

# China Technology

**OUTPERFORM  
(Maintain)**

## Emerging opportunities to accumulate quality names in AR/VR, Apple and auto-related supply chain

We see emerging opportunities for high-quality companies after recent sector pull-back (30-40% in past three months), as most stocks under our coverage are trading below 1-SD of its 5-year average. We believe near-term concerns over weak macro, inflation, geopolitical risks, RMB depreciation are largely priced in. We suggest to accumulate quality names with higher exposure to structural growth drivers, including AR/VR, auto-related and Apple share gain. Our stock picks include Apple supply chain (Luxshare, FIT Hon Teng, Tongda), AR/VR (Goertek) and auto-related names (BOEVx).

- Smartphone weakness to extend to 1Q23E.** We expect smartphone shipment to remain weak until 2Q23E, due to inflation pressure in US/EU, EM FX depreciation and lack of major upgrade. Recent shipment data suggested that China/US/India/Europe reported -17%/-4%/-6%/-31% YoY decline in Aug. For China, we expect inventory level is easing but high base in 4Q21 will lead to widening YoY decline in 4Q22E. We prefer Apple supply chain over Android as we see higher visibility in 2H22E restocking post product launches in Sep.
- AR/VR, Apple and auto-related supply chain remains resilient.** We believe structural growth trends in metaverse and smart car will continue to drive content value growth and opportunities in AR/VR and auto-related supply chain. For instance, Pico 4/4 Pro launched last week features spec upgrade in optical lens to Pancake from Frensel and five cameras for eye/hand/face tracking. Rising adoption of automotive ADAS/smart cockpit will also benefit vehicle cameras and auto display products. For Apple names, we expect share gainers with spec upgrade are better positioned in 4Q22E.
- Recommend to accumulate quality stocks at trough valuation.** The sector has retreated 30-40% in past three months due to inflation concerns, RMB depreciation and geopolitical tensions. We believe most concerns have been priced in, as most stocks under our coverage are trading below 1-SD of its 5-year average. We believe iPhone 14 restocking and AR/VR product launches will boost near-term sentiment. For 4Q22E, we prefer **BOEVx** for auto cockpit trend, **Goertek** for AR/VR exposure and Apple names such as **Luxshare** for iPhone/Watch/AirPods OEM and **FIT Hon Teng/Tongda** for iPhone shipment upside.

### China Technology Sector

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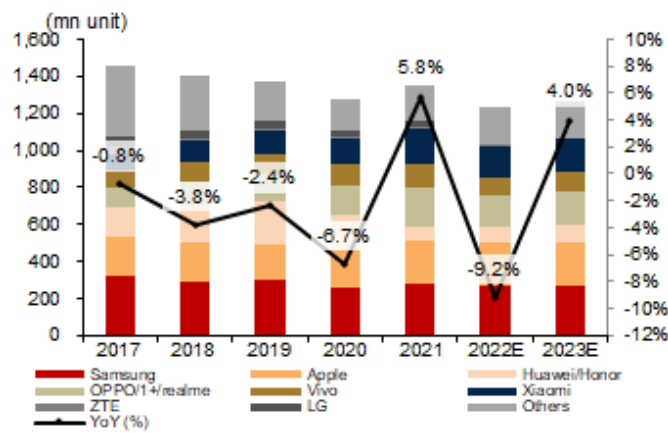
### Valuation Table

Name	Ticker	Rating	Mkt Cap (US\$ mn)	Price (LC)	TP (LC)	Up/Down -side	P/E (x) FY22E FY23E	P/B (x) FY22E FY22E	ROE
Luxshare	002475 CH	BUY	29,274	29.40	52.3	78%	20.9 16.9	3.8	18.2
Goertek	002241 CH	BUY	12,724	26.50	44.7	69%	16.6 13.5	2.8	17.1
BOEVx	710 HK	BUY	1,358	13.84	26.0	88%	18.2 13.3	1.7	14.7
FIT Hon Teng	6088 HK	BUY	861	0.93	1.8	91%	5.3 4.6	0.3	6.0
Tongda	698 HK	BUY	110	0.09	0.2	147%	3.0 2.2	0.1	2.3
AAC Tech	2018 HK	HOLD	1,829	11.88	14.0	18%	14.0 9.8	0.6	4.0
Sunny Optical	2382 HK	HOLD	10,466	74.90	102.3	37%	26.9 18.2	3.2	11.8
BYDE	285 HK	HOLD	5,385	18.76	19.3	3%	25.1 14.3	1.5	6.0

