

# China Auto Sector

## Weak ending of 2022 provides a glimpse of hope

China's passenger-vehicle (PV) retail sales volume fell 3% YoY in 2022 with weaker-than-expected sales in Nov and Dec. Wholesale volume rose 10% YoY in 2022, aided by exports and inventory restocking. Automakers cut about 0.49mn units of inventories in their dealers' showrooms in Dec 2022, lower than our expectation, as new-energy vehicle (NEV) makers only cut their inventories by 17,000 units in Dec. About 1mn units of inventories were added at dealers in China in 2022, 66% of which were NEVs.

The weak sales volume in Nov-Dec 2022, in our view, not only lowers comparison base for 2023, but could also indicate continued auto sales weakness in the short term. **We revise down our 2023 China PV retail sales volume forecast slightly from 20.16mn units to 20mn units, or 2.4% YoY decline**, mainly to reflect possible weaker 1Q23 sales than we had expected. **We maintain our 2023 PV wholesale volume forecast as 22.58mn units, or 4.2% YoY decline**, as we revise up export projection from 2.7mn units to 3.0mn units.

■ **Possible weak 1Q23 auto sales could provide an entry opportunity or trigger another round of stimulus measures.** The share price rebound in the auto sector starting from Nov 2022 came a bit later than we had expected in Sep 2022, as 4Q22 auto sales volume was weaker than expected but at the same time investors started to anticipate consumption recovery after the COVID policy changes. We are of the view that 1Q23 auto sales volume could still miss investors' expectations but possible share price weakness could present an opportunity to accumulate shares, as auto sales volume could recover gradually from 2Q23. The key to share price may lie in how fast the recovery pace would be. Should sales weakness persist in 2Q23, we believe that the Chinese government is likely to resume stimulus measures.

■ **NEV forecasts in 2023:** We revise down our 2023 NEV retail sales volume forecast from 7.5mn units to 7.2mn units mainly due to a possible weaker-than-expected 1Q23. Accordingly, we cut our 2023 NEV wholesale volume forecast from 8.5mn units to 8.3mn units. That implies NEV market share of 36-37% in 2023E on both wholesale and retail basis.

■ **Jan 2023 outlook:** Despite early Chinese New Year, retail sales volume in the first 15 days of Jan 2023 fell 24% YoY. We project retail sales volume in Jan 2023 to fall 44% YoY and wholesale volume to decline 49% YoY. We believe such declines could be below some investors' expectations.

■ **Leading indicators imply weak NEV sales in 1Q23:** Unlike Nov-Dec 2021, leading indicators including number of leads, customer flow and new orders for Tesla, NIO, Lixiang, Xpeng, BYD and Aion in Nov-Dec 2022 fell sequentially, based on data from a sample size of 96 stores in 15 major cities. We project NEV retail sales volume in Jan 2023 to be flat YoY at 0.32mn units, or 25% market share. Tesla's (TSLA US, NR) another round of retail price cuts at the beginning of Jan 2023 was still at the early stage of price war, in our view. We are likely to see more retail price cuts or higher discounts for NEVs in 2023.

**OUTPERFORM**  
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### China Auto Sector

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Source: CAAM, CPCA, CMBIGM



Source: CATARC, CMBIGM

### Stocks Covered:

Name	Ticker	Rating	TP (LC)
Li Auto	LI US	BUY	44
Li Auto	2015 HK	BUY	172
NIO	NIO US	BUY	25
Xpeng	XPEV US	BUY	20
Xpeng	9868 HK	BUY	78
Geely	175 HK	BUY	16.5
GWM	2333 HK	BUY	10
GWM	601633 CH	BUY	32
GAC	2238 HK	BUY	8
GAC	601238 CH	BUY	16.7
EVA	838 HK	BUY	3
Meidong	1268 HK	BUY	23
BYD	1211 HK	HOLD	218
BYD	002594 CH	HOLD	238

Source: Bloomberg, CMBIGM

### Related Reports:

["China Auto Sector – 2023 Outlook: A critical year for long-term survival" – 7 Dec 2022](#)

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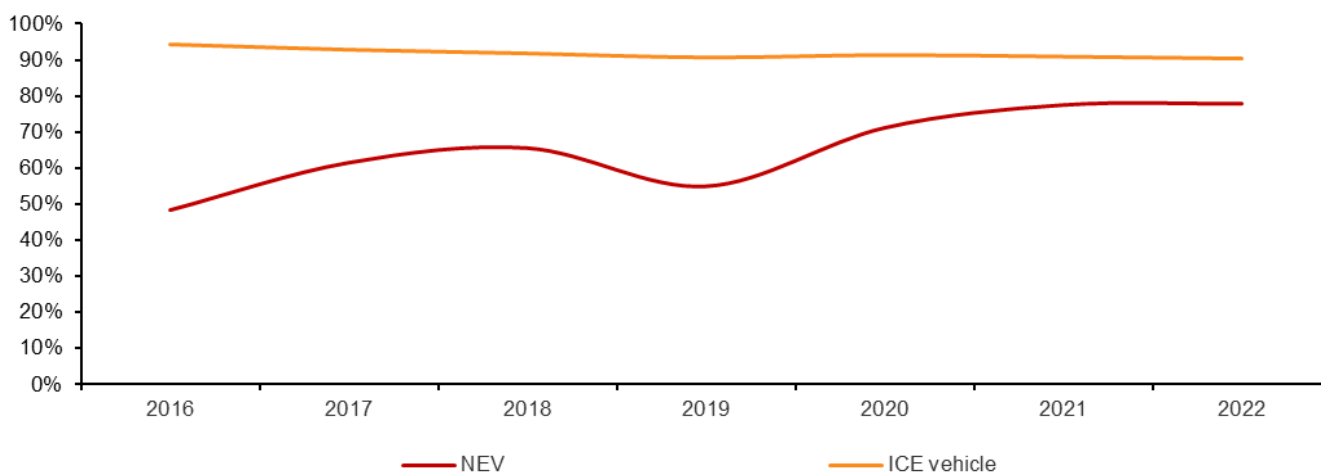
## NEV Segment

### Weak Dec sales with high inventories create challenges for 1Q23

In Dec 2022, retail sales volume of passenger NEVs rose 47% YoY and 32% MoM to about 0.71 units, while market share dropped from 33.1% in Nov to 28.1% in Dec. NEV sales volume in Dec was 16% lower than our prior forecast of 0.84mn units, largely due to significantly rising COVID cases. The NEV market share on a retail basis was 29% in 4Q22, versus 24% in the first three quarters of 2022, which was consistent with what we noted in Apr 2022 that the NEV market share in 4Q22 would not widen sequentially as significantly as previous years.

In 2022, NEV retail sales volume rose 80% YoY to 5.27mn units, and its market share increased 11.9 pts YoY to 25.7%, beating our prior forecast by 0.3 ppt. Individual customers accounted for about 78% of total NEV sales in 2022, based on our calculation, similar to that in 2021. Interestingly, individual customers only accounted for 70% of total NEV sales in Dec 2022, the lowest during the past 28 months, which imply that corporate customers' pre-buying effect was more significant than individual customers' before the subsidies phase-out from the beginning of 2023.

**Figure 1: Proportion of NEVs sold to individual customers vs that of ICE vehicles in China**



Source: CATARC, CMBIGM

Wholesale volume of passenger NEVs rose 51% YoY and 1% MoM to about 0.75mn units in Dec 2022, with a market share of 33.1%. Despite NEV retail sales miss in Dec, its wholesale volume last month was largely in line with our prior forecast due to milder inventory destocking. Automakers have continuously added NEV inventories into dealers in the first 11 months of 2022 but only cut NEV inventories by about 17,000 units in Dec 2022. That resulted in an inventory restocking of 0.69mn units in 2022 for NEVs, or 66% of total inventory addition in 2022, or amounted to 1.6 months of monthly average NEV retail sales volume in 2022.

In 2022, NEV wholesale volume rose 97% YoY to 6.53mn units, largely in line with our prior forecast. NEV wholesale market share increased 12.3 pts YoY to 27.7% in 2022. NEV exports more than doubled YoY to 0.56mn units in 2022, higher than our prior expectation. Therefore, we revise up our 2023 NEV exports from 0.70mn units to 0.76mn units.

## NEV by city-tier: Tier-2 cities were major driver

Tier-1, -2, -3 and -4 and below cities contributed about 17%, 51%, 17% and 15% of total NEV retail sales, respectively, in China in 2022. NEV retail sales volume growth was from tier-2 and below cities in 2022, as only tier-1 cities underperformed the nationwide NEV retail sales volume last year. NEV retail sales volume in tier-2 cities rose 95% YoY in 2022, the most among all city tiers.

NEV market share rose 10.3, 13.2, 11.3 and 9.6 ppts YoY to 38.3%, 27.1%, 22.8% and 18.3% in 2022 for tier-1, -2, -3 and -4 and below cities, respectively. Tier-2 cities have also become the most competitive and diversified market for NEVs in China, as the combined market share of the top 3 brands (BYD, Tesla, Wuling) was only about 45% in 2022, the lowest among all city tiers. For tier-3 and below cities, consumers show clear preference to mini-size BEVs, as the *Wuling Hongguang Mini* took up a market share of 15% in 2022, whereas the best-selling model in tier-1 and -2 cities, the *Tesla Model Y*, only had a market share of 8%. Mini BEVs accounted for 44% of total BEV retail sales volume in tier-3 and below cities in 2022, versus 26% nationwide. The market share for mini-BEVs in the NEV segment has been declining, as we had expected, from 35% in 2021.

