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China 5G Sector

China telecom sector remains as a defensive play

Our view on China telecom sector is unchanged. We think this sector is a defensive play amid macro-economic pressure. We expect China telcos to be the most favorable defensive picks with stable operations, strong FCF, high dividend yield and potential share repo opportunities. China Mobile and China Telecom's (941 HK/ 728 HK, not rated) share prices grew 25.5%/23.8% YTD. The investors' appetite seems to confirm our previous prediction "*Good compound returns* (dividends, share repo) *in an environment of uncertainty will become more valued by investors.*" ("China TMT Hardware barometer" – 30 May 2022/ Link)

- In this updated report, we reviewed domestic and overseas capex historical growth and share our view on the outlook. For domestic telecom capex, **we expect the spending will remain relatively stable, with an expectation of 2.0% YoY growth this year. However, greater allocation will be invested in computing power/industrial digitalization/cloud markets,** capturing greater growth opportunities (LTM: 21% YoY growth from non-legacy business vs. 2%/5% YoY growth from Mobile/wireline businesses). The growing spending in computing power related areas will offset the decline in 5G related expenditure.
- For overseas telecom capex, **we tracked 80 telecommunication network operators' (TNO) data**, including 31 from Asia, 22 from Americas, 14 from Europe and 13 from MEA areas. We think global telecom capex has peaked in 2022, reaching all-time high of US$300bn, driven by resumed 5G buildouts. Looking forward, our outlook for global telecom capex turned cautious. We think **global telecom spending is likely to decrease in 2023, considering unsatisfactory revenue growth (-2.6% in 2022) and macro pressures.**
- As for our coverage, we **maintain our BUY rating on ZTE (763 HK),** considering share gain on domestic carrier business and higher gross margin (43.2% in 1H23 vs. 37.2% in 2022). TP is HK$29.4. **For China Tower (788 HK),** we expect the overall growth will be muted, considering China telcos' cost optimization. Maintain HOLD with TP at HK$0.89.

Valuation Table

Name	Ticker	Rating	TP (HK$)	Mkt Cap (US$ mn)	P/E (x) FY23E	Div. yield (%) FY23E	Div. yield (%) FY24E	ROE (%) FY22E
China Mobile	**941 HK**	NA	NA	**183,03**	9.6	7.34	7.95	10.2
China Telecom	728 HK	NA	NA	68,494	10.4	6.48	7.71	7.0
China Unicom	762 HK	NA	NA	21,655	8.4	6.75	7.61	5.4
ZTE	763 HK	BUY	29.4	21,758	11.0	2.20	2.31	15.5
China Tower	788 HK	HOLD	0.89	17,507	13.2	4.97	5.35	4.8

Source: Bloomberg, CMBIGM estimates

OUTPERFORM
(Maintain)

