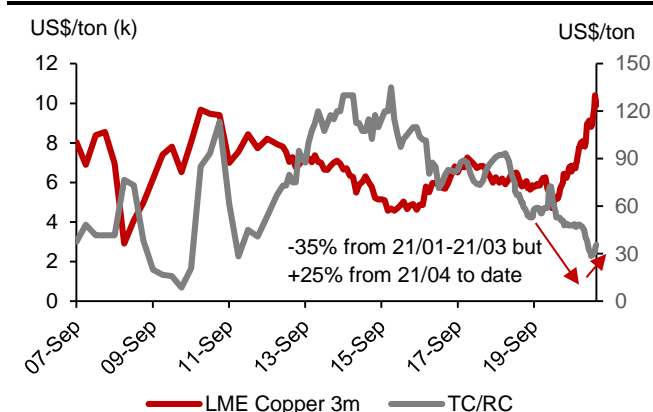
We think the material prices are likely to remain at their highs in the near term. Key factors include 1) recovery of global economy to continue; 2) low copper inventory due to new wave of COVID-19 and policy constraints in South America (top location for copper discoveries) and 3) government intervention (suppressing market price from its equilibrium) which increases buyer's intention to stock up material inventories but curbs suppliers' willingness to sell.

From demand side, economic recovery will continue but the pace may slow down.

The price hike in commodities will also hurt companies' willingness in production as the incremental costs could not be fully passed to downstream, which will bring down demand eventually. From supply side, nearly 40% of global copper production is from two countries, namely Chile (29%) and Peru (11%) in 2020. Copper production of these two countries were +1.6%/-10.6% in 2020, mainly due to COVID-19 restrictions. The impact continues into this year given the new wave of virus and the slow vaccination process in these countries (Chile/Peru: 40.6%/5.1% over total population). Other supply constraints include 1) unfavorable policies to reduce carbon emission and protect the environment and 2) less investments from miners as investors ask for higher returns. **As a result, we believe the supply deficit will continue, which gives support on copper price in the near future.**

In the long term, there are wide disparities in market expectations of copper price (\$7,000-\$12,250 a tonne by year end). Although we think the supply will still be tight as the production will not rebound quickly, we think high price may not be sustainable as it will hurt companies' willingness in production. **We suggest to monitor 1) copper concentrate treatment and refining charges (TC/RC: a rough estimates of demand and supply) and 2) 10-year U.S. treasury yield, as they are two key indicators of future copper price movements.**

Figure 16: Opposite trend of TC/RC and copper prices



Source: SCI99, CMBIS estimates

Figure 17: Opposite trend of 10-yr US Treasury yield and copper prices



Source: Wind, CMBIS estimates

This upcycle for copper is largely due to supply shortage during pandemic. We think TC/RC is a good indicator to reflect the unbalanced demand and supply. For 1Q21, we see TC/RC continue to decline but the trend has been reversed since April. We believe it is due to reduced production amid of the material price hike and government interventions. We will keep follow these indicators in the future.

1Q21 Peers Review

PCB manufacturers outperformed CCL suppliers in FY20 but delivered weaker results in 1Q21. PCB/CCL players' revenue grew at 12.7%/-0.3% in FY20 (vs. 35.5%/41.2% in 1Q21), mainly due to delayed transfer of increasing material costs from last year. As CCL market is more concentrated (stronger bargaining power), we think CCL makers will continue outperform PCB manufacturers as the copper price is expected to remain high in near term.

Figure 18: PCB players revenue/earnings growth

Company name	Ticker	Revenue			Net income		
		2020 YoY	1Q21 YoY	1Q21 QoQ	2020 YoY	1Q21 YoY	1Q21 QoQ
Shengyi Tech	600183 CH	10.9%	46.7%	12.7%	16.0%	60.4%	44.1%
Shennan Circuits	002916 CH	10.2%	9.1%	4.1%	16.0%	-12.0%	-26.6%
Dongshan	002384 CH	19.3%	46.3%	-23.7%	117.8%	18.0%	-57.3%
WUS	002463 CH	4.7%	10.4%	-8.2%	11.3%	3.2%	-43.1%
Kinwo	603228 CH	11.6%	44.0%	-3.1%	-25.1%	23.1%	7.6%
Sunta	002815 CH	17.2%	39.4%	20.8%	-16.2%	-2.3%	87.5%
Fastp	002436 CH	6.1%	24.4%	4.4%	78.7%	158.8%	58.1%
Founder	600601 CH	2.5%	4.0%	-62.8%	-30.8%	67.7%	-81.4%
Bomin	603936 CH	4.4%	49.8%	-11.4%	22.4%	197.1%	-48.3%
Peers only		12.7%	35.5%	-20.5%	44.3%	17.3%	27.5%