Source: Company data, CMBIGM estimates

## Focus Charts

Figure 1: Global smartphone shipment forecasts



Source: IDC, CMBIGM

Figure 2: Global smartphone forecasts by brand

	2019	2020	2021	2022E	2023E
Samsung	296	257	273	268	272
Apple	191	203	236	230	232
Huawei+Honor	241	189	78	90	95
Oppo	146	160	212	168	175
Vivo	110	112	128	100	110
Xiaomi	126	148	191	165	180
Others	264	212	237	209	215
<b>Total</b>	<b>1,373</b>	<b>1,281</b>	<b>1,355</b>	<b>1,230</b>	<b>1,279</b>
<b>YoY</b>	<b>-2.4%</b>	<b>-6.7%</b>	<b>5.8%</b>	<b>-9.2%</b>	<b>4.0%</b>

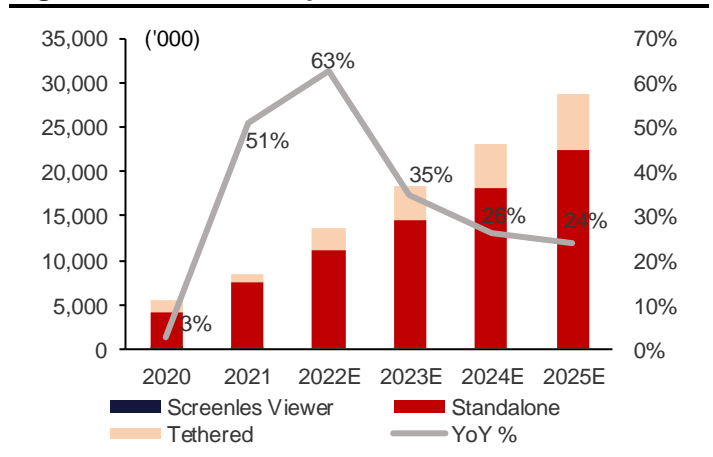
Source: IDC, CMBIGM

Figure 3: Pico 4 vs Meta Quest 2

	Oculus Quest 2	Pico 4	Pico 4 Pro
<b>Announced</b>	Sep 2020	Sep 2022	Sep 2022
<b>Processor</b>	Snapdragon XR2	Snapdragon XR2	Snapdragon XR2
<b>Optical lens</b>	Fresnel	Pancake	Pancake
<b>FOV</b>	90°	105°	105°
<b>Display</b>	FAST-LCD	FAST-LCD	FAST-LCD
<b>Resolution</b>	1832x1920	2160x2160	2160x2160
<b>Refresh rate</b>	72/90/120Hz	90Hz	90Hz
<b>Tracking type</b>	6DoF inside-out	6DoF inside-out	6DoF inside-out
<b>Weight</b>	503g	295g (w/o headstrap)	295g (w/o headstrap)
<b>Battery</b>	3640mAh	5300mAh	5300mAh