China Technology Sector

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3. "Corp Day Takeaways: Stable growth for 2022E" – 17 Jun 2022 (Link)
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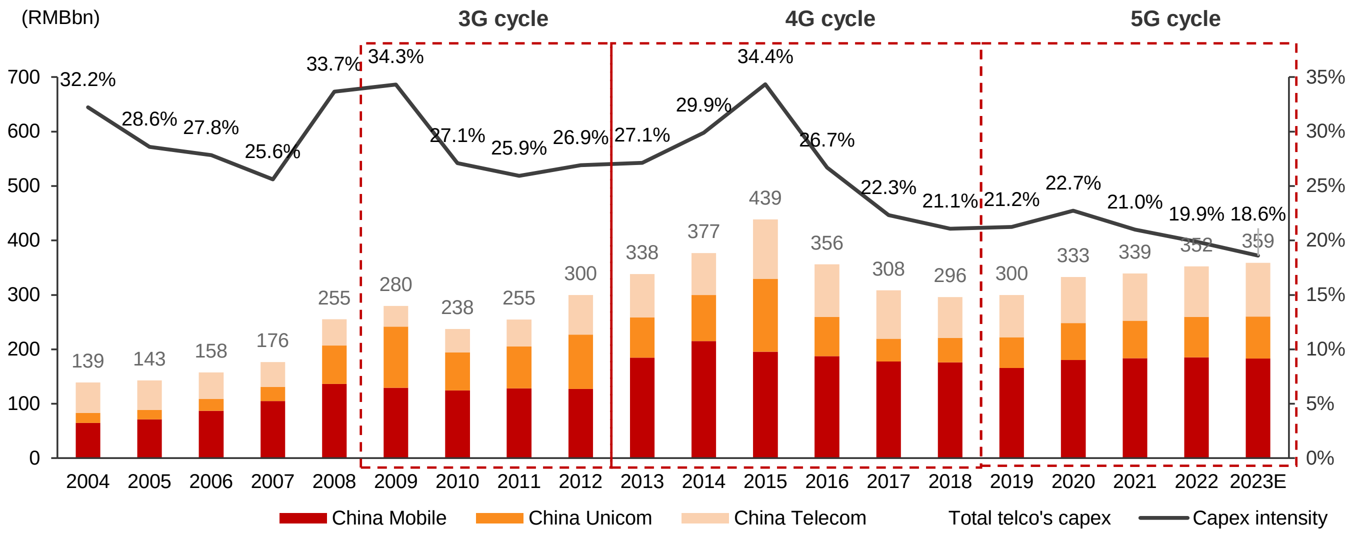
6. "China 5G Sector: Defensive play with upside potential" – 4 May 2022 (Link)
7. "Strong 1Q22 results; continuing improvement in operation and business development" – 26 Apr 2022 (Link)
8. "Overhang removed; Focus on core business development" – 24 Mar 2022 (Link)
9. "ZTE (763 HK) – ZTE finished 2021 with good results; Positive potentials could materialize ahead" – 31 Jan 2022 (Link)

Contents

China telcos' capex is likely to remain stable; while investment focus is shifting

China telcos' capex grew 1.9%/3.7% YoY in 2021/22 vs. 11.1% in 2020. The capex intensity (capex over revenue) ratio peaked in 2022 (22.7%) and declined to 19.9% in 2022. The easing growth and the decreasing trend of capex intensity ratio indicated the **5G cycle has passed the mass buildout stage.**

Figure 1: China telcos' capex intensity ratio showed downward trend

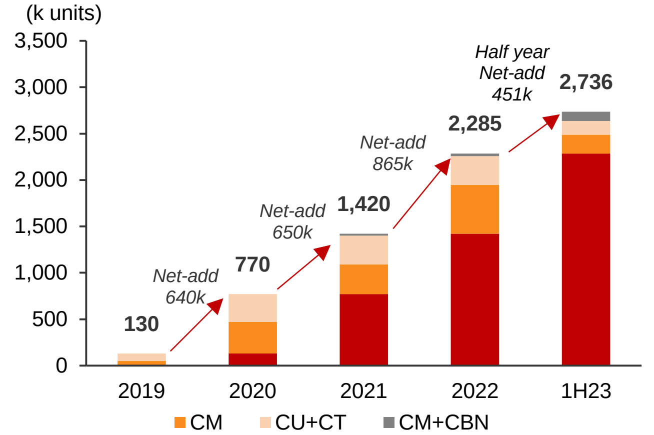


Source: Company data, CMBIGM estimates
Note: capex intensity ratio = capex / revenue.

China Mobile and China Unicom/China Telecom planned to build out 360k and 220k 5G BTS at the beginning of this year. However, based on the recent tender announcements by China Mobile and China Unicom during the past months (500k and 690k), we believe **the total number of 5G BTS to be delivered in 2023 will be greater than 560k.** According to their latest earnings, the three telcos have added 451k 5G BTS already.

We think a significant portion of 5G BTS buildout this year will be 700MHz and 900MHz, facilitating broader network coverage. China Mobile announced 184k out of the 500k 5G BTS tender were 700MHz. Although China Unicom did not disclose, the bid ASP suggested the tender was most likely to be lower frequency base stations.