Source: Bloomberg, CMBIS estimates

Figure 19: CCL players revenue/earnings growth

Company name	Ticker	Revenue			Net income		
		2020 YoY	1Q21 YoY	1Q21 QoQ	2020 YoY	1Q21 YoY	1Q21 QoQ
Shengyi Tech	600183 CH	10.9%	46.7%	12.7%	16.0%	60.4%	44.1%
Nanya	1303 TT	0.2%	46.7%	14.5%	16.9%	1781.9%	46.9%
ITEQ	6213 TT	12.1%	41.1%	22.6%	13.5%	82.5%	-16.3%
Sumitomo	4203 JT	-2.6%	25.9%	0.4%	-22.8%	-244.7%	-83.9%
Rogers	ROG US	-10.7%	15.3%	8.8%	5.6%	135.4%	105.3%
Peers only		-0.3%	41.2%	12.6%	10.9%	1291.7%	25.8%

Source: Bloomberg, CMBIS estimates

Maintain BUY on Shengyi Tech and HOLD on Shennan Circuits

Shengyi Technology (600183 CH, BUY, TP RMB30.5)

CCL suppliers have stronger bargaining power in the recent material price hike, as the cost pressure has gradually been transferred to downstream PCB manufacturers since 4Q20. We expect Shengyi will benefit from this upcycle with revenue/EPS growth of 29%/37% YoY in FY21E. We believe blended GPM will improve due to favorable product mix with higher CCL revenue mix.

We maintain BUY and keep our TP at RMB30.5 based on 30x FY21/P/E. Trading at 21.4x FY21E P/E, 1-sd below historical P/E, the stock is very attractive in our view. Near-term catalysts include continued increase in CCL price and 5G BTS tenders. Potential risks include less-than-expected transfer of material costs and delay in 5G upgrades.

Earnings Summary

(YE 31 Dec)	FY19A	FY20A	FY21E	FY22E	FY23E
Turnover (RMB mn)	13,241	14,687	18,976	22,591	25,237
YoY growth (%)	10.5	10.9	29.2	19.0	11.7
Gross margin (%)	26.6	26.8	27.3	27.5	27.8
Net profit (RMB mn)	1,449	1,681	2,327	2,826	3,246
EPS (RMB)	0.66	0.74	1.02	1.23	1.42
YoY growth (%)	39.7	12.1	37.3	21.4	14.9
Consensus EPS (RMB)	NA	NA	0.98	1.17	1.39
PE (x)	34.5	30.8	22.4	18.5	16.1
PB (x)	5.9	5.3	4.6	4.1	3.6
Yield (%)	1.8	1.8	2.4	3.0	3.4
Roe (%)	16.4	17.0	20.6	22.0	22.3

Source: Company data, Bloomberg, CMBIS estimates

Shennan Circuits (002916 CH, HOLD, TP RMB82.7)

We believe Shennan's IC substrate business will maintain robust growth with 22% YoY in FY21E driven by strong demand for package substrate, while PCB segment remains weak due to the delay of China 3rd batch of 5G BTS tender. We expect 1H20 growth will be at a lower gear and gross margin pressure will continue in short term. In the long run, we believe top PCB players can enjoy scale benefits and Shennan will gain share with accelerated industry consolidation in the backdrop of surging material costs.

We maintain HOLD as we expect near-term pressure on the stock due to 1) delay of China 3rd batch of 5G BTS tender; 2) price pressure on PCB de-spec for 700MHz 5G BTS and 3) continued surge in material costs. Potential risks include lower 5G CAPEX from telco and raw material cost hike. Maintain our TP at RMB82.7 based on 30x FY21E P/E.