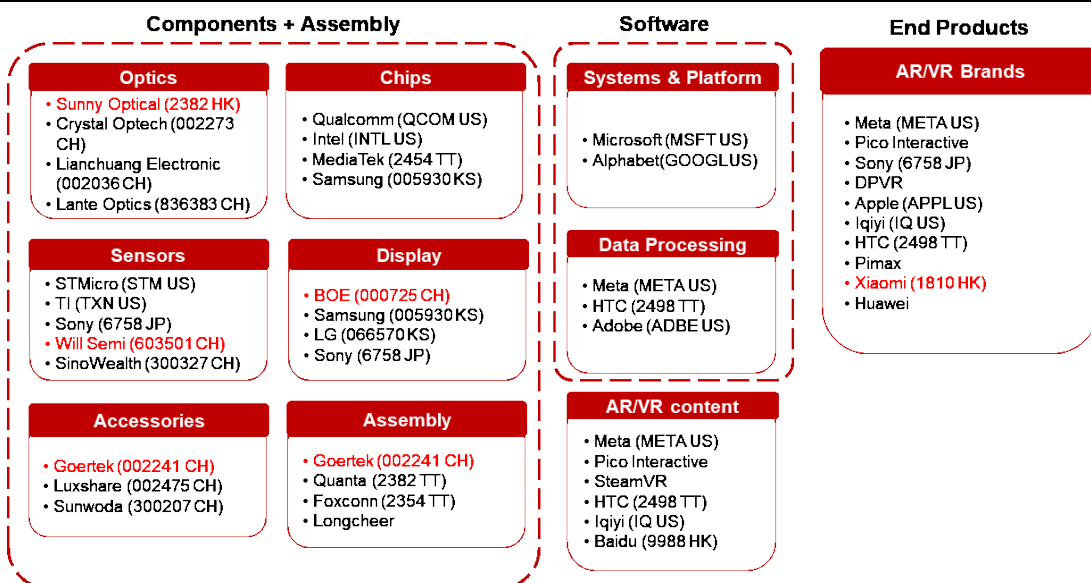
Source: Company, CMBIGM

Figure 4: Global VR shipment forecasts



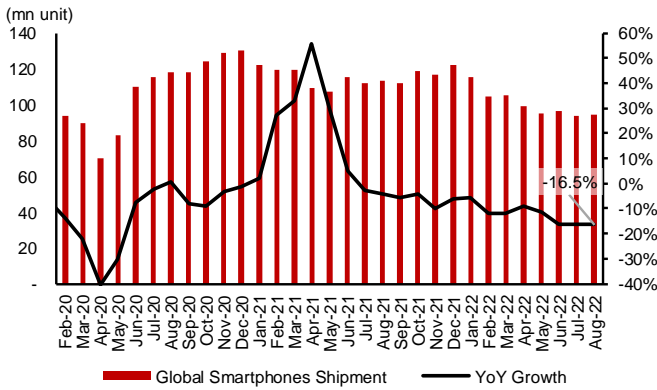
Source: IDC, CMBIGM

Figure 5: AR/VR hardware supply chain



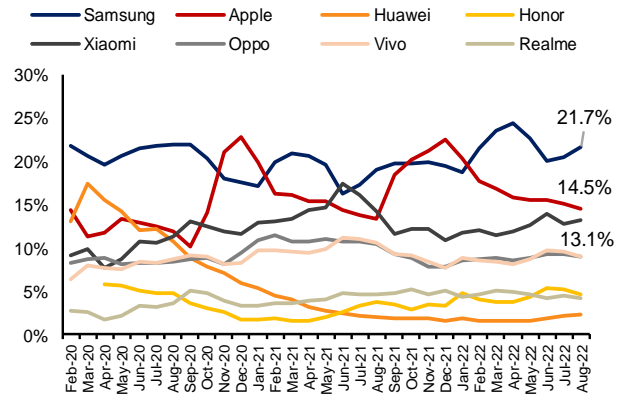
Source: Company data, CMBIGM estimates

**Figure 6: Global smartphone: -16.5% YoY in Aug**



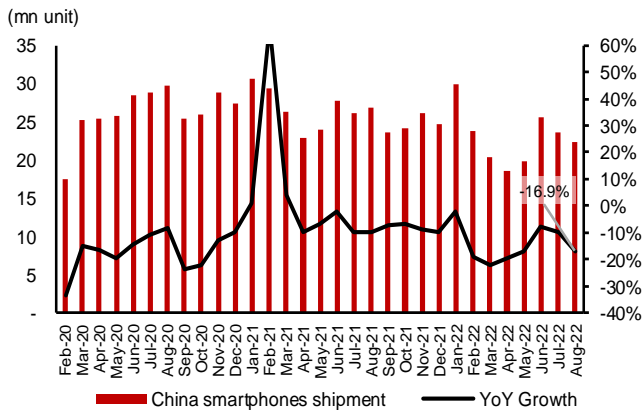
Source: Counterpoint, CMBIGM

**Figure 7: Global smartphone market share trend**



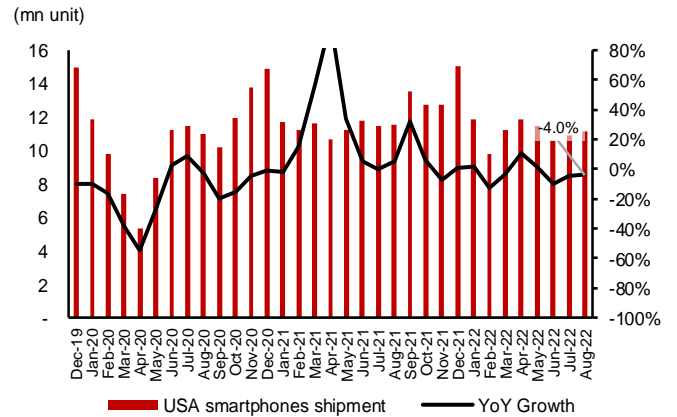
Source: Counterpoint, CMBIGM

**Figure 8: China smartphone: -16.9% YoY in Aug**



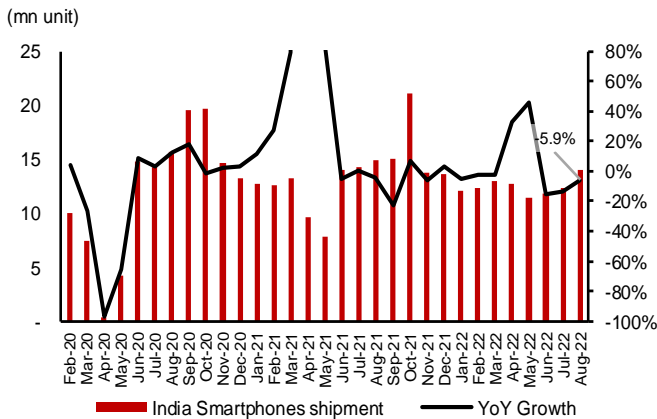
Source: Counterpoint, CMBIGM

**Figure 9: US smartphone: -4.0% YoY in Aug**



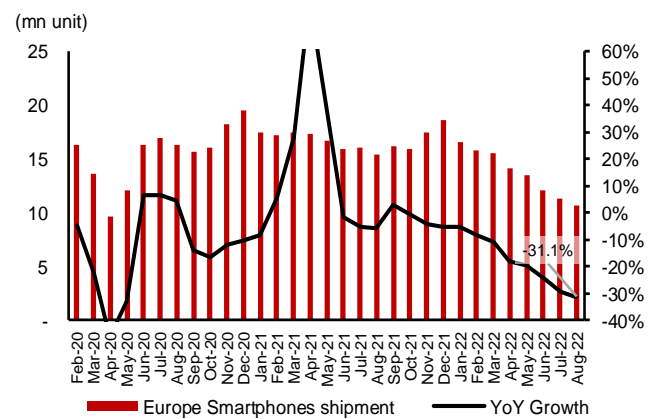