Figure 2: China major telcos have collectively added ~451k 5G BTS in 1H23



Source: Company data, CMBIGM estimates

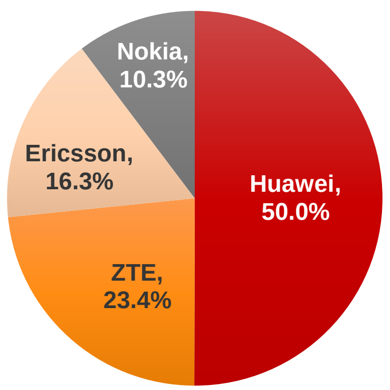
Figure 3: 5G BTS tender announcements

Month	Telco	Announcement
2020/03	China Mobile	230k 5G BTS
2020/03	China Unicom, China Telecom	250k 5G BTS
2021/06	China Mobile	480k 5G BTS (700MHz)
2021/07	China Unicom, China Telecom	242k 5G BTS (2.1GHz)
2022/08	China Mobile	200k 5G BTS (2.6GHz/4.9GHz)
2023/05	China Mobile	86.9k 5G BTS (63.8k 2.6GHz/4.9GHz & 23.1k 700MHz)
2023/05	China Mobile	412.7k 5G BTS (251.7k 2.6GHz/4.9GHz & 161k 700MHz)
2023/08	China Unicom	690k 5G BTS

Source: C114, CMBIS estimates

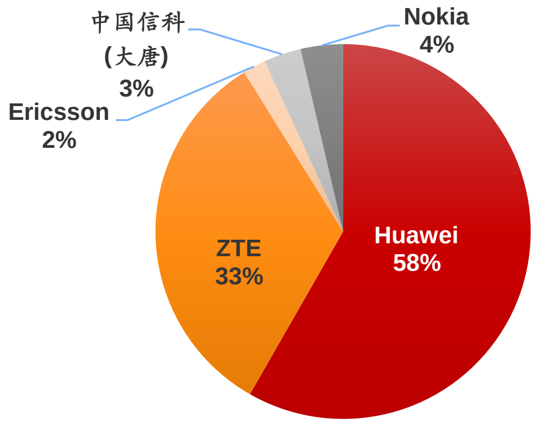
We expect vendors' share to remain stable as well. According to public information, Huawei and ZTE were the biggest winners of the 869k 5G BTS tender. Huawei won over 50% shares of both trenches, while ZTE gained 24% in the 2.6G/4.9G trench and 33% in the 700MHz trench, which is similar compared with previous years.

Figure 4: Huawei/ZTE won 50%/23% shares of China Mobile's 2.6/4.9GHz 5G BTS tender



Source: Company data, CMBIGM estimates

Figure 5: Huawei/ZTE won 58%/38% shares of China Mobile's 700MHz 5G BTS tender

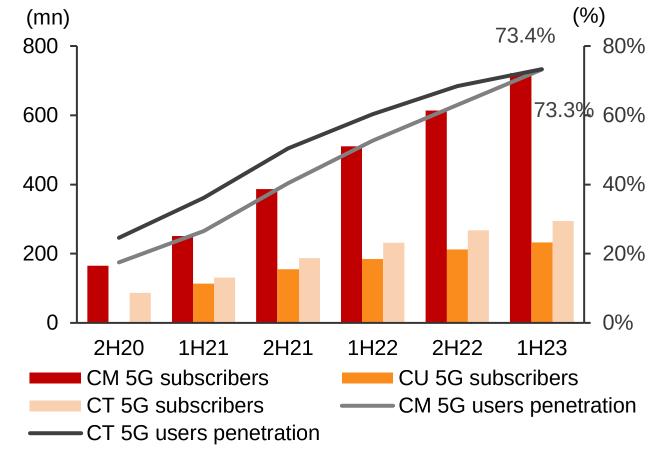


Source: Company data, CMBIGM estimates

The growth of China telcos' legacy businesses (mobile/wireline) was stalled (LTM: avg. 2% and 5% YoY). Although 5G user penetration rate keeps increasing, the telcos' mobile ARPU is maintained at the current level, not reflecting the favorable user mix.

