

# China Auto Sector

## A trough in the short term?

China's passenger-vehicle (PV) retail sales volume rose 11% YoY in Feb 2023, 4% lower than our prior forecast. Wholesale volume also rose 11% YoY last month, 13% higher than our prior projection, again largely due to inventory restocking and higher export volume. PV exports surged 86% YoY to about 271,000 units in Feb 2023.

Automakers in China added about 131,000 units of inventories into their dealers in Feb 2023 based on our calculations, which has led to 2.2 months of inventories based on our projected retail sales volume for Mar and Apr 2023. We estimate the inventory level for new-energy vehicles (NEVs) is about 2.5 months, after adding 670,000 units of inventories to dealers in the past 12 months.

■ **Inventory risk could be largely priced in after sell-off.** We have been warning investors about inventory risk for months and the bubble burst last week when more automakers joined price war with concerns raised by inventories of vehicles with the China VI-a emission standards. We are of the view that the shift between China VI-a to China VI-b at the end of Jun 2023 is different from the shift between China V to China VI at the end of Jun 2019. Back that time, some Chinese automakers just fulfilled the technological requirement a few months before the deadline and some automakers speculated that the implementation of China VI could be delayed. Both issues do not exist this time. Based on our channel checks with a few brands, China VI-a inventories are well manageable. We had projected a range-trading market for auto names in 2023 and we believe now could be a short-term trough in the volatile market.

■ **Mar 2023 outlook:** Retail sales volume in the first 12 days of Mar 2023 fell 14% YoY. We project retail sales volume in Mar 2023 to rise 6% YoY to 1.57mn units amid low base last year due to Shanghai lockdown. We expect wholesale volume to also rise 6% YoY to 1.98mn units assuming continued stock restocking. It appears to us that 1Q23 sales volume on both wholesale and retail basis could beat our original forecasts made in Dec 2022. We believe that market already has an expectation that vehicle consumption could be weaker than other consumption in 1H23 and recovery could start in 2H23. Based on our channel checks, customer flow has risen to a reasonable level, whereas the conversion ratio from customer flow to new orders remains low.

We also project NEV market share to be 34% in Mar 2023 on a retail basis, the highest in history, which makes our Mar NEV retail sales volume forecast as 0.53mn units.

■ **Leading indicators for NEV brands have been improving gradually:** Leading indicators including number of leads, customer flow and new orders for Tesla, NIO, Lixiang, Xpeng, BYD and Aion rose MoM in Feb 2023, based on data from a sample size of 96 stores in 15 major cities. That is one of the reasons why we project historical-high NEV market share in Mar 2023. Li Auto led the MoM growth for these leading indicators with the L7 debut.

**OUTPERFORM**  
 (Maintain)

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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	21
Xpeng	XPEV US	BUY	18
Xpeng	9868 HK	BUY	70
Geely	175 HK	BUY	16.5
GWM	2333 HK	BUY	13
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	25
BYD	1211 HK	HOLD	230
BYD	002594 CH	HOLD	240

Source: Bloomberg, CMBIGM

#### Related Reports:

["China Auto Sector – Inventory risk could lead to a bumpy recovery" – 15 Feb 2023](#)

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## Company Watch List

### Great Wall Motor

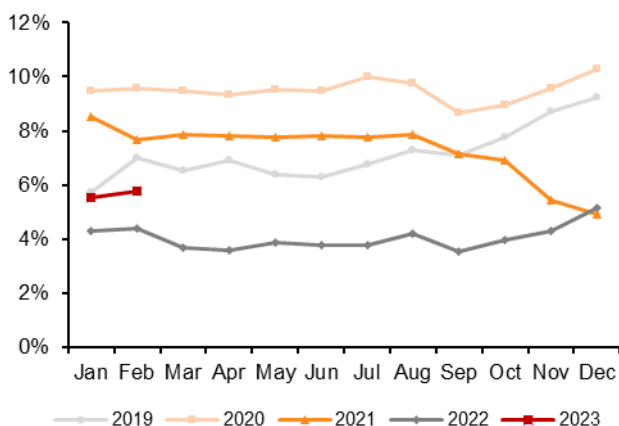
Great Wall's wholesale volume, including pick-up trucks, fell 4% YoY to about 68,000 units in Feb 2023, underperforming the overall industry's 11% YoY increase. Retail sales volume of PVs and pick-up trucks combined fell 8% YoY to about 59,000 units last month, leading to an inventory reduction of about 4,800 units, a third consecutive month of destocking.