Source: Counterpoint, CMBIGM

**Figure 10: India smartphone: -5.9% YoY in Aug**



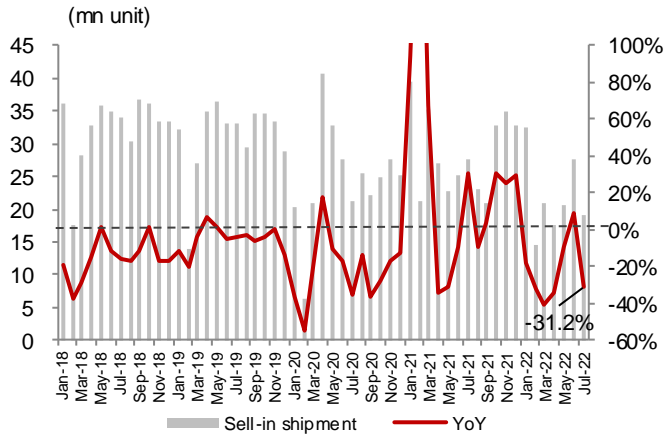
Source: Counterpoint, CMBIGM

**Figure 11: Europe smartphone: -31.1% YoY in Aug**



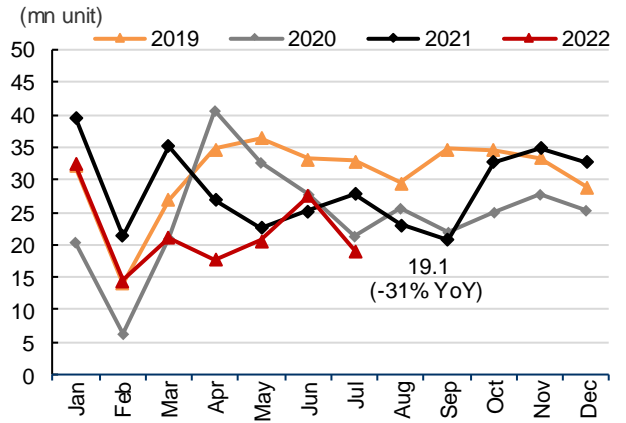
Source: Counterpoint, CMBIGM

**Figure 12: China smartphone sell-in: -31% YoY in Jul**



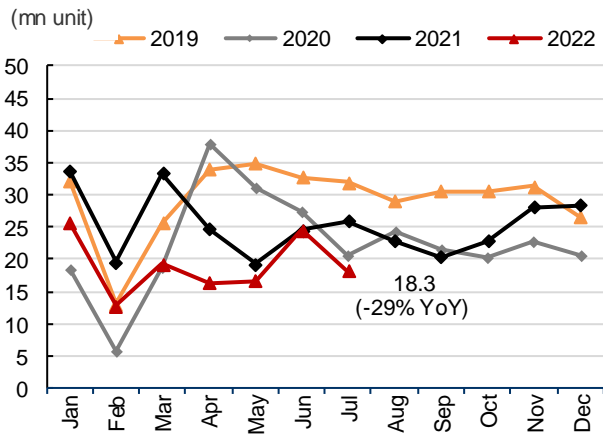
Source: CAICT, CMBIGM

**Figure 13: China smartphone sell-in shipment**



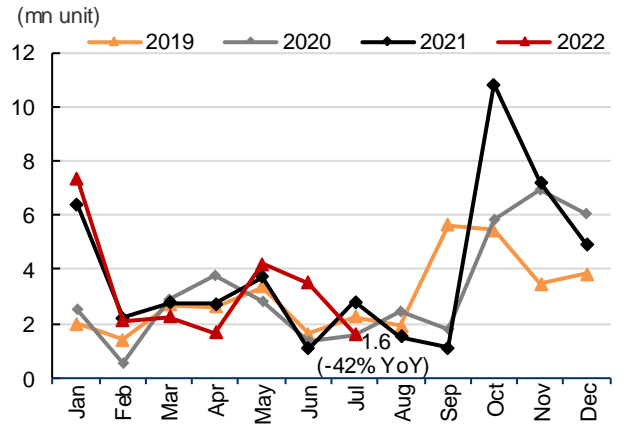
Source: CAICT, CMBIGM

**Figure 14: China market: Chinese brand shipment**



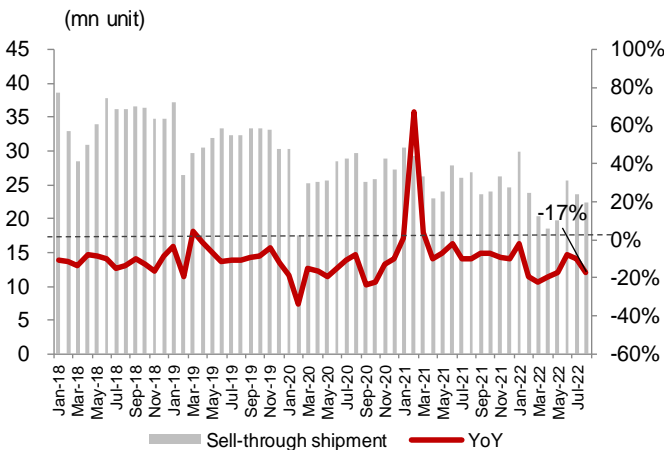
Source: CAICT, CMBIGM

**Figure 15: China market: Overseas brand shipment**



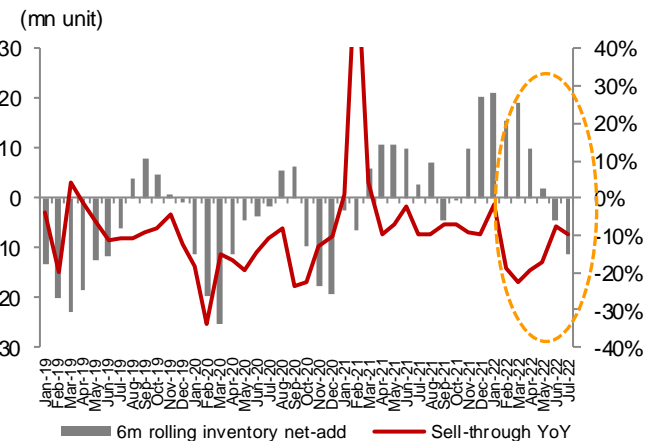