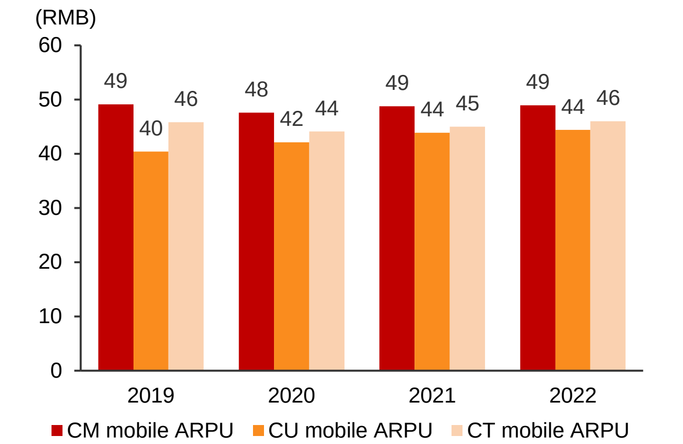
We believe **the stalled mobile ARPU growth is largely due to telcos' aggressive promotions for 5G packages, which means lowering rate to boost 5G subscribers.** Among the 1,249mn of 5G subscribers as of 1H23, 758.9mn (60.8%) consumers have purchased 5G-model handsets, according to MIIT. We believe most of the remaining ~40% of 5G subscribers have switched to 5G package because of lowered rate, which explains the flattish trend of telcos' mobile ARPUs.

Figure 6: China telco's 5G users penetration has reached as high as 73%



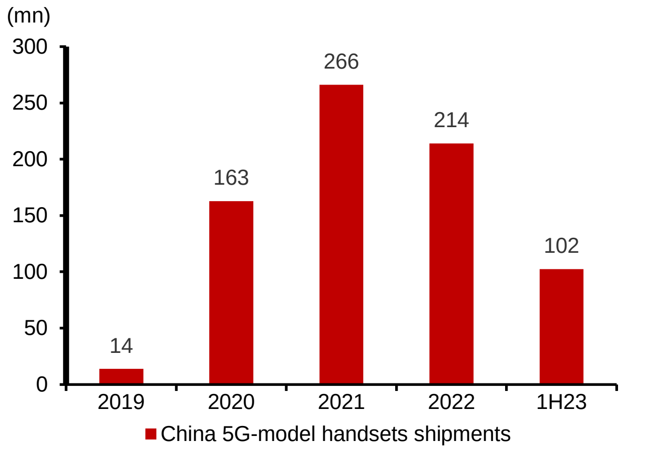
Source: Company data, CMBIGM estimates

Figure 7: China telco's mobile ARPU's growth stalled



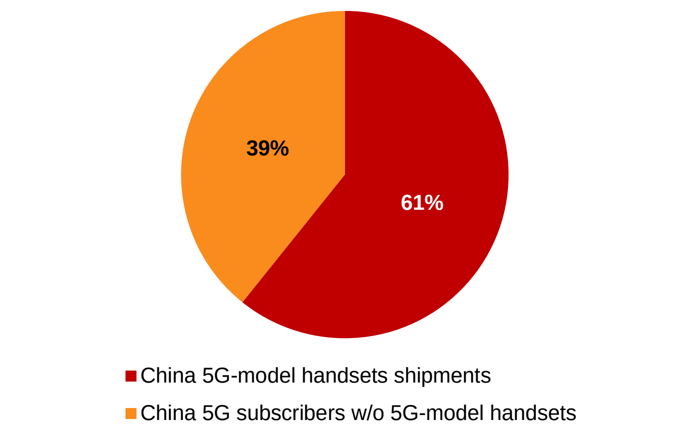
Source: Company data, CMBIGM estimates

Figure 8: Only 759mn 5G-model handsets shipped as of 06/2023 (vs. 1,249.1mn 5G subscribers)