**Figure 2: China NEV market share by city tier (trailing 12-month basis)**

Market Share	Jun 2022	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
Tier 1	32.6%	33.5%	34.4%	35.2%	35.8%	37.1%	38.4%
Tier 2	21.5%	22.6%	23.6%	24.5%	25.3%	26.3%	27.1%
Tier 3	17.9%	18.9%	19.6%	20.4%	21.1%	21.9%	22.8%
Tier 4 and below	14.1%	14.9%	15.6%	16.3%	17.1%	17.8%	18.3%
<b>Nationwide</b>	<b>20.3%</b>	<b>21.3%</b>	<b>22.2%</b>	<b>23.1%</b>	<b>23.9%</b>	<b>24.9%</b>	<b>25.7%</b>

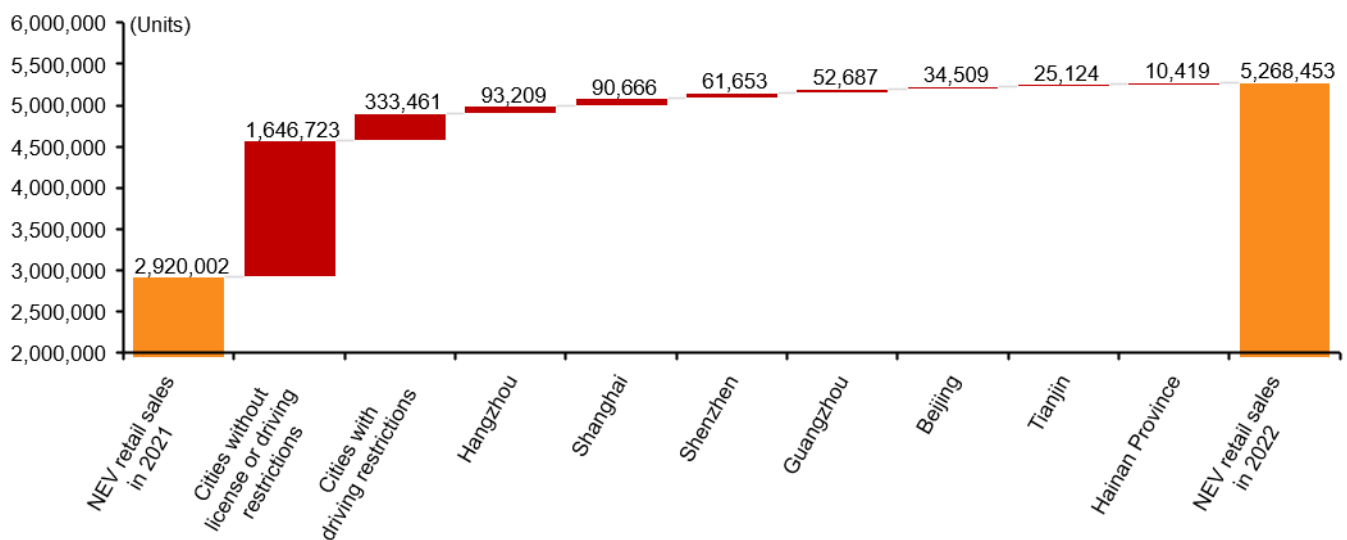
Source: CATARC, CMBIGM

## NEV by city type: Market driven rather than policy driven

We divided cities in China into three types based on whether there are restrictions for ICE vehicle registration or driving. In 2022, only 24% of NEV retail sales volume came from regions with new ICE vehicle registration limits (Beijing, Shanghai, Shenzhen, Guangzhou, Tianjin, Hangzhou and Hainan province), declining for at least six consecutive years, while the contribution from cities without license or driving restrictions rose to 62%, increasing YoY for five successive years. In addition, about 14% of NEV retail sales volume was from cities with driving restrictions (including 24 cities, like Baoding, Chongqing, Wuhan, Xi'an etc.). The ratio has been stable for the past five years. In other words, among incremental 2.35mn units of nationwide NEV retail sales volume in 2022, cities without license or driving restrictions contributed 1.65mn units, or 70%.

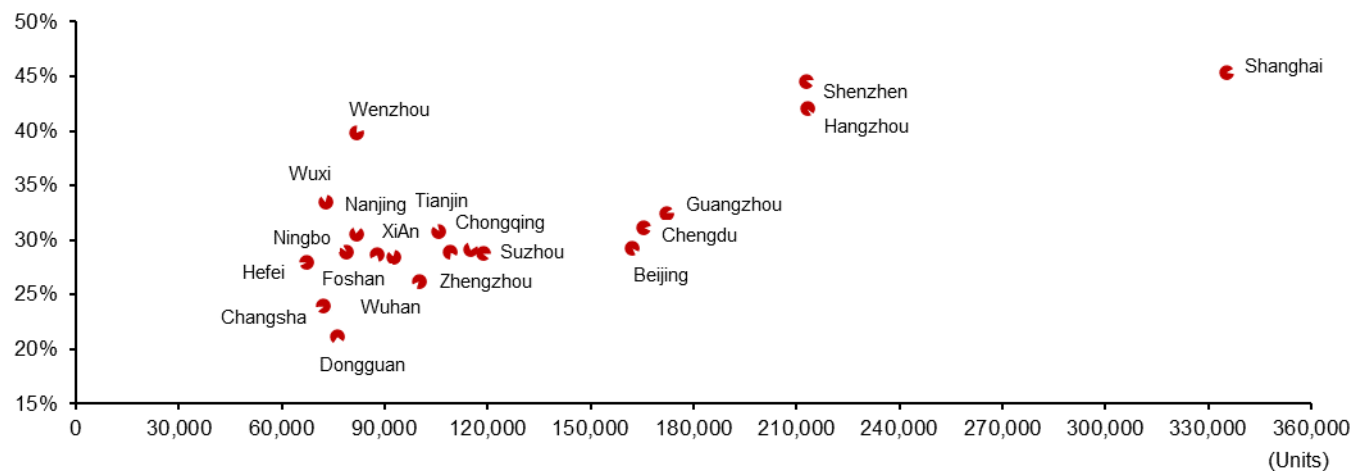
**Figure 3: NEV market share by city type**

Source: CATARC, CMBIGM

**Figure 4: NEV retail sales volume YoY growth contribution by city type in 2022**

Source: CATARC, CMBIGM

Shanghai retained the NEV retail sales crown for three years in a row, with substantial leading advantage. Shanghai also surpassed Shenzhen to have the highest NEV market share in China, thanks to strong pre-buying effect of PHEVs in 4Q22, amid Shanghai's green license cancellation for PHEVs in 2023. In our report on 7 Dec 2022, we estimated Shanghai's cancellation of green licenses for PHEV could dent the nationwide PHEV sales volume by about 3% in 2023. Although Shenzhen missed our prior expectation of above 50% NEV market share in Dec 2022, we believe the city is likely to regain the NEV market share crown in 2023.

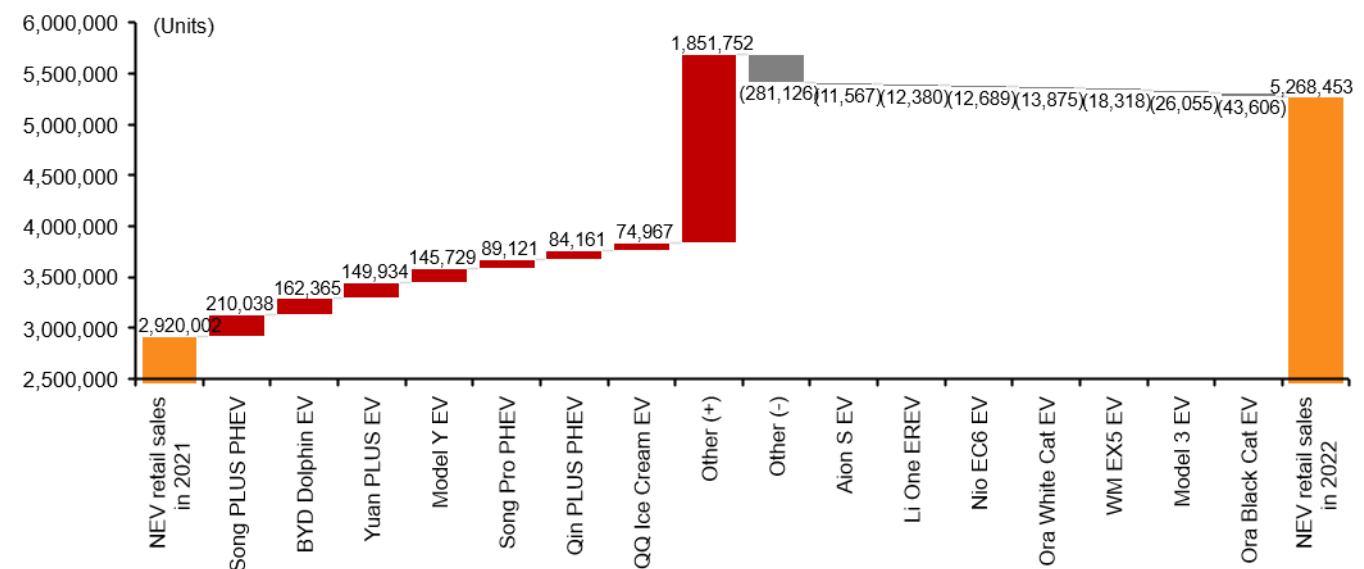
**Figure 5: NEV retail sales volume in top 20 cities with corresponding NEV market share in 2022**


Source: CATARC, CMBIGM

### NEV growth by model: BYD was the largest winner

In terms of NEV retail sales volume YoY growth by model, BYD was the largest contributor to the NEV sales-volume YoY growth in 2022, as its *Song Plus PHEV*, *Dolphin BEV*, *Yuan Plus BEV* and *Song Pro PHEV* took up four spots among the top five contributors at the model level to the NEV YoY growth in 2022, while the *Model Y* was the fourth largest contributor.