Earnings Summary

(YE 31 Dec)	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue (RMB mn)	10,524	11,600	13,320	15,141	17,338
YoY growth (%)	38.4	10.2	14.8	13.7	14.5
Gross margin	26.5	26.5	24.6	25.5	26.0
Net income (RMB mn)	1,233	1,430	1,348	1,662	1,970
EPS (RMB)	2.62	3.00	2.76	3.40	4.03
YoY growth (%)	5.2	14.5	(8.2)	23.3	18.5
Consensus EPS (RMB)	NA	NA	3.57	4.39	4.90
P/E (x)	32.4	28.3	30.8	25.0	21.1
P/B (x)	5.8	5.6	5.0	4.3	3.8
Dividend Yield (%)	1.4	1.1	1.1	1.3	1.5
ROE (%)	25	19	16	17	18

Source: Company data, Bloomberg, CMBIS estimates

Figure 20: Peers' valuation

Company	Ticker	Rating	Market Cap (US\$ mn)	Price (LC)	TP (LC)	Up/Down -side	P/E (x)		P/B (x)		ROE (%)	
							FY21E	FY22E	FY21E	FY22E	FY21E	FY22E
CCL												
Shengyi Tech	600183 CH	Buy	8,201	22.79	30.5	34%	22.4	18.5	4.6	4.1	20.6	22.0
Nanya	1303 TT	NR	23,893	83.50	NA	NA	12.8	14.1	1.7	1.7	14.1	12.7
ITEQ	6213 TT	NR	1,490	124.00	NA	NA	12.4	10.1	3.0	2.9	23.3	28.9
Kingboard	148 HK	NR	6,120	42.90	NA	NA	5.8	5.2	-	-	-	-
Sumitomo	4203 JT	NR	2,026	4490.00	NA	NA	18.3	13.6	1.1	1.1	8.4	7.8
Rogers	ROG US	NR	3,526	188.41	NA	NA	24.4	21.6	3.5	-	-	-
Average							16.0	13.8	2.8	2.4	16.6	17.8
PCB												
Shengyi Tech	600183 CH	Buy	8,201	22.79	30.5	34%	22.4	18.5	4.6	4.1	20.6	22.0
Shennan Circuits	002916 CH	Hold	6,519	84.83	82.7	-3%	30.8	25.0	5.0	4.3	16.2	17.4
WUS	002463 CH	NR	4,141	15.29	NA	NA	18.5	15.1	-	-	19.2	18.4
DSBJ	002384 CH	NR	4,871	18.14	NA	NA	15.9	12.6	2.2	1.9	14.6	15.1
Zhen Ding	4958 TT	NR	3,158	97.00	NA	NA	9.7	8.4	1.1	1.0	10.4	11.4
TTM	TTMI US	NR	1,624	15.15	NA	NA	12.2	10.3	1.0	1.0	8.7	9.0
UMTC	3037 TT	NR	5,674	104.50	NA	NA	20.7	15.2	3.0	2.6	14.1	17.0
Tripod	3044 TT	NR	2,399	126.50	NA	NA	10.2	9.2	1.7	1.6	17.0	17.4
Comped	2313 TT	NR	1,647	38.30	NA	NA	9.3	8.2	1.4	1.3	16.5	16.8
Average							16.6	13.6	2.5	2.2	15.2	16.0

Source: Bloomberg, CMBIS estimates

Financial Summary: Shengyi Tech

Income statement

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue	13,241	14,687	18,976	22,591	25,237
Cost of sales	9,713	10,754	13,804	16,375	18,212
Gross profit	3,528	3,933	5,172	6,215	7,025
Selling exp	288	179	247	294	328
Admin exp	644	720	911	1,062	1,161
R&D exp	605	711	892	1,062	1,186
Finance costs	142	114	187	224	239
Other operating exp.	44	119	20	35	45
Operating profit	1,805	2,090	2,915	3,539	4,065
Other non-oper exp.	0	(7)	-	-	-
Pre-tax profit	1,805	2,083	2,915	3,539	4,065
Income tax expense	242	283	396	480	552
Minority interests	115	120	192	233	268
Net profit to shareholders	1,449	1,681	2,327	2,826	3,246