Source: CAICT, CMBIGM

**Figure 16: China smartphone sell-out: -17% YoY in Aug**



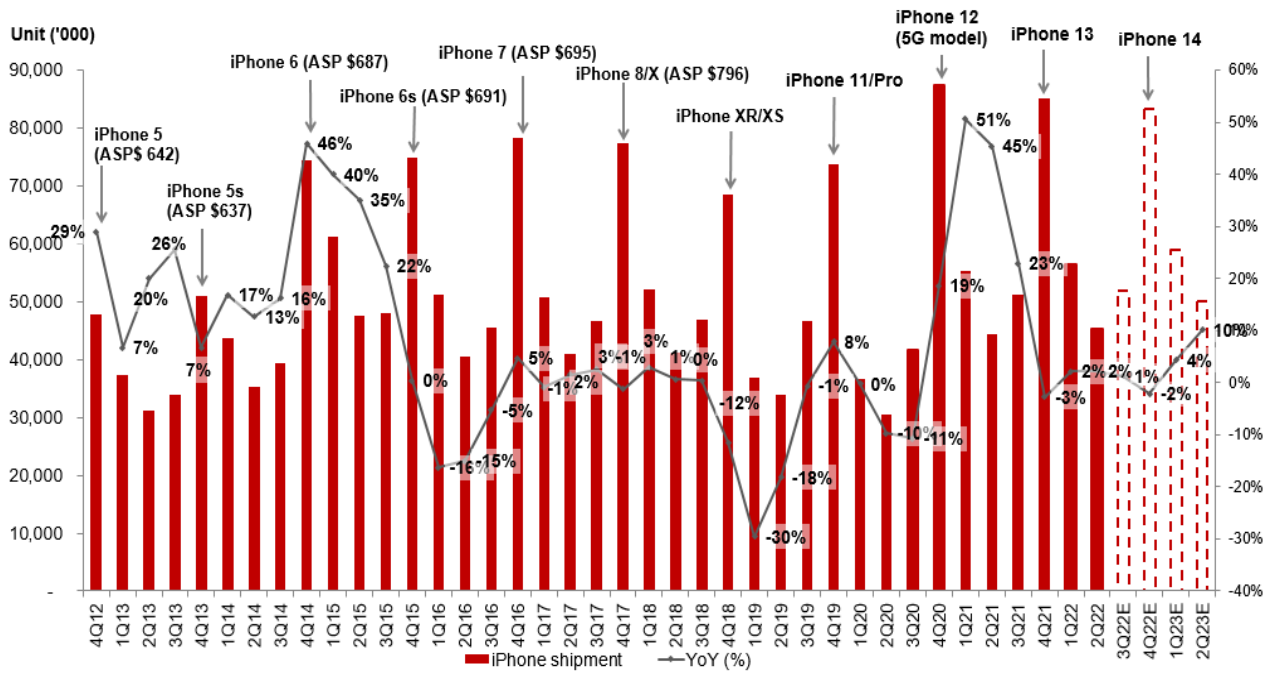
Source: Counterpoint, CMBIGM

**Figure 17: China mkt: 6m rolling inventory trend**



Source: Counterpoint, CMBIGM

**Figure 18: Apple's iPhone shipment by quarter (CY)**



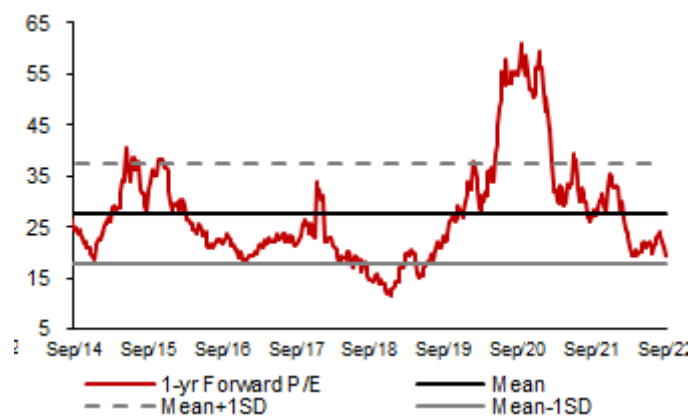
Source: Company data, CMBIGM estimates

**Figure 19: Supply chain mapping and sales mix exposure (2022)**

Company	Ticker	Apple	Huawei/Honor	Samsung	Other CN brands	Others	Major Products
AAC Tech	2018 HK	45%	5%	25%	20%	5%	Acoustics, haptics, optics, casing
FIT Hon Teng	6088 HK	40%	3%			57%	Connector, wireless charging, accessories
Sunny Optical	2382 HK	2%	10%	20%	58%	10%	Camera module, handset lens sets, auto lens/module
BYDE	285 HK	40%	5%	10%	30%	15%	Metal/glass/plastics casing, ODM/OEM, e-cigarette
Tongda	698 HK	20%	5%	10%	35%	25%	Metal/plastic casing, waterproof
Q-Tech	1478 HK		5%		85%	15%	Cam module/lens, fingerprint modules, auto cam module
TK Group	2283 HK	10%				90%	Plastic molding, plastic precision
Truly	732 HK			3%	62%	35%	Camera modules, fingerprint, display modules
Cowell	1415 HK	90%		5%		5%	Camera Module
Luxshare	002475 CN	60%	10%	3%		27%	Wireless, iPhone/AirPods/Watch OEM, acoustics/haptics
Goertek	002241 CN	45%	5%	10%	15%	25%	Acoustics, AirPods, Watch, AR/VR, Wearables
Sunway	300136 CH	45%	5%	10%	30%	10%	Antenna, wireless charging, connector, RF
Lens Tech	300433 CN	50%	5%	10%	20%	15%	Glass/metal casing, EMS