The Tesla *Model 3* had the second largest YoY decline on a unit basis in 2022, due to its market share loss to the *Model Y* and some rival models at Chinese automakers, such as the *Xpeng P7*, *BYD Seal*, *Zeekr 001* and *NIO ET5*.

**Figure 6: NEV retail sales volume growth contribution by model in 2022**


Source: CATARC, CMBIGM

### BEV brands: More intensifying competition ahead

In 2022, total BEV retail sales volume rose 67% YoY to about 4.0mn units. BEV's market share in the NEV segment dropped to 75.3% in 2022 from 81.5% in 2021, largely in line with our prior expectation.

BYD regained BEV retail sales crown in 2022, after it lost the crown to Tesla in 2020 and Wuling in 2021. BYD's market share increased to almost 20% in 2022 from 12.5% in 2021, thanks to its comprehensive model line-ups. The *Wuling Hongguang Mini BEV* was the best-selling BEV models in 2022, followed by the Tesla *Model Y BEV* despite being aged. Tesla surpassed Wuling to become the second best-selling BEV brand in China in 2022. The top three BEV brands combined accounted for 41.6% of total China's BEV sales volume in 2022, down from 42.6% in 2021, amid intensifying competition.

We expect both BYD and Tesla to retain their leading positions in 2023, but at a cost of lower margins amid NEV subsidy phase-out and lower production capacity utilization.

Neta ended up with the 7<sup>th</sup> position in terms of the BEV retail sales volume in 2022. VW is the only foreign brand in the top 10 list in 2022. Xpeng dropped to the 10<sup>th</sup> position, whereas NIO was ranked No. 11, with 291 units fewer than Xpeng.

**Figure 7: Top 10 BEV brands' retail sales volume in China**

Units	Dec 2022	YoY	2022	2022 YoY	2022 Market Share in BEV Segment
<b>Total BEV</b>	<b>517,507</b>	<b>30.3%</b>	<b>3,967,659</b>	<b>66.7%</b>	<b>100.0%</b>
BYD	99,524	96.7%	789,054	166.1%	19.9%
Tesla	41,687	-40.6%	441,697	36.9%	11.1%
Wuling	35,788	-25.0%	421,153	7.0%	10.6%
GAC Aion	25,605	49.9%	213,832	74.5%	5.4%
Changan	28,867	26.3%	179,122	75.9%	4.5%
Chery	14,034	8.7%	174,675	104.5%	4.4%
Neta	22,270	95.1%	145,595	124.8%	3.7%
Dongfeng	28,167	130.7%	138,777	145.2%	3.5%
VW	10,263	-40.6%	137,249	86.9%	3.5%
Xpeng	11,526	-29.5%	120,449	24.6%	3.0%

Source: CATARC, CMBIGM

## PHEV brands: BYD strengthened its dominance in 2022

In 2022, total PHEV (EREV included) retail sales volume surged 141% YoY to about 1.3mn units. PHEV's market share in the NEV segment increased from 18.5% in 2021 to 24.7% in 2022, the highest since 2019. We expect PHEV to continue gaining market share in 2023.

BYD has been the PHEV retail sales volume champion in China for 14 years since 2009, when the company launched the *BYD F3 DM*. In 2022, BYD's dominance in the PHEV market was strengthened in 2022, with market share widening from 42% in 2021 to 61% in 2022. BYD's market share in the PHEV segment had declined for six years in row during 2015-20, with only 19% in 2020. Such dominance could be unsustainable in our view, as more brands are tapping into this fast-growing segment.

Lixiang retained No.2 in terms of PHEV retail sales volume in 2022, although its market share dropped from 16.9% in 2021 to 10.4% in 2022. We project Lixiang to regain market share in 2023 with its new *L9*, *L8* and *L7*.

Huawei-backed Aito rose to the 3<sup>rd</sup> position in 2022 with the *M5* and *M7* ramping up, aided by much more showrooms than other start-ups, especially in lower-tier cities. Although sales volume of the *Emgrand L PHEV* missed our expectation, Geely still managed to enter the top 10 list, as we had expected in Aug 2022. We expect Geely's PHEVs to gain market share in 2023 with hard lessons learnt from its *Xingyue L* and *Emgrand L* PHEVs.



Unlike the BEV segment, which is largely dominated by Chinese brands, foreign brands (VW, Mercedes-Benz, Nissan, BMW) took four spots in the top 10 PHEV brands in China in 2022, despite large market share gap with Chinese brands. Overall, Chinese brands gained market share in the PHEV segment, as the combined market share rose to 87.1% in 2022 versus 72.5% in 2021.

**Figure 8: Top 10 PHEV (EREV included) brands' retail sales volume in China**

Units	Dec 2022	YoY	2022	2022 YoY	2022 Market Share in PHEV Segment
<b>Total PHEV</b>	<b>191,739</b>	<b>121.1%</b>	<b>1,300,794</b>	<b>140.6%</b>	<b>100.0%</b>
BYD	116,974	163.1%	793,971	246.4%	61.0%
Lixiang	21,394	51.6%	135,296	48.2%	10.4%
Aito	8,364	2191.5%	63,897	16939.2%	4.9%
VW	4,080	-2.4%	36,162	-16.9%	2.8%
Mercedes-Benz	3,108	44.9%	27,796	149.3%	2.1%
Lynk & Co	2,650	76.8%	24,557	165.9%	1.9%
Nissan	1,205	22.8%	21,841	2066.8%	1.7%
Changan	2,803	8659.4%	17,415	8970.3%	1.3%
BMW	1,158	-44.4%	17,056	-35.3%	1.3%
Geely	2,210	132.4%	16,498	89.8%	1.3%

Source: CATARC, CMBIGM

### Leads, customer flows, new orders all posted MoM declines in Dec

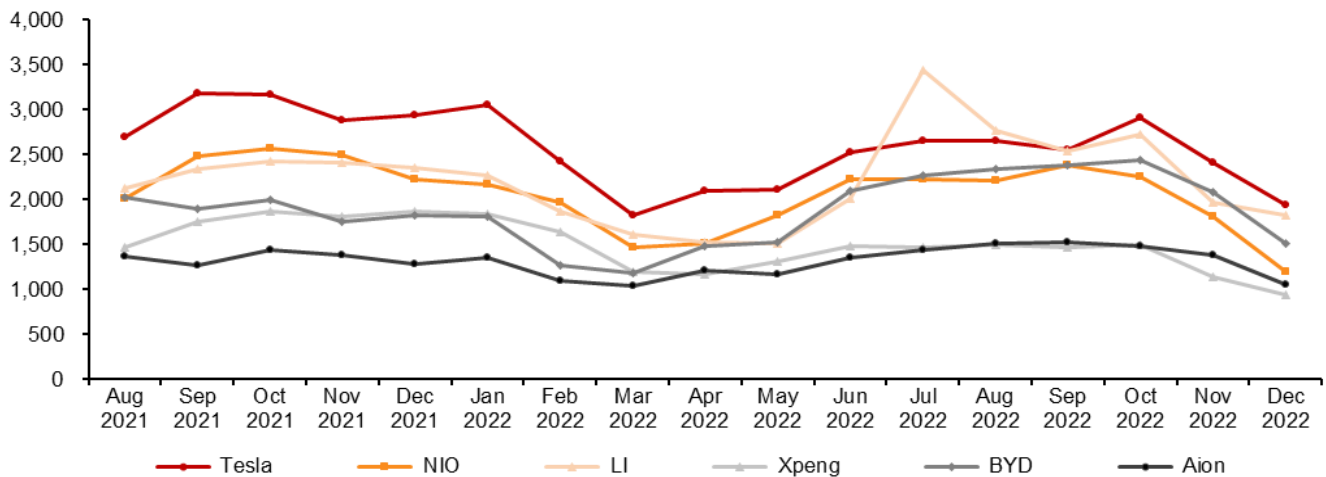
The leading indicators below, including number of leads, customer flows, and new orders generated, for Tesla, NIO, Lixiang, Xpeng, BYD and Aion are based on data from a sample size of 96 stores (15-18 stores for each brand) in 15 major cities in China.