Great Wall was one of few Chinese automakers which cut inventories in Feb 2023. We estimate Great Wall's inventory level to be about 116,000 units, or 1.5 months based on the average retail sales volume in the past three months.

Although its low inventory level paves way for Great Wall's plethora of upcoming new models, we believe its 1.6mn-unit sales target for 2023 is still too aggressive. We maintain our full-year forecast of 1.25mn units. Similar to Geely, how successful Great Wall's new PHEVs would be in 2023 could be key to Great Wall's valuation, in our view. The company introduced its new hybrid technology (Hi4) on 10 Mar 2023, but no new NEV models have been released yet.

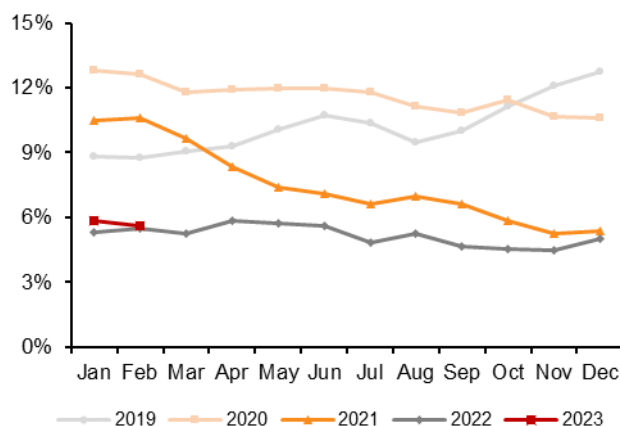
Discounts at dealers continued to widen MoM to 16-month high, based on our calculations. We expect Great Wall's discounts at dealers to continue widening before new models play a meaningful contribution.

**Figure 1: Great Wall Motor discounts at dealers**



Source: ThinkerCar, CMBIGM

**Figure 2: Geely discounts at dealers**



Source: ThinkerCar, CMBIGM

### Geely

Geely's wholesale volume rose 39% YoY to about 109,000 units in Feb 2023, with the Geometry series almost doubled driven by the *Panda mini EV*. NEVs accounted for 21% of Geely's total sales volume last month. Retail sales volume at Geely rose 6% YoY to about 76,000 units last month.

Geely added inventories of about 16,000 units into dealers in Feb 2023, which pushed its inventory level to about 2.2 months based on our estimates. Although Geely's average discounts at dealers narrowed MoM in Feb 2023 due to a smaller portion of sales contribution from aging models, discounts for most individual models widened MoM at Geely's dealers. It raised the discounts for the *Emgrand L PHEV* significantly in Feb in order to compete with BYD. We expect Geely's discounts to widen further in Mar 2023, as the automaker has raised its rebates for dealers, especially for the *Xingyue L*, *Xingrui* and

Boyue L, based on our channel checks. We maintain our FY23 sales forecast of 1.53mn units.

## BYD

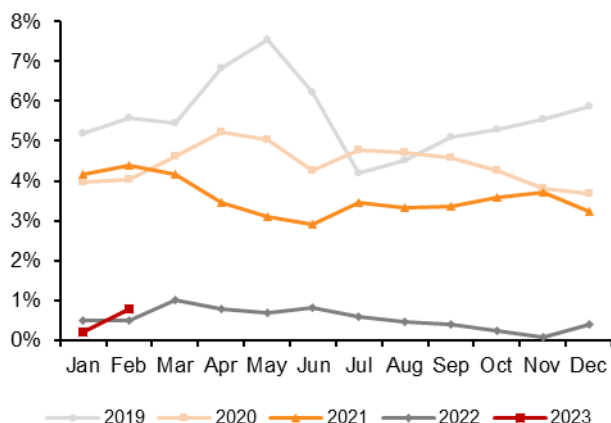
BYD's PV wholesale volume rose 112% YoY to about 190,000 units in Feb 2023. BYD's retail sales volume rose 109% YoY to about 146,000 units last month, which led to an inventory restocking of about 31,000 units. Although BYD still has orders backlog of about 1.5 months based on channel checks, we calculate BYD's inventories at dealers have increased by about 220,000 units in the past 12 months. We estimate BYD's inventory level at dealers to be close to two months now.