Cash flow summary

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E
Net profit	1,563	1,800	2,519	3,059	3,513
Depreciation/amortization	409	531	825	933	1,070
Change in working capital	(479)	(832)	(1,465)	(1,017)	(563)
Others	198	258	187	224	239
Net cash from operating	1,692	1,758	2,067	3,199	4,260
Capex	(1,580)	(1,761)	(2,077)	(2,024)	(2,251)
Other	14	(72)	0	0	0
Net cash from investing	(1,566)	(1,833)	(2,077)	(2,024)	(2,251)
Share issuance	0	189	0	0	0
Dividend paid	(872)	(1,101)	(916)	(1,269)	(1,541)
Other	699	696	980	176	151
Net cash from financing	(173)	(215)	64	(1,093)	(1,390)
Net change in cash	(50)	(232)	53	81	619
Cash at beginning of the year	1,101	1,051	818	871	953
Exchange difference	(3)	58	0	0	0
Cash at the end of the year	1,051	818	871	953	1,572

Balance sheet

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E
Current assets	8,712	9,716	12,330	13,418	15,295
Cash & equivalents	1,062	850	903	984	1,603
Account receivables	4,598	4,888	6,613	7,506	8,267
Inventory	2,100	2,519	3,355	3,468	3,966
Prepayment	11	20	20	20	20
Other current assets	941	1,439	1,439	1,439	1,439
Non-current assets	6,823	8,642	9,894	10,985	12,166
PPE	5,003	6,374	7,257	8,149	9,114
Deferred tax assets	76	120	120	120	120
Other non-current assets	1,744	2,148	2,517	2,717	2,933
Total assets	15,535	18,357	22,224	24,403	27,461
Current liabilities	5,257	6,804	8,865	9,185	10,202
ST borrowings	1,519	2,157	2,879	3,126	3,368
Account payables	2,656	2,903	3,999	3,989	4,684
Tax payable	116	125	125	125	125
Other current liabilities	965	1,619	1,861	1,944	2,025
Non-current liabilities	925	910	1,112	1,182	1,249
LT borrowings	732	605	807	877	944
Deferred tax liability	13	38	38	38	38
Other non-current	179	267	267	267	267
Total liabilities	6,181	7,714	9,977	10,366	11,451
Share capital	2,276	2,291	2,291	2,291	2,291
Reserve	2,505	2,795	2,795	2,795	2,795
Minority interest	520	754	946	1,180	1,448
Total equity	9,354	10,643	12,246	14,037	16,009
Total liabilities and equity	15,535	18,357	22,224	24,403	27,461

Key ratios

YE 31 Dec	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue mix					
CCL	76	74	72	66	62
PCB	23	24	26	32	36
Others	1	2	2	2	1
Growth (%)					
Revenue	10.5	10.9	29.2	19.0	11.7
Gross profit	32.8	11.5	31.5	20.2	13.0
Operating profit	46.9	15.8	39.5	21.4	14.9
Net profit	39.7	12.1	37.3	21.4	14.9
Profit & loss ratio (%)					
Gross margin	26.6	26.8	27.3	27.5	27.8
Operating margin	13.6	14.2	15.4	15.7	16.1
Net profit margin	10.9	11.4	12.3	12.5	12.9
Balance sheet ratio					
Net debt/total equity (%)	12.7	18.0	22.7	21.5	16.9
Current ratio (x)	1.7	1.4	1.4	1.5	1.5
Receivable turnover days	116	118	111	114	114
Inventory turnover days	72	78	78	76	74
Payable turnover days	85	94	91	89	87
Profitability (%)					
ROE	16.4	17.0	20.6	22.0	22.3
ROA	9.3	9.2	10.5	11.6	11.8
Per share data (RMB)					
EPS	0.66	0.74	1.02	1.23	1.42
DPS	0.40	0.40	0.55	0.67	0.77
BPS	3.88	4.32	4.93	5.61	6.36

Source: Company data, CMBIS estimates

Financial Summary- Shennan Circuits

Income statement

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue	10,524	11,600	13,320	15,141	17,338
Cost of sales	7,732	8,530	10,039	11,274	12,826
Gross profit	2,792	3,071	3,280	3,867	4,512
Selling exp	218	167	240	273	312
Admin exp	501	480	533	606	694
R&D exp	537	645	799	908	1,040
Finance costs	73	152	163	175	208
Other operating exp.	47	2	(3)	(2)	(2)
Operating profit	1,417	1,625	1,549	1,908	2,260
Other non-oper exp.	(14)	(19)	(16)	(18)	(21)
Pre-tax profit	1,403	1,606	1,533	1,890	2,239
Income tax expense	170	175	184	227	269
Minority interests	1	1	1	1	1
Net profit to shareholders	1,233	1,430	1,348	1,662	1,970