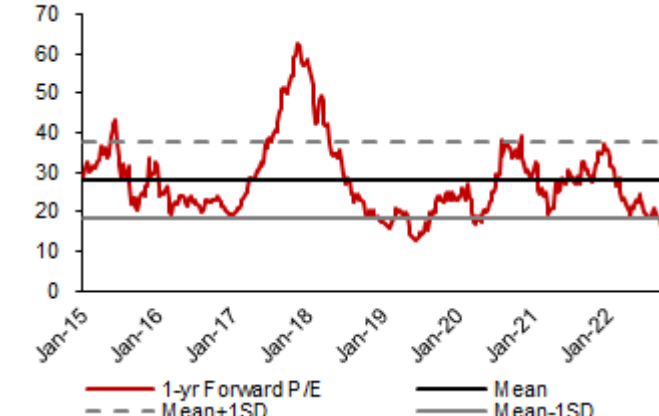
Source: Company data, CMBIGM estimates

**Figure 20: Luxshare P/E Band**



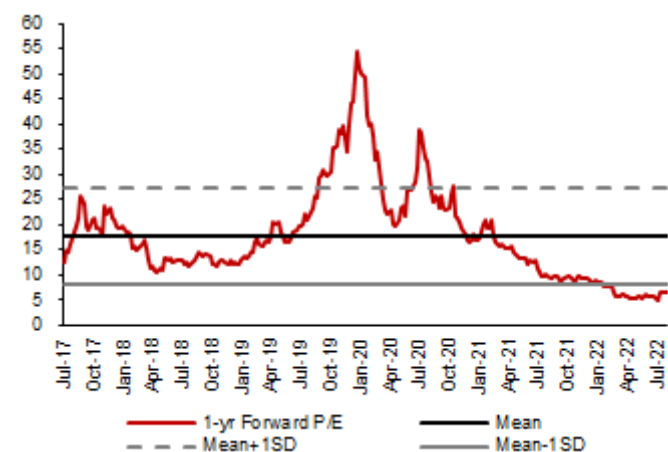
Source: Bloomberg, CMBIGM

**Figure 21: Goertek P/E Band**



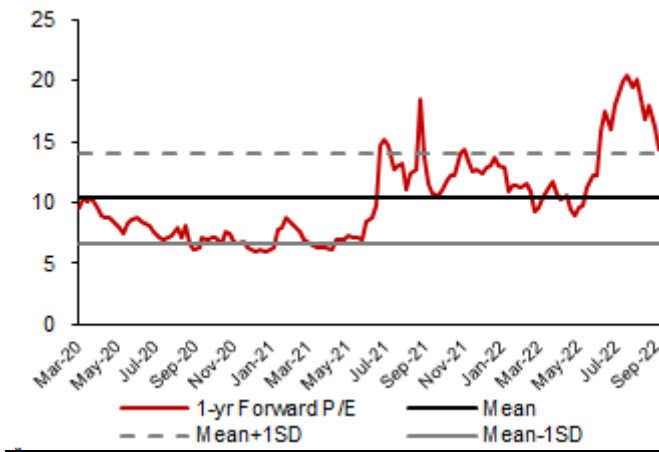
Source: Bloomberg, CMBIGM

**Figure 22: FIT Hon Teng P/E Band**



Source: Bloomberg, CMBIGM

**Figure 23: BOEVx P/E Band**



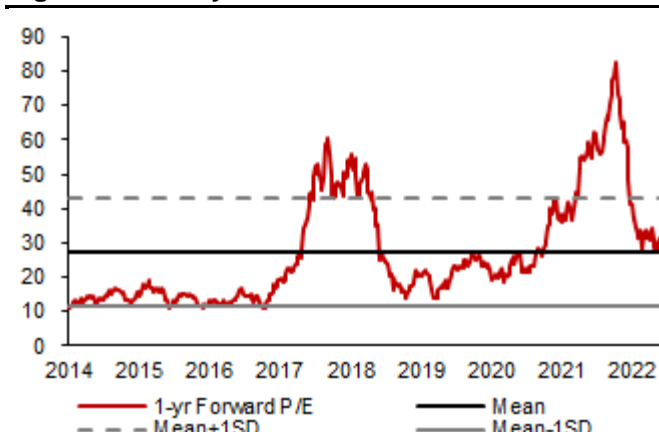
Source: Bloomberg, CMBIGM

**Figure 24: Tongda P/E Band**



Source: Bloomberg, CMBIGM

**Figure 25: Sunny P/E Band**



Source: Bloomberg, CMBIGM

Figure 26: Peers Comparison

Company	Ticker	Rating	Mkt Cap (US\$ mn)	Price (LC)	TP (LC)	Up/Down -side	P/E (x)		P/B (x)		ROE (%)	
							FY22E	FY23E	FY22E	FY23E	FY22E	FY23E
<b>Optics</b>												
Sunny Optical	2382 HK	HOLD	10,466	74.90	102.3	37%	26.9	18.2	3.2	2.8	11.8	15.3
Q Tech	1478 HK	BUY	477	3.16	5.6	77%	12.3	6.0	0.7	0.6	5.5	10.3
Truly	732 HK	NR	513	1.24	NA	NA	4.3	3.5	0.4	0.3	8.2	9.2
Cowell	1415 HK	NR	1,215	11.40	NA	NA	16.3	10.4	2.8	-	21.4	27.3
Largan	3008 TT	NR	7,192	1710	NA	NA	11.6	12.9	1.5	1.4	13.3	11.6
Genius	3406 TT	NR	1,252	353	NA	NA	14.3	12.7	2.1	1.9	15.3	15.7
Primax	4915 TT	NR	865	59.90	NA	NA	9.5	8.7	1.7	1.5	18.0	18.2
Lite-On	2301 TT	NR	4,845	65.40	NA	NA	10.7	9.8	2.0	1.9	18.8	19.7
O-Film	002456 CH	NR	2,413	5.27	NA	NA	-	-	2.3	2.3	(14.6)	(5.8)
Samsung Elec	009150 KS	NR	6,165	117000	NA	NA	8.1	7.5	1.2	1.0	15.2	14.9
Lg Innotek	011070 KS	NR	4,741	284000	NA	NA	5.9	5.4	1.5	1.2	29.5	24.3
Partron	091700 KS	NR	332	7990	NA	NA	11.4	8.2	1.0	0.9	8.6	11.2
<b>Average</b>							<b>11.9</b>	<b>9.4</b>	<b>1.7</b>	<b>1.4</b>	<b>12.6</b>	<b>14.3</b>
<b>Acoustics/Haptics</b>												
AAC Tech	2018 HK	HOLD	1,829	11.88	14.0	18%	14.0	9.8	0.6	0.5	4.0	5.6
Goertek	002241 CH	BUY	12,724	26.50	44.7	69%	16.6	13.5	2.8	2.4	17.1	17.8
Luxshare	002475 CH	BUY	29,274	29.40	52.3	78%	20.9	16.9	3.8	3.1	18.2	18.6
Sunway	300136 CH	NR	1,924	14.15	NA	NA	17.3	12.8	2.0	1.8	12.2	15.0