BYD's dealers announced price discounts of RMB 6,000-10,000 during late Feb to Mar 2023, which was in line with our prior expectation, given its slower order intake and price cuts from its rivals including Tesla. We have confirmed with the company that BYD has not raised rebates to dealers yet. Such discounts could lead to very thin gross profit for BYD's dealers. BYD may need to raise incentives to dealers if it wants to continue building inventories.

BYD has been expanding its model mix with wider price ranges in order to withstand the competition. Its premium brand, Yangwang, debuted the first model, the *U8*, in Jan 2023. It also launched the redesigned *Qin Plus* PHEV with the lowest price of below RMB 100,000 in Feb 2023. The new orders of the new *Qin Plus* exceeded 32,000 units within seven days.

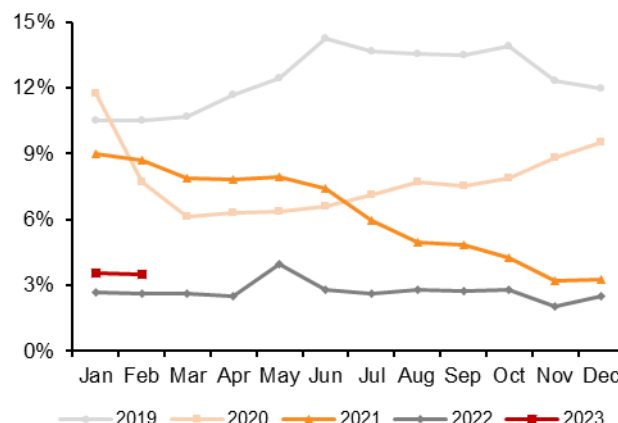
We maintain our FY23 PV sales forecast of 2.45mn units for BYD, or about 200,000 units per month on average, which is more conservative than investors' expectation of about 3-4mn units in 2023. We believe such monthly volume forecast is in line with BYD's new order intake in recent months.

**Figure 3: BYD discounts at dealers**



Source: ThinkerCar, CMBIGM

**Figure 4: GAC Trumpchi & Aion discounts at dealers**



Source: ThinkerCar, CMBIGM

## Guangzhou Automobile Group

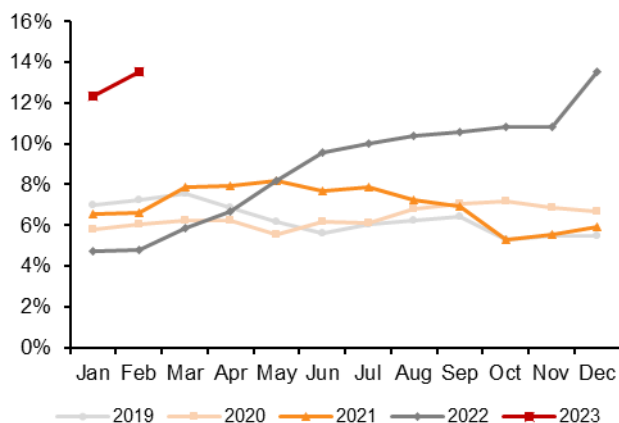
Total wholesale volume at GAC Group rose 12% YoY in Feb 2023, largely in line with the industry average. Sales volume increase at GAC Toyota (+26% YoY) was offset by the sales decline at GAC Honda (-28% YoY). GAC Motor's wholesale volume rose 71% YoY to about 55,000 units in Feb 2023, driven by GAC Aion's 353% YoY growth.

Retail sales volume of Aion rose 292% YoY to about 29,000 units, leading to an inventory increase of 1,300 units as of Feb 2023. We estimate Aion added more than 52,000 units

of inventories to its dealers in the past 12 months, resulting in an inventory level of about three months. That is the main reason why we only project 319,000 units for Aion's wholesale volume in 2023.