#### Number of leads: NIO showed the highest MoM decline, Xpeng fell the most YoY

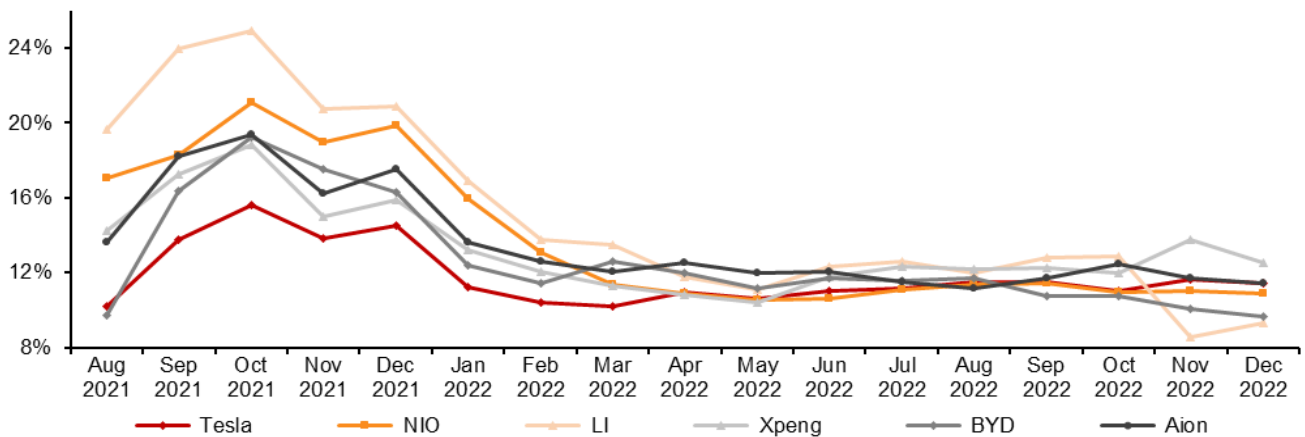
Number of leads per store for these six brands fell about 20% MoM and 30% YoY on average in Dec 2022. Such number fell 34% MoM for NIO last month, the most among all the six brands. Lixiang was the most resilient with only 7% MoM decline. Xpeng's number of leads per store fell 50% YoY, the most among the six brands.

The conversion ratios from leads to store visit remained flat or declined slightly MoM in Dec 2022 for the six brands, but were significantly lower than that in Dec 2021.



**Figure 9: Number of leads per store on average for each brand**

Source: Thinkercar, CMBIGM

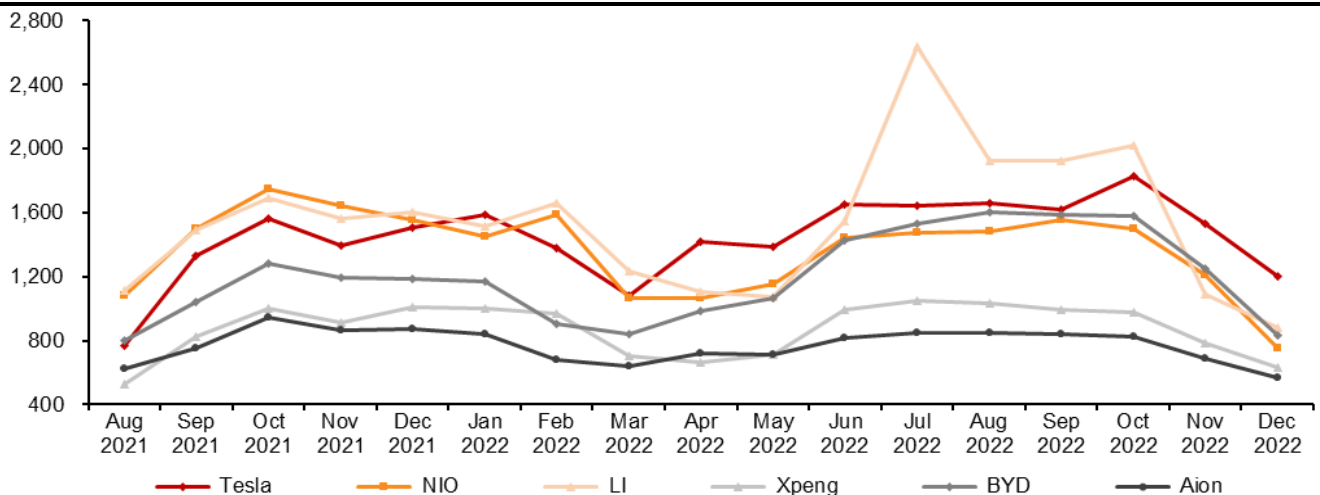
**Figure 10: Conversion ratio from leads to store visit for each brand**

Source: Thinkercar, CMBIGM

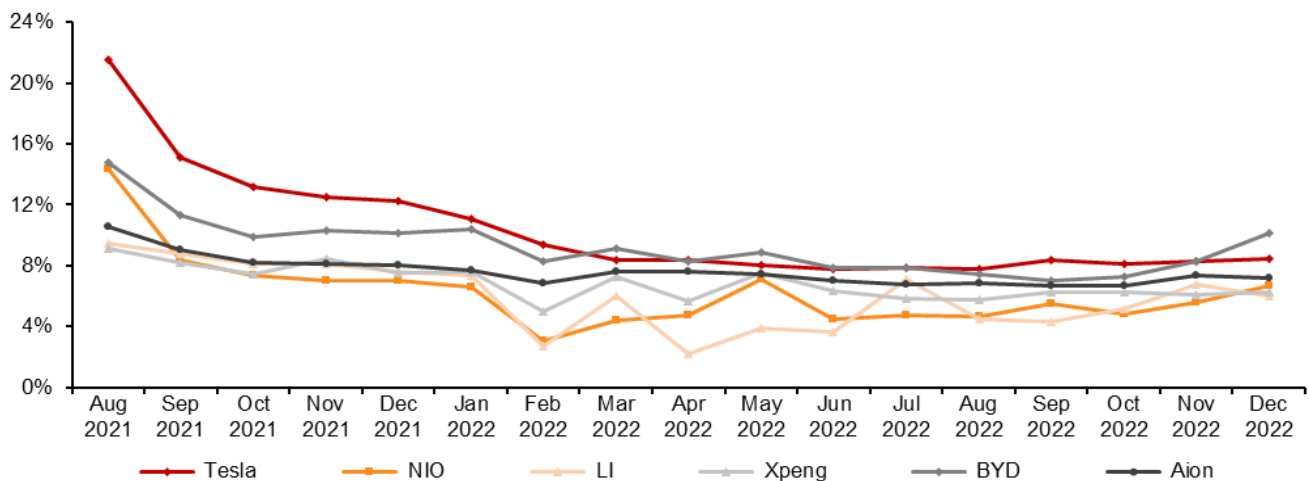
**Customer flow: Fell MoM in Dec amid rising COVID cases**

Declining number of leads, along with flat or slightly falling conversion ratios resulted in lower store visits in Dec 2022. Customer flow per store for these six brands fell at a similar pace MoM in Dec 2022, with 25% on average, as COVID cases rose significantly in China. Yet, Aion was the most resilient with only 17% MoM decline, followed by Lixiang and Xpeng.

The conversion ratio from store visit to order generation has been stable since 2H22. The ratio increased by 1-2 pts MoM for NIO and BYD in Dec 2022, reflecting higher purchase intention for customers who visited stores during the time with a high number of new COVID cases.

**Figure 11: Customer flow per store on average for each brand**

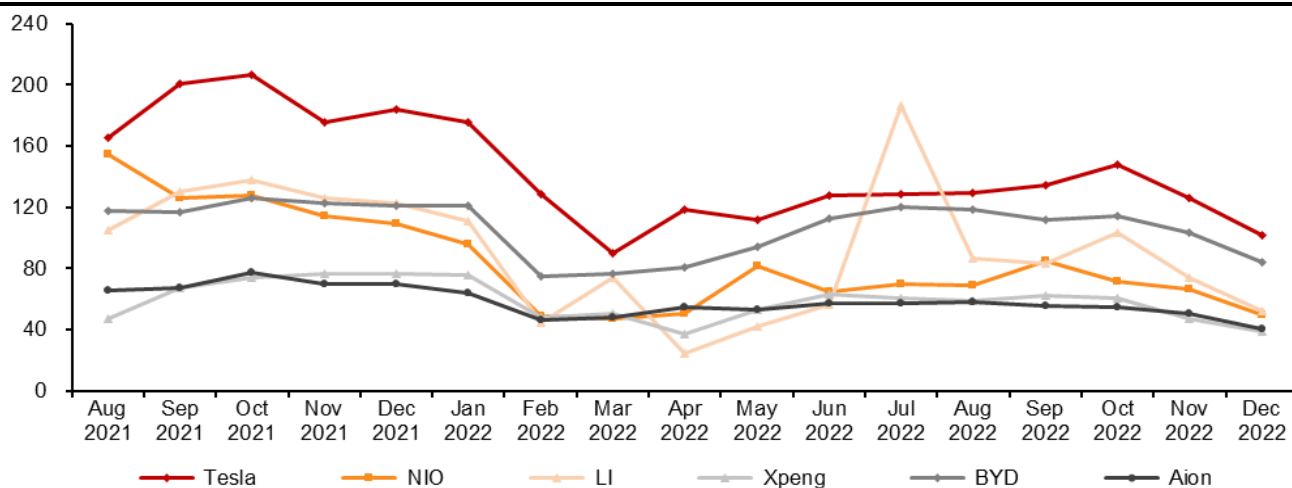
Source: Thinkercar, CMBIGM

**Figure 12: Conversion ratio from store visit to new order generation for each brand**

Source: Thinkercar, CMBIGM

**Declining new orders in Nov-Dec could lead to weak sales volume in 1Q23**

Unlike 4Q21 when most brands' new orders remained at high levels, new orders fell substantially from Nov 2022. The average MoM decline for the six brands was about 15% in Nov and 22% in Dec. Such declines could lead to weak sales volume in 1Q23. The MoM decline in Dec 2022 was the lowest for Xpeng (-17%) and the most for Lixiang (-29%) among all the six brands.