Source: MIIT, CMBIGM estimates

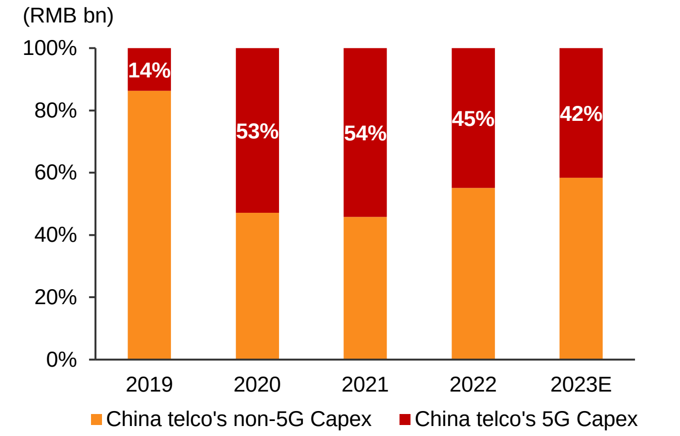
Figure 9: 39% of the 5G subscribers do not own a 5G-model handset as of 1H23



Source: MIIT, Company data, CMBIGM estimates

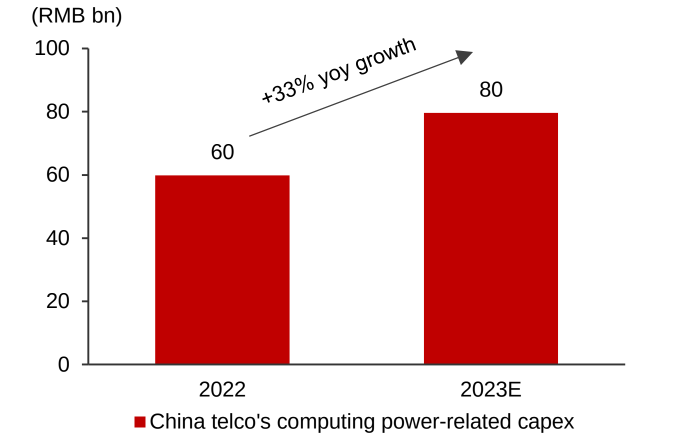
China telcos' capex is budgeted to grow only 2.0% YoY. **Looking forward, we think their capex will remain stable. However, Greater allocation will be invested in computing power/industrial digitalization/cloud markets,** capturing greater growth opportunities (LTM: 21% YoY growth from non-legacy business). The growing spending in computing power related areas will offset the decline in 5G related expenditure.

Figure 10: Less spending on 5G-related capex



Source: Company data, CMBIGM estimates

Figure 11: Greater allocation of telco's capex to be invested in computing power/industrial digitalization/cloud resources, etc.



Source: Company data, CMBIGM estimates

Global telecom capex outlook weighs on slower revenue growth and macro pressures

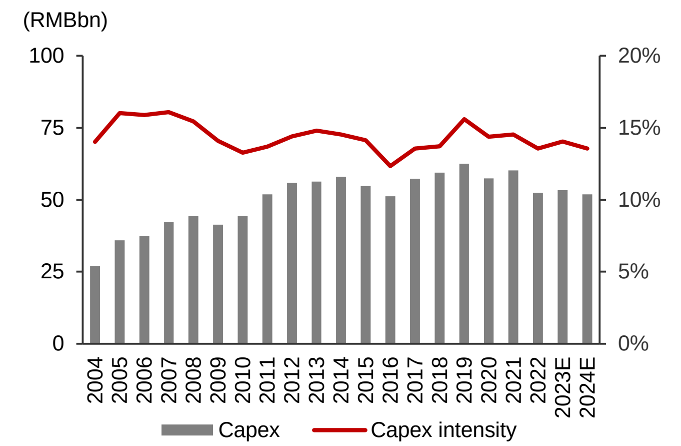
We tracked global telecom capex trend based on 80 telecommunication network operators' (TNO) data, including 31 from Asia, 22 from Americas, 14 from Europe and 13 from MEA areas. Global telecom capex peaked in 2022, reaching all-time high of US$300bn. This is driven by resumed 5G buildouts, which were delayed in the past years. Looking forward, our outlook for global telecom capex turned cautious. We think **global telecom spending is likely to decrease in 2023, considering unsatisfactory revenue growth (-2.6% in 2022) and macro pressures.**