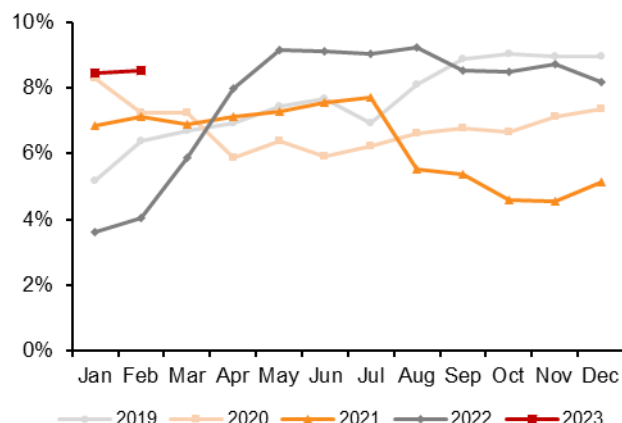
Both GAC Toyota and GAC Honda added inventories into dealers in Feb 2023. GAC Honda's inventory level exceeded two months, the highest for at least five years, based on our calculations. The inventory level at GAC Toyota rose to about 1.1 months after adding about 4,700 units of inventories last month. That could probably explain why discounts for both GAC Toyota and GAC Honda widened in Feb 2023.

**Figure 5: GAC Toyota discounts at dealers**



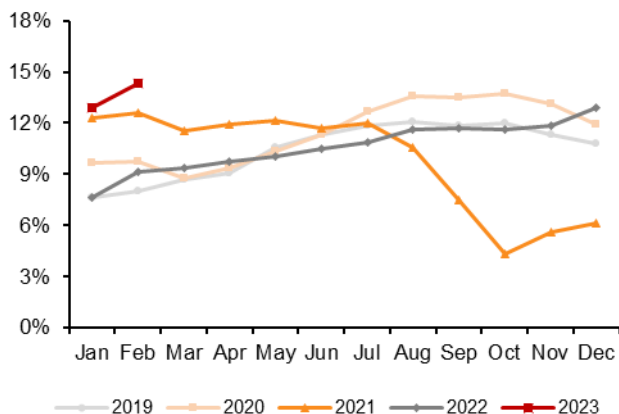
Source: ThinkerCar, CMBIGM

**Figure 6: GAC Honda discounts at dealers**



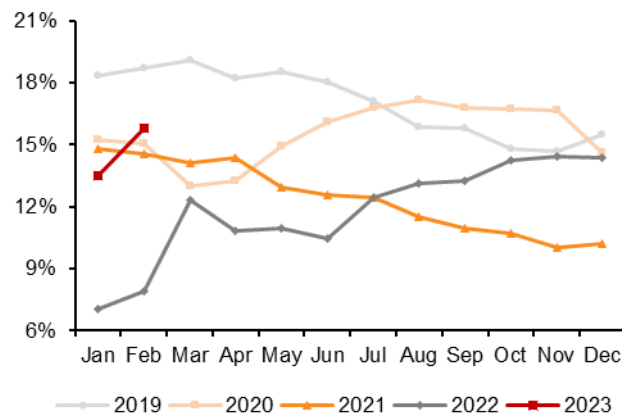
Source: ThinkerCar, CMBIGM

**Figure 7: Beijing Benz discounts at dealers**



Source: ThinkerCar, CMBIGM

**Figure 8: BMW Brilliance discounts at dealers**



Source: ThinkerCar, CMBIGM

Discounts for Beijing Benz rose to almost 15% in Feb 2023, the highest since at least 2017. Discounts for BMW Brilliance widened to almost 16% last month, the highest since Dec 2020.