**Figure 13: New orders per store on average for each brand**

Source: Thinkercar, CMBIGM

## Other Industry Indicators to Watch

### COVID-19 as the major uncertainty for city performance

Tier-1 and -2 cities outperformed tier-3 and below cities in terms of retail sales volume growth in 2022, in line with our expectation at the beginning of 2022. Although we believe that tier-1 and -2 cities are more resilient during COVID, the pandemic recurrence did make the city-tier performance pattern more volatile and unpredictable in 2022.

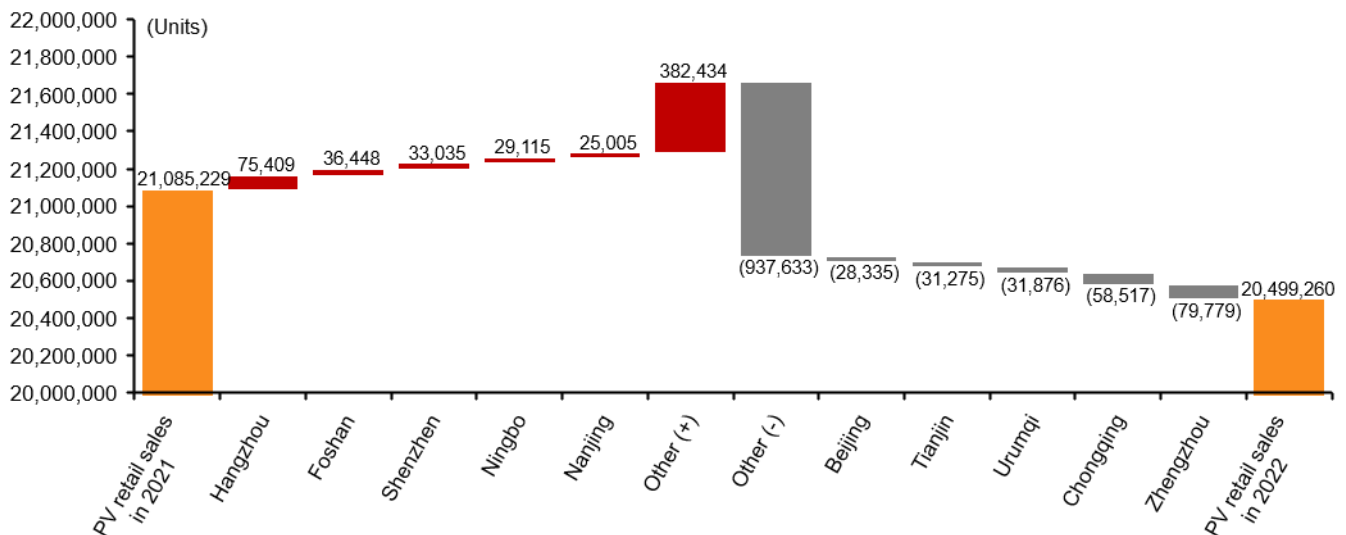
**Figure 14: China auto retail sales growth by city tier**

Retail Sales YoY Growth	Jun 2022	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	2022
Tier 1	9.1%	14.9%	24.6%	25.7%	16.8%	14.0%	13.2%	0.3%
Tier 2	18.4%	10.6%	22.4%	11.1%	5.1%	-1.4%	13.2%	0.6%
Tier 3	12.2%	6.9%	16.5%	4.1%	-8.4%	-23.8%	6.7%	-7.4%
Tier 4 and below	10.0%	3.5%	4.6%	-2.9%	-16.1%	-19.4%	11.6%	-7.2%
<b>Nationwide</b>	<b>14.4%</b>	<b>8.8%</b>	<b>17.6%</b>	<b>8.6%</b>	<b>-1.2%</b>	<b>-7.9%</b>	<b>11.5%</b>	<b>-2.8%</b>

Source: CATARC, CMBIGM

Pandemic management and stimulus measures by local governments played important roles for city-level retail sales volume performance, which can be reflected by the cities named in the chart below. Shanghai showed its resilience and enjoyed YoY growth in the total retail sales volume in 2022 despite its two months of almost zero sales volume amid lockdowns.

**Figure 15: PV retail sales volume YoY growth contribution by city in 2022**



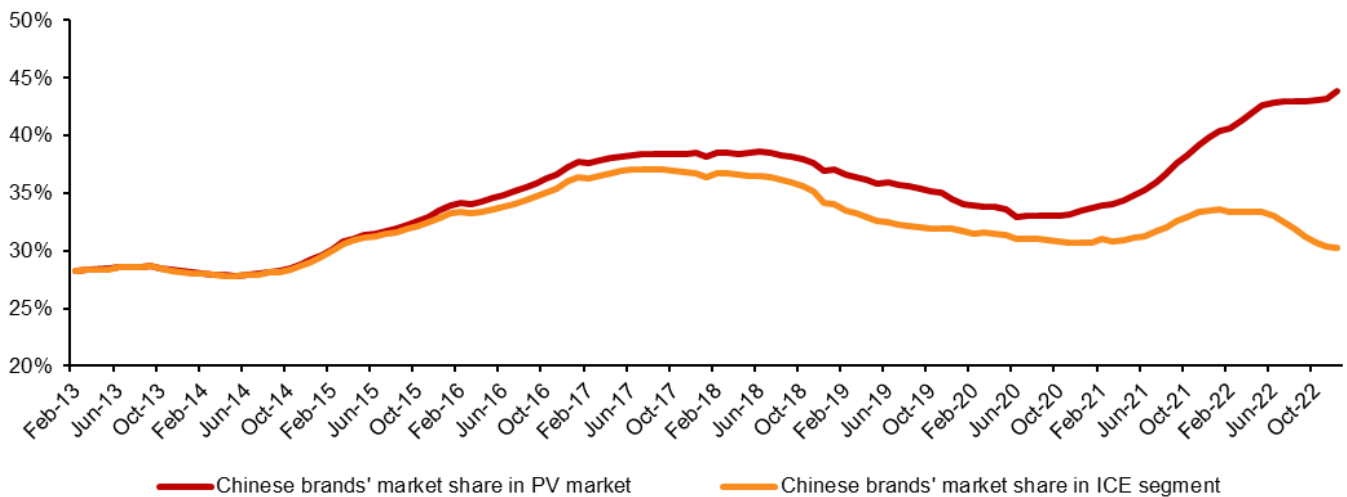
Source: CATARC, CMBIGM

### Chinese-brand market share rose to 44% in 2022

Retail sales volume for Chinese brands rose 7.1% YoY in 2022, outpacing the industrywide YoY decline of 2.8% by almost 10 ppts, thanks to rising demand for NEVs. Excluding NEVs, retail sales volume of Chinese-brand ICE vehicles fell 24% YoY in 2022, weaker than the overall ICE segment's 16% YoY decline.

Chinese-brand market share in a retail sales volume basis, widened to 43.8% in 2022, up from 39.7% in 2021. We expect Chinese brands' market share on a wholesale basis to exceed 50% in 2023, aided by NEVs and exports.

**Figure 16: Chinese brands' market share (trailing 12-month basis)**



Source: CATARC, CMBIGM

### Lack of NEV models leads to traditional luxury's underperformance

The total retail sales volume of traditional luxury brands dropped 6.7% YoY to 3.5mn units in 2022, underperforming the overall industry by 3.9 ppts, missing our expectation at the beginning of 2022. Traditional luxury brands' market share narrowed for two years in a row to 14.9% in 2022.

While supply chain constraints could play an important role to traditional luxury brands' underperformance in 2021, lack of competitive NEV models became more apparent for their weak sales volume in 2022. Retail sales volume of luxury ICE vehicles fell 9% YoY in 2022, outperforming the industrywide ICE decline of 16% YoY during the same period.

We project traditional luxury brands to extend its market share loss in 2023 based on our compiled NEV model pipeline for these brands.

**Figure 17: China traditional luxury auto market share by city tier (trailing 12-month basis)**

Market Share	Jun 2022	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
Tier 1	21.6%	21.5%	21.2%	21.2%	21.3%	21.1%	20.9%
Tier 2	18.3%	18.2%	18.1%	18.2%	18.3%	18.4%	18.4%
Tier 3	10.2%	10.2%	10.2%	10.4%	10.6%	10.7%	10.8%
Tier 4 and below	6.7%	6.8%	6.8%	6.9%	7.0%	7.1%	7.2%
<b>Nationwide</b>	<b>14.5%</b>	<b>14.5%</b>	<b>14.4%</b>	<b>14.5%</b>	<b>14.7%</b>	<b>14.8%</b>	<b>14.9%</b>

Source: CATARC, CMBIGM

Mercedes-Benz regained the luxury-sales crown from BMW in 2022 with only 3,800 more vehicles sold in China. BMW posted higher retail sales volume than Mercedes-Benz for locally-produced models in China, as it started local production of the X5 in 2022. Such localization reduced BMW's vehicle imports. The German "Big Three" (Mercedes-Benz, BMW, Audi) remained dominant in the traditional luxury brands, accounting for market share of 72%. However, NEV luxury brands, especially Tesla, have been challenging the

“Big Three”. In 2023, we expect Tesla to surpass Audi in terms of retail sales volume in China.

The ranking from 3<sup>rd</sup> to 10<sup>th</sup> positions for each brand remained the same in 2022 versus 2021. Despite low comparison base amid supply chain constraints in 2021, most traditional luxury brands posted retail sales volume YoY declines in 2022 except Mercedes-Benz and Porsche. Retail sales volume for Porsche only rose 1% YoY in 2022, the highest in the top 10 list.