Figure 12: Global telecom capex review

(US$mn)	2016	2017	2018	2019	2020	2021	2022	2023E	2024E
Asia TNOs capex	104,807	103,016	104,235	105,920	105,703	112,875	104,792	102,290	101,355
YoY%		*-1.7%*	*1.2%*	*1.6%*	*-0.2%*	*6.8%*	*-7.2%*	*-2.4%*	*-0.9%*
Revenue	615,508	627,279	646,100	604,952	611,589	665,042	650,846	642,803	664,010
Capex intensity (%)	*17.0%*	*16.4%*	*16.1%*	*17.5%*	*17.3%*	*17.0%*	*16.1%*	*15.9%*	*15.3%*
Americas TNOs capex	96,496	99,133	101,339	98,736	96,967	104,869	118,713	111,323	117,272
YoY%		*2.7%*	*2.2%*	*-2.6%*	*-1.8%*	*8.1%*	*13.2%*	*-6.2%*	*5.3%*
Revenue	655,478	680,625	725,986	744,106	732,339	754,029	747,986	680,000	695,109
Capex intensity (%)	*14.7%*	*14.6%*	*14.0%*	*13.3%*	*13.2%*	*13.9%*	*15.9%*	*16.4%*	*16.9%*
Europe TNOs capex	54,378	52,753	54,047	54,894	58,075	60,519	64,750	64,690	63,527
YoY%		*-3.0%*	*2.5%*	*1.6%*	*5.8%*	*4.2%*	*7.0%*	*-0.1%*	*-1.8%*
Revenue	362,840	364,073	367,320	356,605	375,049	388,996	356,731	356,398	359,907
Capex intensity (%)	*14.7%*	*14.6%*	*14.0%*	*13.3%*	*13.2%*	*13.9%*	*15.9%*	*16.4%*	*16.9%*
MEA TNOs capex	11,645	10,972	12,420	12,948	12,226	11,468	11,713	10,976	11,159
YoY%		*-5.8%*	*13.2%*	*4.3%*	*-5.6%*	*-6.2%*	*2.1%*	*-6.3%*	*1.7%*
Revenue	70,911	71,201	77,672	80,253	81,377	85,327	88,386	79,810	84,208
Capex intensity (%)	*16.4%*	*15.4%*	*16.0%*	*16.1%*	*15.0%*	*13.4%*	*13.3%*	*13.8%*	*13.3%*
Total capex	267,326	265,874	272,040	272,498	272,970	289,730	299,968	289,278	293,313
YoY%		*-0.5%*	*2.3%*	*0.2%*	*0.2%*	*6.1%*	*3.5%*	*-3.6%*	*1.4%*
Total revenue	1,704,737	1,743,179	1,817,078	1,785,917	1,800,355	1,893,394	1,843,950	1,759,011	1,803,233
Avg. capex intensity (%)	*15.7%*	*15.3%*	*15.0%*	*15.3%*	*15.2%*	*15.3%*	*16.3%*	*16.4%*	*16.3%*