**Figure 9: China passenger-vehicle wholesale volume by OEM / brand**

	Sales Volume in Feb 2023 (units)	YoY (%)	MoM (%)	Sales Volume YTD (units)	YTD YoY (%)	YTD Market Share (%)
<b>Chinese OEMs</b>	<b>887,182</b>	<b>35.7%</b>	<b>15.2%</b>	<b>1,664,585</b>	<b>-1.3%</b>	<b>53.6%</b>
Geely	108,701	38.5%	5.1%	212,153	-5.7%	6.8%
Great Wall Motor	51,053	-13.7%	2.4%	100,892	-36.2%	3.3%
Changan	112,828	58.8%	-5.4%	232,086	-1.2%	7.5%
SAIC-GM-Wuling	54,492	-0.1%	113.8%	79,976	-42.9%	2.6%
SAIC	58,499	-9.2%	5.0%	114,197	-13.5%	3.7%
BYD	191,664	112.3%	27.6%	341,828	84.2%	11.0%
GAC Motor (incl. Aion)	56,968	76.3%	66.7%	91,147	6.5%	2.9%
Chery	96,592	76.4%	1.3%	191,958	41.1%	6.2%
Dongfeng	20,487	-44.2%	-15.8%	44,827	-52.7%	1.4%
FAW	7,303	645.2%	32.6%	12,812	113.2%	0.4%
BAIC	7,675	78.9%	30.5%	13,555	29.6%	0.4%
NIO	12,157	98.3%	42.9%	20,663	30.9%	0.7%
Li Auto	16,620	97.5%	9.8%	31,761	53.6%	1.0%
Xpeng	6,010	-3.5%	15.2%	11,228	-41.4%	0.4%
Weltmeister	0	-100.0%	/	0	-100.0%	0.0%
Neta	10,073	41.5%	67.4%	16,089	-11.2%	0.5%
Leap Motor	3,198	-6.9%	180.8%	4,337	-62.4%	0.1%
Jinkang Seres	3,521	231.9%	-21.2%	7,990	325.9%	0.3%
<b>German Brands</b>	<b>288,161</b>	<b>-4.3%</b>	<b>-0.5%</b>	<b>570,083</b>	<b>-22.5%</b>	<b>18.4%</b>
VW	126,246	-19.4%	-10.1%	266,738	-30.7%	8.6%
Audi	39,563	-8.7%	25.5%	71,081	-33.2%	2.3%
BMW	52,871	21.4%	-9.3%	111,138	-9.4%	3.6%
Mercedes-Benz	54,212	27.8%	20.8%	99,094	-0.9%	3.2%
Jetta	11,001	-27.5%	-0.3%	22,032	-31.1%	0.7%
<b>Japanese Brands</b>	<b>255,383</b>	<b>-22.9%</b>	<b>18.1%</b>	<b>471,600</b>	<b>-39.0%</b>	<b>15.2%</b>
Honda	72,538	-37.3%	5.7%	141,194	-47.7%	4.6%
Toyota	118,053	-6.0%	5.6%	229,854	-17.0%	7.4%
Nissan	60,008	-20.4%	99.4%	90,098	-51.9%	2.9%
Mazda	3,863	-56.3%	-4.0%	7,887	-70.8%	0.3%
Mitsubishi	330	-90.9%	-71.7%	1,498	-79.9%	0.0%
<b>American Brands</b>	<b>163,680</b>	<b>12.8%</b>	<b>17.7%</b>	<b>302,720</b>	<b>-12.3%</b>	<b>9.8%</b>
Buick	41,437	-1.5%	23.9%	74,882	-28.0%	2.4%
Chevrolet	17,720	-13.4%	41.1%	30,276	-34.6%	1.0%
Cadillac	9,000	-33.3%	0.0%	18,000	-49.6%	0.6%
Ford	17,282	77.3%	26.8%	30,909	-1.5%	1.0%
Lincoln	3,839	42.1%	-12.0%	8,200	-12.8%	0.3%
Tesla	74,402	31.7%	12.6%	140,453	20.7%	4.5%
<b>Korean Brands</b>	<b>27,217</b>	<b>-1.2%</b>	<b>14.4%</b>	<b>51,002</b>	<b>-22.0%</b>	<b>1.6%</b>
Hyundai	17,003	3.3%	13.1%	32,031	-20.9%	1.0%
Kia	10,214	-7.8%	16.6%	18,971	-23.7%	0.6%
<b>Others</b>	<b>22,166</b>	<b>-6.1%</b>	<b>5.7%</b>	<b>43,139</b>	<b>-30.9%</b>	<b>1.4%</b>
PSA	5,289	-31.2%	9.5%	10,119	-51.6%	0.3%
Volvo	11,766	56.5%	11.1%	22,353	-8.0%	0.7%
Jaguar	1,638	-19.4%	-20.8%	3,707	16.5%	0.1%
Land Rover	1,973	-6.0%	-20.7%	4,460	11.8%	0.1%
<b>Total</b>	<b>1,643,789</b>	<b>10.9%</b>	<b>12.6%</b>	<b>3,103,129</b>	<b>-15.5%</b>	<b>100.0%</b>