Merry	2439 TT	NR	580	84	NA	NA	11.7	11.9	1.5	1.4	12.5	11.7
Knowles	KN US	NR	1,181	12.89	NA	NA	10.4	9.3	-	-	-	-
Nidec	6594 JP	NR	34,907	8437	NA	NA	35.0	29.0	4.1	3.5	12.2	12.5
Alps Alpine	6770 JP	NR	1,666	1095	NA	NA	13.1	7.6	0.6	0.6	4.7	7.5
<b>Average</b>							<b>17.4</b>	<b>13.8</b>	<b>2.2</b>	<b>1.9</b>	<b>11.6</b>	<b>12.7</b>
<b>Connector</b>												
FIT Hon Teng	6088 HK	BUY	861	0.93	1.8	91%	5.3	4.6	0.3	0.3	6.0	6.5
Luxshare	002475 CH	BUY	29,274	29.40	52.3	78%	20.9	16.9	3.8	3.1	18.2	18.6
TE	TEL US	NR	37,898	118.49	NA	NA	16.3	15.4	3.5	3.2	21.9	21.7
Amphenol	APH US	NR	42,530	71.52	NA	NA	24.3	23.3	6.3	5.6	27.7	26.6
<b>Average</b>							<b>16.7</b>	<b>15.0</b>	<b>3.5</b>	<b>3.1</b>	<b>18.4</b>	<b>18.4</b>
<b>EMS/OEM</b>												
BYDE	285 HK	HOLD	5,385	18.76	19.3	3%	25.1	14.3	1.5	1.4	6.0	9.6
Luxshare	002475 CH	BUY	29,274	29.40	52.3	78%	20.9	16.9	3.8	3.1	18.2	18.6
Hon Hai Precision	2317 TT	NR	44,779	102.50	NA	NA	9.4	8.6	0.9	0.9	10.3	10.6
Pegatron	4938 TT	NR	4,969	59.10	NA	NA	10.2	8.6	0.9	0.9	8.5	9.8
Wistron	3231 TT	NR	2,479	27.10	NA	NA	8.8	7.8	0.9	0.8	9.7	10.6
<b>Average</b>							<b>29.0</b>	<b>20.9</b>	<b>6.6</b>	<b>5.0</b>	<b>13.6</b>	<b>19.9</b>
<b>Casing</b>												
BYDE	285 HK	HOLD	5,385	18.76	19.3	3%	25.1	14.3	1.5	1.4	6.0	9.6
Tongda	698 HK	BUY	110	0.09	0.2	147%	3.0	2.2	0.1	0.1	2.3	3.0
TK Group	2283 HK	BUY	184	1.73	3.4	95%	4.2	3.3	0.8	0.7	18.6	20.7
Ju Teng	3336 HK	NR	223	1.46	NA	NA	-	-	-	-	-	-
Everwin	300115 CH	NR	1,809	10.72	NA	NA	49.2	15.9	1.8	1.6	3.3	9.4
Lens Tech	300433 CH	NR	6,451	9.23	NA	NA	20.9	12.3	1.0	1.0	6.3	8.0
Chaozhou Three	300408 CH	NR	7,013	26.04	NA	NA	22.7	17.1	2.8	2.5	12.0	14.3
Catcher	2474 TT	NR	3,873	172.0	NA	NA	13.2	17.5	0.8	0.8	6.0	4.9
Jabil	JBL US	NR	8,413	61.17	NA	NA	8.2	7.4	3.2	2.7	45.8	41.3
<b>Average</b>							<b>18.3</b>	<b>11.2</b>	<b>1.5</b>	<b>1.3</b>	<b>12.5</b>	<b>13.9</b>

Source: Bloomberg, CMBIGM estimates, \* TP under review

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