Cash flow summary

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E
Net profit	1,234	1,431	1,349	1,663	1,971
Dep. /amort.	467	644	721	881	1,057
Change in working capital	(650)	(557)	447	(1,187)	318
Others	212	282	157	172	207
Net cash from operating	1,263	1,800	2,674	1,528	3,552
Capex	(2,183)	(2,486)	(2,885)	(2,506)	(2,855)
Other	186	(149)	0	0	0
Net cash from investing	(1,997)	(2,635)	(2,885)	(2,506)	(2,855)
Share issuance	130	0	0	0	0
Dividend paid	(278)	(453)	(465)	(438)	(540)
Debt issuance/(paydown)	1,746	87	1,316	1,119	295
Other	(82)	295	(163)	(175)	(208)
Net cash from financing	1,516	(71)	689	505	(453)
Net change in cash	791	(937)	479	(472)	244
Cash at beginning of year	650	1,441	504	983	511
Exchange difference	9	(31)	2	0	0
Cash at the end of year	1,441	504	983	511	755

Balance sheet

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E
Current assets	5,977	5,941	6,593	7,136	7,799
Cash & equivalents	1,444	507	986	514	758
Account receivables	2,092	2,053	2,540	2,681	3,297
Inventory	1,504	2,206	1,892	2,766	2,568
Prepayment	3	6	6	6	6
Other current assets	934	1,169	1,169	1,169	1,169
Non-current assets	6,242	8,067	10,237	11,866	13,665
PPE	4,310	6,485	7,913	9,458	11,027
Construction in process	1,147	885	1,616	1,686	1,898
Intangibles	297	322	334	348	366
Other non-current assets	488	374	374	374	374
Total assets	12,219	14,008	16,830	19,002	21,464
Current liabilities	4,670	4,932	6,029	6,282	7,130
ST borrowings	713	688	1,164	1,589	1,702
Notes payables	765	858	858	858	858
Account payables	1,555	1,515	2,135	1,964	2,700
Other payables	1,119	1,399	1,399	1,399	1,399
Other current liabilities	517	472	472	472	472
Non-current liabilities	2,547	1,631	2,472	3,165	3,348
LT borrowings	2,250	1,059	1,900	2,593	2,776
LT Deferred income	294	266	266	266	266
Other non-current liabilities	3	306	306	306	306
Total liabilities	7,216	6,563	8,500	9,447	10,479
Share capital	339	489	489	489	489
Reserve	2,231	3,660	3,660	3,660	3,660
Retained earnings	2,170	3,135	3,950	5,091	6,422
Other equity items	260	158	227	310	408
Minority interest	2	3	4	4	5
Total equity	5,003	7,444	8,330	9,555	10,985
Total liabilities and equity	12,219	14,008	16,830	19,002	21,464

Key ratios

YE 31 Dec	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue mix					
PCB	73	72	71	71	74
PCBA	12	10	9	8	8
IC substrate	11	13	14	15	12
Growth (%)					
Revenue	38.4	10.2	14.8	13.7	14.5
Gross profit	58.8	10.0	6.8	17.9	16.7
Operating profit	80.8	14.7	(4.7)	23.2	18.5
Net profit	5.2	14.5	(8.2)	23.3	18.5
Profit & loss ratio (%)					
Gross margin	26.5	26.5	24.6	25.5	26.0
Operating margin	13.5	14.0	11.6	12.6	13.0
Net profit margin	11.7	12.3	10.1	11.0	11.4
Balance sheet ratio					
Net debt/total equity (%)	34.0	24.1	27.8	33.4	30.6
Current ratio (x)	1.3	1.2	1.1	1.1	1.1
Receivable turnover days	64	65	63	63	63
Inventory turnover days	49	58	56	56	56
Payable turnover days	67	66	66	66	66
Cash conversion cycle	46	58	53	53	53
Profitability (%)					
ROE	24.6	19.2	16.2	17.4	17.9
ROA	10.1	10.2	8.0	8.7	9.2
Per share data (RMB)					
EPS	2.62	3.00	2.76	3.40	4.03
DPS	1.15	0.95	0.90	1.10	1.31

Source: Company data, CMBIS estimates

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CMB International Securities Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

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