**Figure 18: Top 10 traditional luxury auto brands' retail sales volume in China**

Units	Dec 2022	YoY	2022	2022 YoY	2022 Market Share in Luxury Segment
<b>Total Luxury</b>	<b>304,101</b>	<b>17.9%</b>	<b>3,047,174</b>	<b>-6.7%</b>	<b>100.0%</b>
Mercedes-Benz	70,223	10.0%	774,068	0.5%	25.4%
BMW	76,018	40.8%	770,275	-6.2%	25.3%
Audi	65,781	26.1%	642,909	-7.0%	21.1%
Cadillac	21,905	20.0%	186,086	-20.1%	6.1%
Lexus	15,343	-11.4%	182,666	-16.7%	6.0%
Volvo	19,544	26.1%	166,801	-2.8%	5.5%
Porsche	10,228	-20.9%	94,366	0.9%	3.1%
Lincoln	6,520	-25.8%	79,362	-13.4%	2.6%
Land Rover	6,992	-6.2%	67,920	-15.2%	2.2%
MINI	2,328	-1.5%	28,812	-6.2%	0.9%

Source: CATARC, CMBIGM

Figure 19: China passenger-vehicle wholesale volume by OEM / brand

	Sales Volume in Dec 2022 (units)	YoY (%)	MoM (%)	Sales Volume in 2022 (units)	2022 YoY (%)	2022 Market Share (%)
<b>Chinese OEMs</b>	<b>1,313,273</b>	<b>12.6%</b>	<b>14.4%</b>	<b>11,741,886</b>	<b>23.5%</b>	<b>50.0%</b>
Geely	124,029	-6.7%	-2.3%	1,252,861	13.1%	5.3%
Great Wall Motor	63,655	-53.7%	-13.7%	880,808	-16.0%	3.8%
Changan	161,686	104.5%	43.5%	1,371,402	12.2%	5.8%
SAIC-GM-Wuling	166,254	-2.1%	17.2%	1,302,554	2.9%	5.5%
SAIC	86,891	-17.5%	18.7%	839,186	1.7%	3.6%
BYD	228,596	133.3%	0.9%	1,852,625	153.8%	7.9%
GAC Motor (incl. Aion)	67,989	40.8%	24.6%	634,362	41.8%	2.7%
Chery	100,444	-5.3%	6.3%	1,159,967	32.3%	4.9%
Dongfeng	51,313	7.9%	17.4%	522,004	24.3%	2.2%
FAW	11,574	16.6%	44.0%	75,769	10.7%	0.3%
BAIC	16,309	24.0%	57.5%	106,750	-22.9%	0.5%
NIO	15,815	50.8%	11.5%	122,485	34.0%	0.5%
Li Auto	21,233	50.7%	41.2%	133,246	47.2%	0.6%
Xpeng	11,292	-29.4%	94.3%	120,757	23.0%	0.5%
Weltmeister	13	-99.7%	-91.5%	29,450	-33.3%	0.1%
Neta	7,795	-23.0%	-48.3%	152,073	118.3%	0.6%
Leap Motor	8,493	8.8%	5.5%	111,168	147.6%	0.5%
<b>German Brands</b>	<b>385,579</b>	<b>-12.0%</b>	<b>12.0%</b>	<b>4,370,768</b>	<b>3.3%</b>	<b>18.6%</b>
VW	212,601	-13.5%	17.0%	2,332,730	7.7%	9.9%
Audi	52,968	-19.6%	27.7%	599,348	-6.9%	2.6%
BMW	60,119	21.6%	2.7%	665,050	2.0%	2.8%
Mercedes-Benz	46,796	-17.7%	-9.5%	624,740	4.4%	2.7%
Jetta	8,301	-58.7%	-22.4%	148,900	-16.4%	0.6%
<b>Japanese Brands</b>	<b>319,741</b>	<b>-27.8%</b>	<b>12.5%</b>	<b>4,188,030</b>	<b>-5.7%</b>	<b>17.8%</b>
Honda	119,298	-21.2%	43.4%	1,388,382	-9.0%	5.9%
Toyota	134,454	-28.1%	-11.0%	1,838,349	11.0%	7.8%
Nissan	57,130	-35.1%	31.7%	818,705	-18.2%	3.5%
Mazda	5,901	-14.9%	6.8%	92,748	-45.3%	0.4%
Mitsubishi	2,257	-67.8%	181.4%	33,776	-48.8%	0.1%
<b>American Brands</b>	<b>173,093</b>	<b>-36.0%</b>	<b>-22.9%</b>	<b>2,175,284</b>	<b>0.7%</b>	<b>9.3%</b>
Buick	47,346	-47.9%	-10.2%	677,927	-18.2%	2.9%
Chevrolet	20,231	-54.1%	-23.6%	276,902	2.6%	1.2%
Cadillac	26,624	3.3%	11.9%	215,278	-7.7%	0.9%
Ford	17,964	-29.0%	4.6%	220,648	-11.1%	0.9%
Lincoln	5,132	-57.5%	26.6%	71,807	-18.4%	0.3%
Tesla	55,796	-21.2%	-44.4%	710,865	50.3%	3.0%
<b>Korean Brands</b>	<b>35,380</b>	<b>-37.1%</b>	<b>13.4%</b>	<b>381,049</b>	<b>-25.9%</b>	<b>1.6%</b>
Hyundai	25,056	-37.9%	16.3%	250,424	-30.5%	1.1%
Kia	10,324	-35.2%	7.0%	130,625	-15.1%	0.6%
<b>Others</b>	<b>31,148</b>	<b>-8.7%</b>	<b>21.2%</b>	<b>353,666</b>	<b>2.4%</b>	<b>1.5%</b>
PSA	9,700	-28.8%	5.9%	115,132	21.8%	0.5%
Volvo	16,280	27.1%	68.4%	146,297	4.3%	0.6%
Jaguar	2,172	206.8%	11.3%	20,780	14.0%	0.1%
Land Rover	1,063	-61.8%	-63.7%	29,957	-17.7%	0.1%
<b>Total</b>	<b>2,258,214</b>	<b>-6.2%</b>	<b>9.7%</b>	<b>23,473,924</b>	<b>9.6%</b>	<b>100.0%</b>

Source: CPCA, CMBIGM



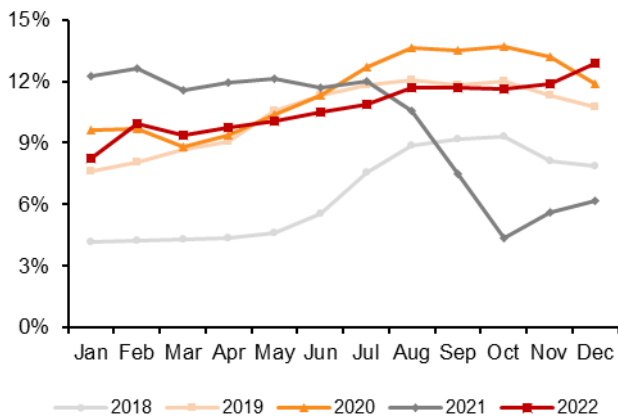
**Figure 20: China passenger-vehicle monthly retail sales volume by OEM / brand**

	Retail Sales Volume in Dec 2022 (Units)	YoY %	MoM %	Retail Sales Volume in 2022 (Units)	2022 YoY %
<b>Chinese OEMs</b>					
Geely (incl. Lynk & co, Geometry)	158,571	10.7%	82.9%	1,089,687	-15.4%
Zeekr	11,419	216.2%	4.9%	71,441	1182.1%
Great Wall	98,454	-14.3%	92.6%	741,698	-25.8%
Changan	172,191	42.7%	79.1%	1,153,120	-1.1%
SAIC Motor	46,704	-17.2%	79.0%	393,367	-27.9%
GAC Trumpchi	40,160	11.3%	89.4%	303,304	-3.8%
GAC Aion	25,605	49.8%	33.0%	213,838	74.3%
BYD	216,616	102.0%	22.9%	1,603,010	122.7%
SAIC-GM-Wuling	75,261	-25.8%	34.9%	797,544	-21.2%
BAIC Magna	1,629	42.9%	53.4%	11,895	146.4%
Voyah	1,607	-48.8%	4.8%	17,373	169.6%
NIO	15,050	43.6%	6.3%	120,158	32.2%
Lixiang	21,394	51.6%	37.3%	135,296	48.2%
Xpeng	11,526	-29.5%	98.2%	120,449	24.6%
Weltmeister	548	-87.3%	-48.8%	34,637	-2.8%
Neta	22,774	99.5%	43.4%	146,099	125.6%
Leapmotor	14,843	75.6%	67.8%	108,868	147.7%
Human Horizons	224	-75.6%	-13.8%	4,520	6.7%
Jinkang Seres	10,857	518.6%	-1.9%	70,853	749.9%
<b>Foreign OEMs</b>					
SAIC VW	160,606	11.4%	66.2%	1,242,704	-15.7%
FAW VW	214,786	21.8%	71.8%	1,743,954	-3.9%
Beijing Benz	54,891	15.0%	18.2%	583,509	3.6%
BMW Brilliance	66,597	55.7%	23.4%	657,949	0.4%
FAW Toyota	96,518	14.1%	59.2%	807,332	1.4%
GAC Toyota	119,249	25.8%	50.2%	1,006,768	24.9%
Dongfeng Honda	68,077	-20.0%	87.9%	653,062	-15.9%
GAC Honda	84,834	-5.0%	73.9%	724,925	-5.4%
Dongfeng Nissan	109,695	-5.6%	101.5%	891,988	-18.9%
GAC Mitsubishi	2,530	-59.8%	184.6%	29,096	-56.7%
SAIC GM	104,766	-12.6%	49.3%	1,002,659	-21.9%
Changan Ford	18,484	-19.3%	43.1%	169,759	-16.8%
Tesla China	41,687	-40.6%	-32.8%	441,697	37.2%
GAC FCA	183	-90.3%	157.7%	6,030	-78.4%
Volvo Asia Pacific	17,785	31.8%	53.9%	147,411	-0.8%
Chery JLR	5,786	8.2%	54.0%	50,144	-15.2%
Beijing Hyundai	35,854	9.3%	94.5%	260,405	-32.0%
Yueda Kia	10,469	-23.5%	93.4%	94,335	-40.5%
<b>Total Volume (excl. imports)</b>	<b>2,457,794</b>	<b>12.4%</b>	<b>57.3%</b>	<b>19,730,972</b>	<b>-2.1%</b>
<b>Imports by Brand</b>					
Lexus	15,343	-11.4%	21.4%	182,666	-16.7%
BMW	9,421	-16.1%	4.9%	112,326	-32.3%
Mercedes-Benz	13,438	2.6%	13.1%	163,452	-7.2%
Porsche	10,228	-20.9%	19.1%	94,366	0.9%
Audi	3,424	-24.4%	20.9%	44,544	-43.0%
<b>Total Imports</b>	<b>67,096</b>	<b>-13.4%</b>	<b>16.6%</b>	<b>768,288</b>	<b>-18.1%</b>
<b>Total Retail Sales Volume</b>	<b>2,524,890</b>	<b>11.5%</b>	<b>55.9%</b>	<b>20,499,260</b>	<b>-2.8%</b>