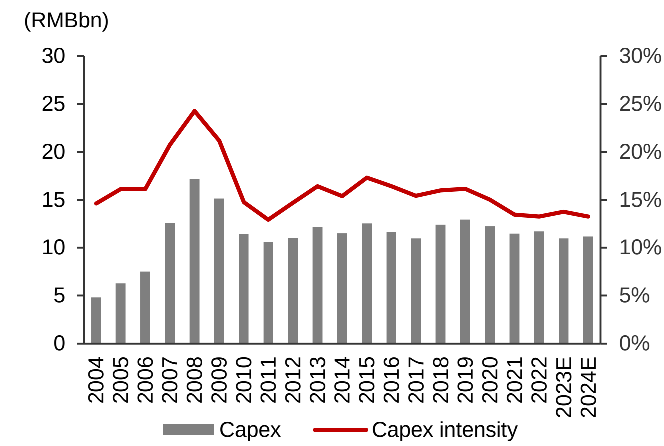
Source: Bloomberg, CMBIGM estimates

Figure 13: Asian (excluding China Mainland) telecom network operators' capex (28 TNOs)



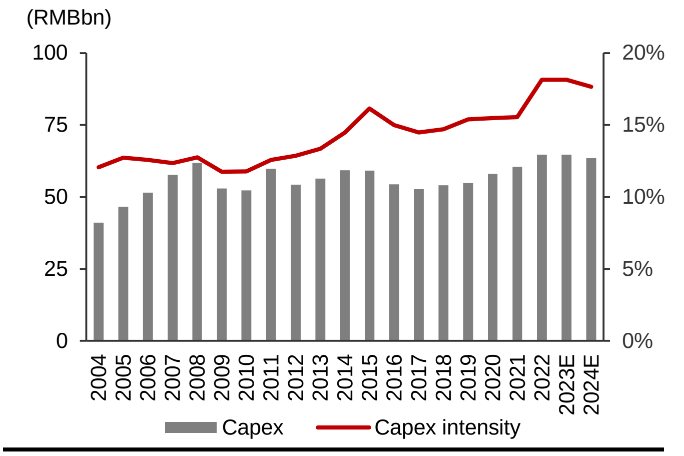
Source: Bloomberg, CMBIGM estimates

Figure 14: America telecom network operators' capex (22 TNOs)



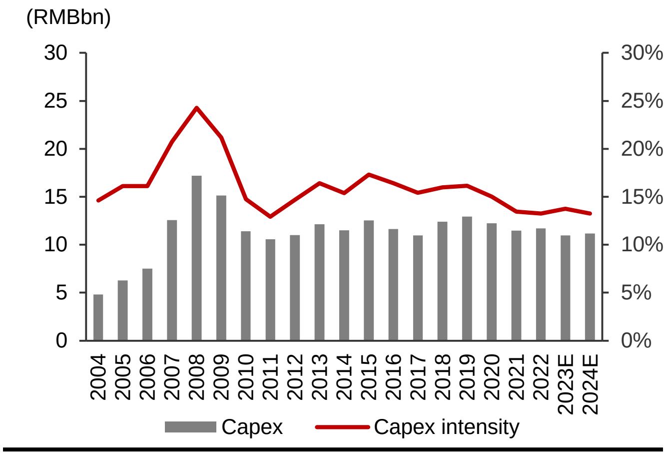
Source: Bloomberg, CMBIGM estimates

Figure 15: European telecom network operators' capex (14 TNOs)



Source: Bloomberg, CMBIGM estimates

Figure 16: MEA telecom network operators' capex (13 TNOs)



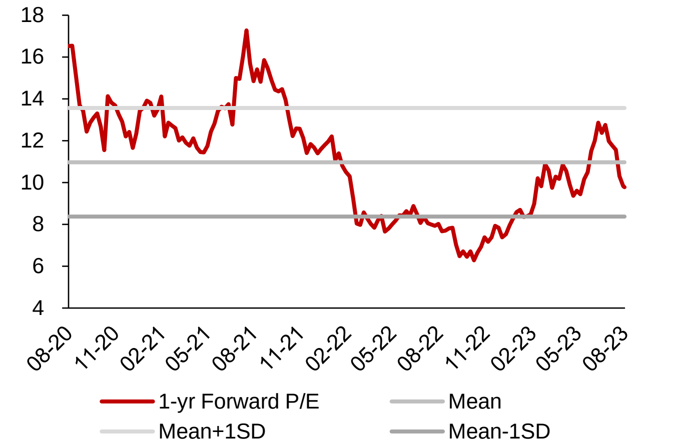
Source: Bloomberg, CMBIGM estimates

Network vendor – ZTE (763 HK)