Source: CATARC, CMBIGM

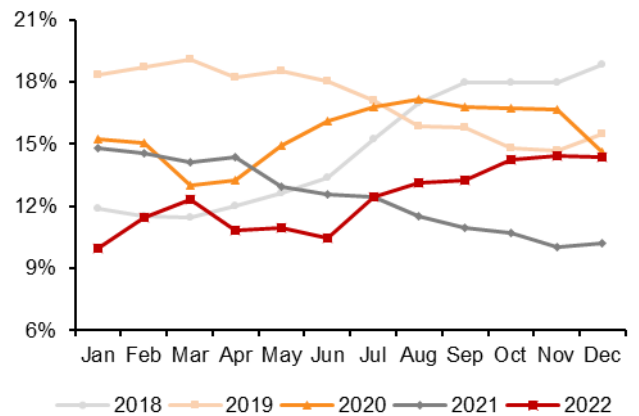
## Appendix: Major Brands' Discounts at Dealers

**Figure 21: Beijing Benz discounts at dealers**



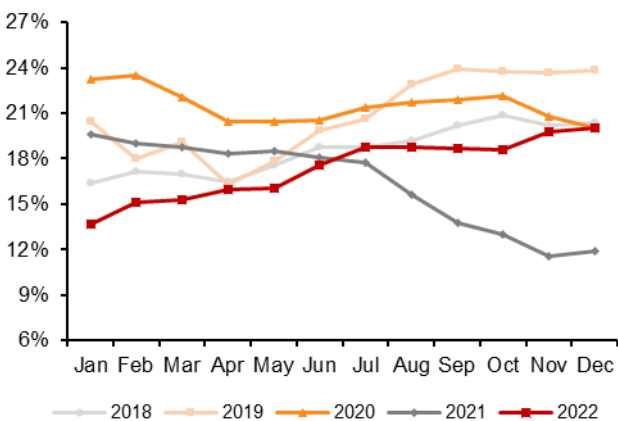
Source: ThinkerCar, CMBIGM

**Figure 22: BMW Brilliance discounts at dealers**



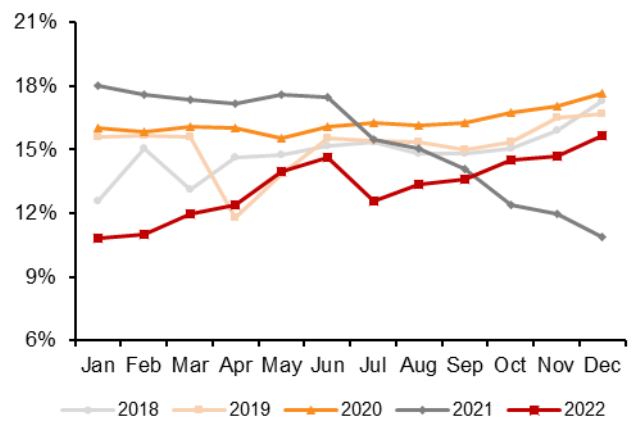
Source: ThinkerCar, CMBIGM

**Figure 23: FAW Audi discounts at dealers**



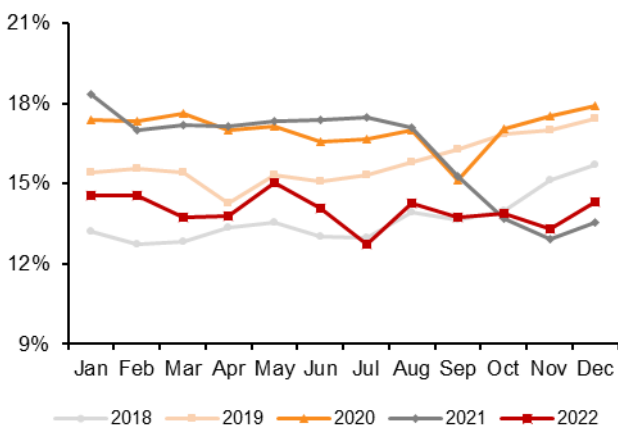
Source: ThinkerCar, CMBIGM

**Figure 24: FAW VW discounts at dealers**



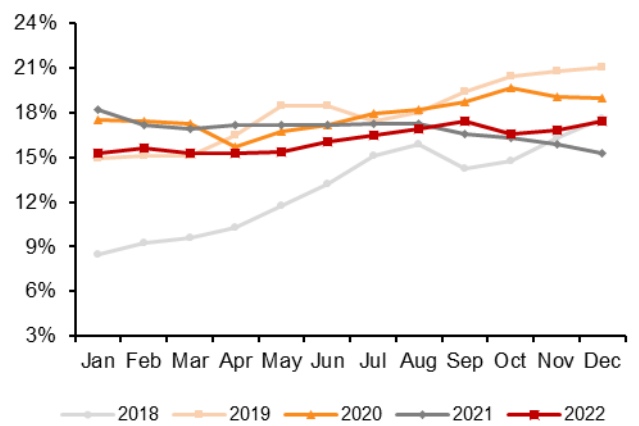
Source: ThinkerCar, CMBIGM

**Figure 25: SAIC VW discounts at dealers**

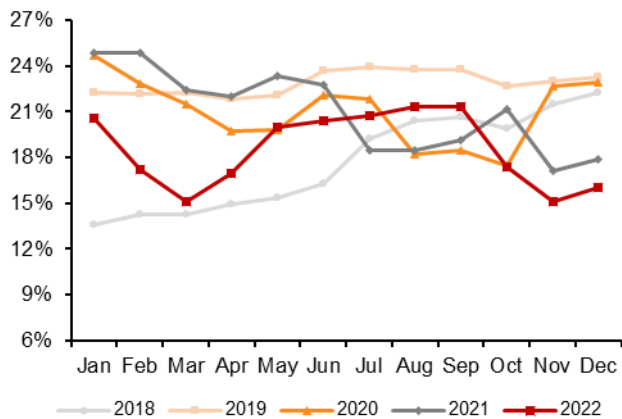


Source: ThinkerCar, CMBIGM

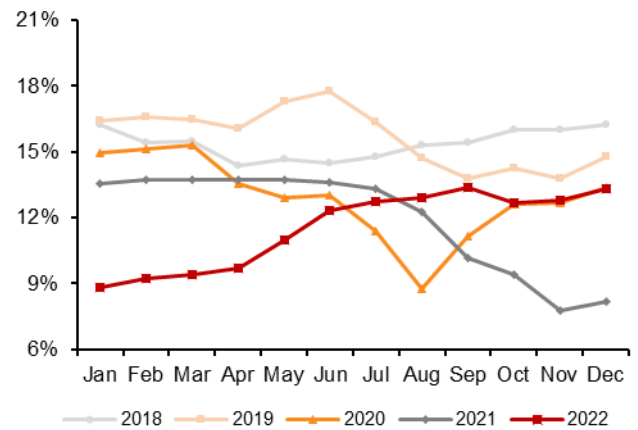
**Figure 26: Cadillac discounts at dealers**