We expect ZTE's revenue to grow 7.6%/8.9% YoY in 2023/24E. We think ZTE will continue to be the key beneficiary in domestic telecom market with potential share gain. Non-RAN business and new server/memory business is expected to deliver double-digit growth. The overall growth rate will be partially dragged down by sluggish growth in capex from overseas telecom names. Should the management be able to execute well continuously without major unexpected disruptions, we could see further improvement in the bottom line

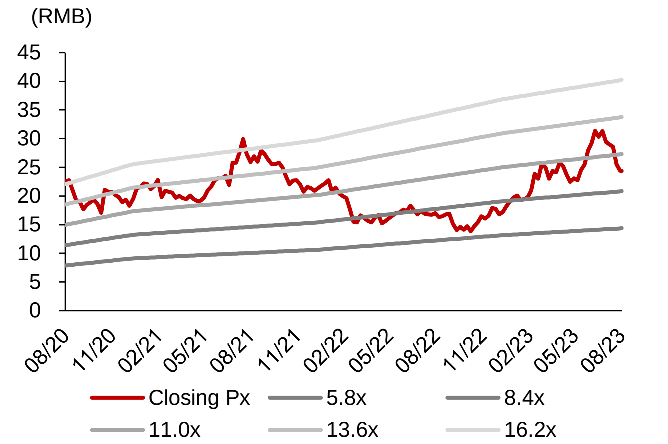
Maintain BUY with TP at HK$29.4, based on 11.4x (unchanged) rollover FY24E P/E. Potential risks include China-US trade tensions, additional component restriction/technology ban, and 5G deployment delays.

Figure 17: 3-year forward P/E chart



Source: Company data, CMBIGM estimates

Figure 18: 3-year forward P/E band

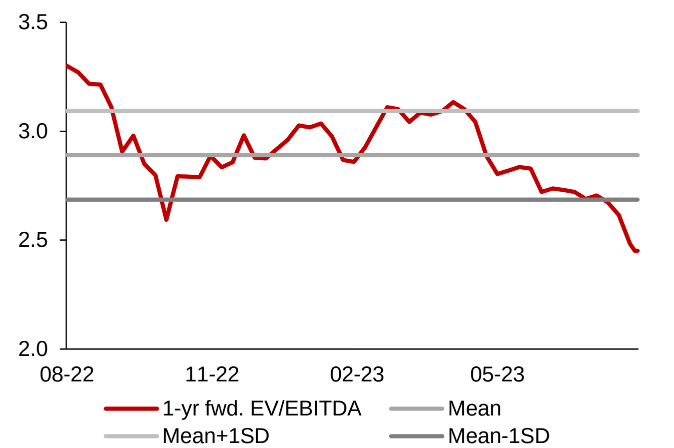


Source: Company data, CMBIGM estimates

Network infrastructure builder – China Tower (788 HK)

China Tower's revenue remains flat, with 2.5%/1.8% YoY growth in 1Q/2Q23. The double-digit growth from DAS and TSSAI/Energy business (30.4% YoY in 1H23) was offset by the sales decline from Tower business (-2.9% YoY in 1H23). The legacy segment (80% of their total revenue) is expected to experience decrease in sales under the new pricing agreement. Maintain HOLD with TP at HK$0.89, based on 2.7x FY24 EV/EBITDA.

Figure 19: 3-year forward EV/EBITDA chart



Source: Company data, CMBIGM estimates

Figure 20: 3-year forward P/E band

Source: Company data, CMBIGM estimates

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