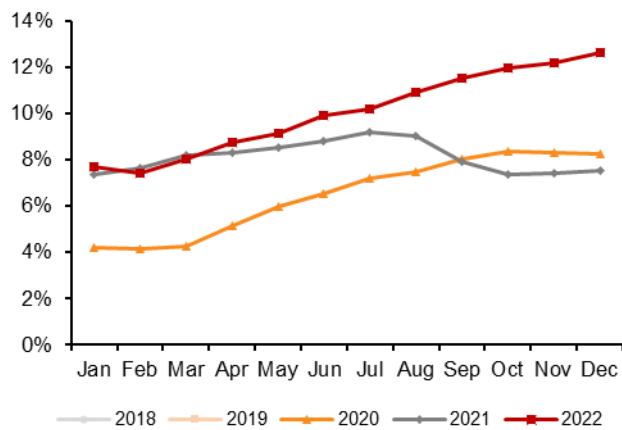
Source: ThinkerCar, CMBIGM

**Figure 27: Buick discounts at dealers**

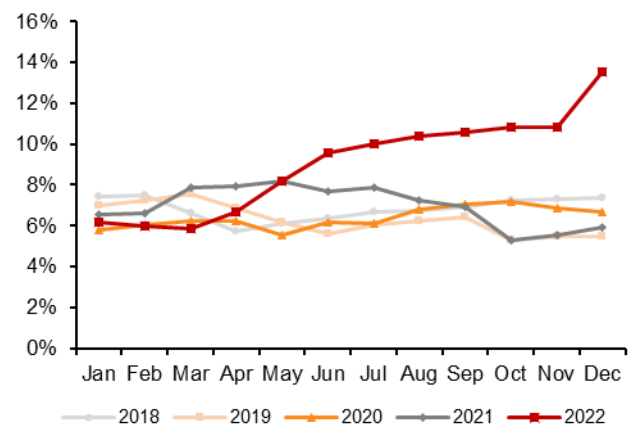
Source: ThinkerCar, CMBIGM

**Figure 28: Dongfeng Nissan discounts at dealers**

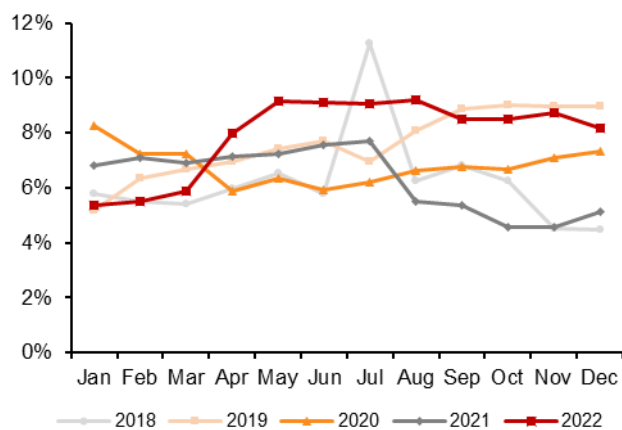
Source: ThinkerCar, CMBIGM

**Figure 29: FAW Toyota discounts at dealers**

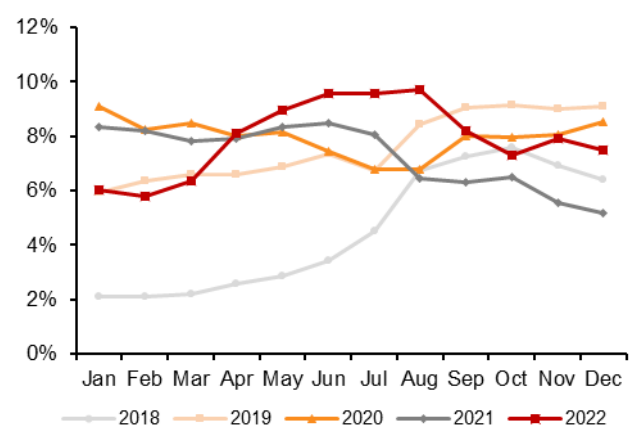
Source: ThinkerCar, CMBIGM

**Figure 30: GAC Toyota discounts at dealers**

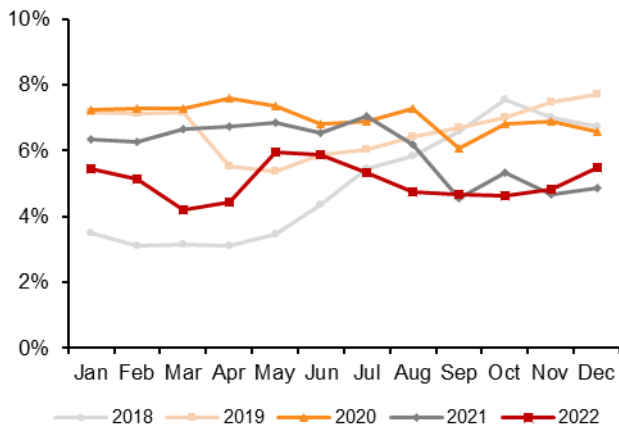
Source: ThinkerCar, CMBIGM

**Figure 31: GAC Honda discounts at dealers**

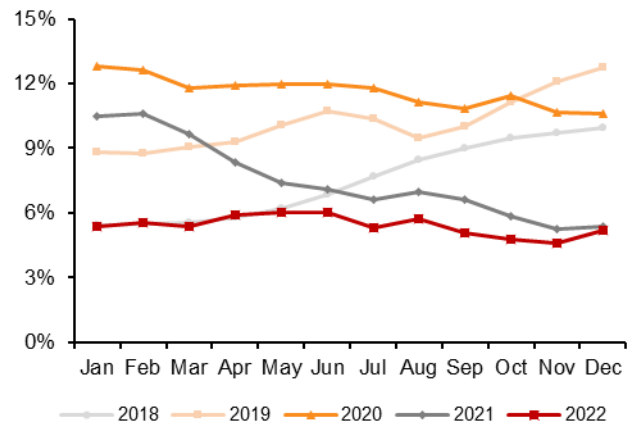
Source: ThinkerCar, CMBIGM

**Figure 32: Dongfeng Honda discounts at dealers**

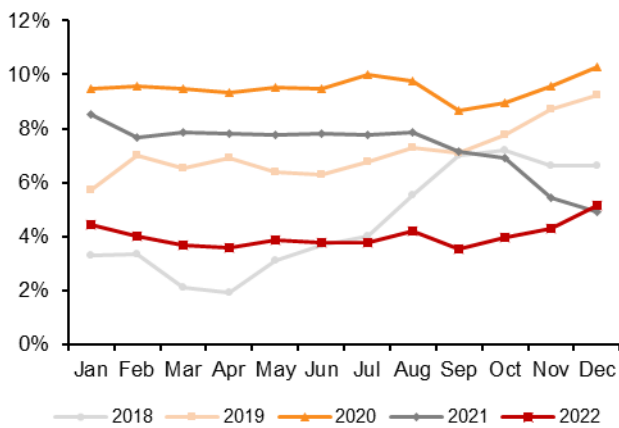
Source: ThinkerCar, CMBIGM

**Figure 33: Changan discounts at dealers**

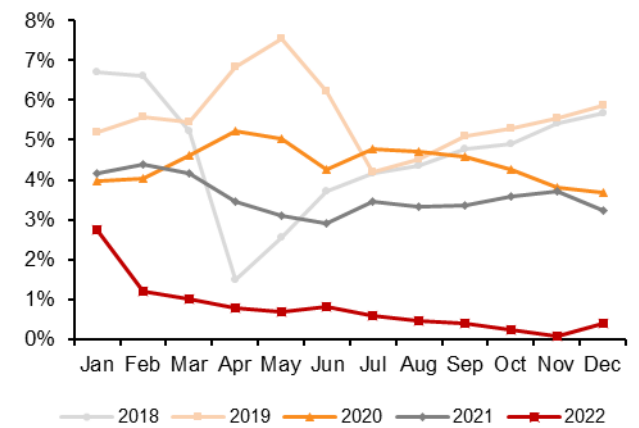
Source: ThinkerCar, CMBIGM

**Figure 34: Geely discounts at dealers**

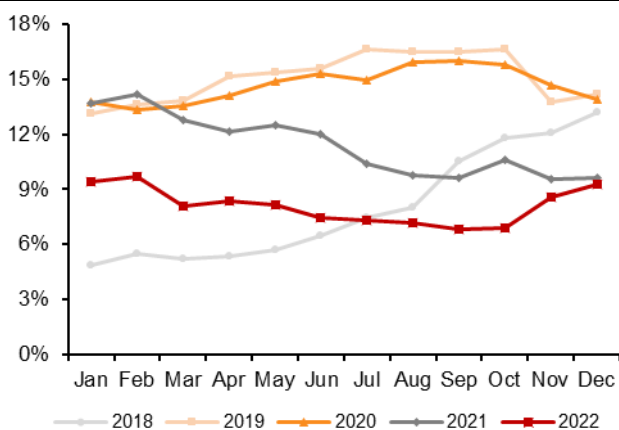
Source: ThinkerCar, CMBIGM

**Figure 35: Great Wall Motor discounts at dealers**

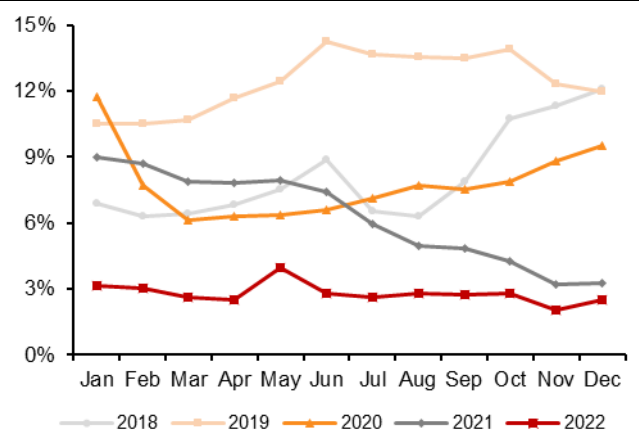
Source: ThinkerCar, CMBIGM

**Figure 36: BYD discounts at dealers**

Source: ThinkerCar, CMBIGM

**Figure 37: SAIC PV discounts at dealers**

Source: ThinkerCar, CMBIGM

**Figure 38: GAC Trumpchi & Aion discounts at dealers**

Source: ThinkerCar, CMBIGM

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