Source: CPCA, CMBIGM

Figure 10: China passenger-vehicle monthly retail sales volume by OEM / brand

	Retail Sales Volume Feb 2023 (Units)	YoY %	MoM %	Retail Sales Volume YTD (Units)	YTD YoY %
<b>Chinese OEMs</b>					
Geely (incl. Lynk & co, Geometry, Maple)	70,468	2.8%	-11.6%	150,222	-32.6%
Zeekr	5,089	88.1%	29.1%	9,031	50.0%
Great Wall	42,026	-18.5%	-19.8%	94,409	-42.5%
Changan	72,918	25.7%	-26.5%	172,136	-14.5%
SAIC Motor	20,292	-33.8%	-22.7%	46,542	-53.1%
GAC Trumpchi	20,747	18.3%	-11.8%	44,280	-20.5%
GAC Aion	28,795	291.6%	256.5%	36,872	101.1%
BYD	146,088	109.0%	18.4%	269,523	73.3%
SAIC-GM-Wuling	57,361	-9.6%	18.7%	105,688	-31.2%
BAIC Magna	574	50.3%	21.6%	1,046	-15.0%
Voyah	759	9.5%	-27.8%	1,810	-28.0%
NIO	11,904	110.2%	18.2%	21,971	38.7%
Lixiang	17,003	103.1%	9.9%	32,473	56.2%
Xpeng	5,872	-4.6%	16.8%	10,900	-43.1%
Weltmeister	278	-91.6%	55.3%	457	-92.4%
Neta	8,556	32.3%	72.1%	13,527	-16.4%
Leapmotor	1,285	-62.8%	107.9%	1,903	-82.5%
Human Horizons	339	-4.5%	64.6%	545	-39.8%
Jinkang Seres	3,171	259.5%	-3.1%	6,442	548.1%
<b>Foreign OEMs</b>					
SAIC VW	72,691	-6.1%	-3.3%	147,879	-31.0%
FAW VW	107,409	6.6%	-1.2%	216,150	-25.2%
Beijing Benz	43,766	41.3%	-3.1%	88,918	-12.4%
BMW Brilliance	46,692	42.1%	-11.4%	99,412	-19.5%
FAW Toyota	46,361	3.3%	15.8%	86,404	-25.2%
GAC Toyota	58,532	21.6%	10.6%	111,477	-21.5%
Dongfeng Honda	31,168	-29.5%	2.9%	61,447	-49.9%
GAC Honda	34,403	-16.3%	22.6%	62,460	-49.0%
Dongfeng Nissan	40,573	-23.4%	-22.0%	92,622	-42.5%
GAC Mitsubishi	1,289	-48.2%	-12.1%	2,755	-66.4%
SAIC GM	48,411	-12.8%	2.3%	95,721	-47.8%
Changan Ford	8,722	-12.4%	-5.5%	17,948	-43.6%
Tesla China	34,064	40.8%	25.2%	61,271	39.9%
GAC FCA	4	-99.4%	-71.4%	18	-99.2%
Volvo Asia Pacific	9,131	28.6%	14.6%	17,098	-15.0%
Chery JLR	4,201	38.4%	41.7%	7,165	-4.5%
Beijing Hyundai	14,013	-7.8%	-31.6%	34,493	-34.1%
Yueda Kia	5,252	-23.7%	-11.3%	11,172	-46.8%
<b>Total Volume (excl. imports)</b>	<b>1,228,768</b>	<b>10.2%</b>	<b>-0.7%</b>	<b>2,466,403</b>	<b>-25.0%</b>
<b>Imports by Brand</b>					
Lexus	10,154	-12.5%	12.4%	19,185	-34.8%
BMW	8,631	39.2%	-7.1%	17,919	-24.6%
Mercedes-Benz	13,334	56.1%	-5.6%	27,458	-5.9%
Porsche	6,498	122.2%	-10.5%	13,759	25.3%
Audi	4,315	37.5%	52.6%	7,142	-16.2%
<b>Total Imports</b>	<b>56,972</b>	<b>37.0%</b>	<b>0.8%</b>	<b>113,466</b>	<b>-13.0%</b>
<b>Total Retail Sales Volume</b>	<b>1,285,740</b>	<b>11.2%</b>	<b>-0.6%</b>	<b>2,579,869</b>	<b>-24.5%</b>

Source: CATARC, CMBIGM



## Leading Indicators

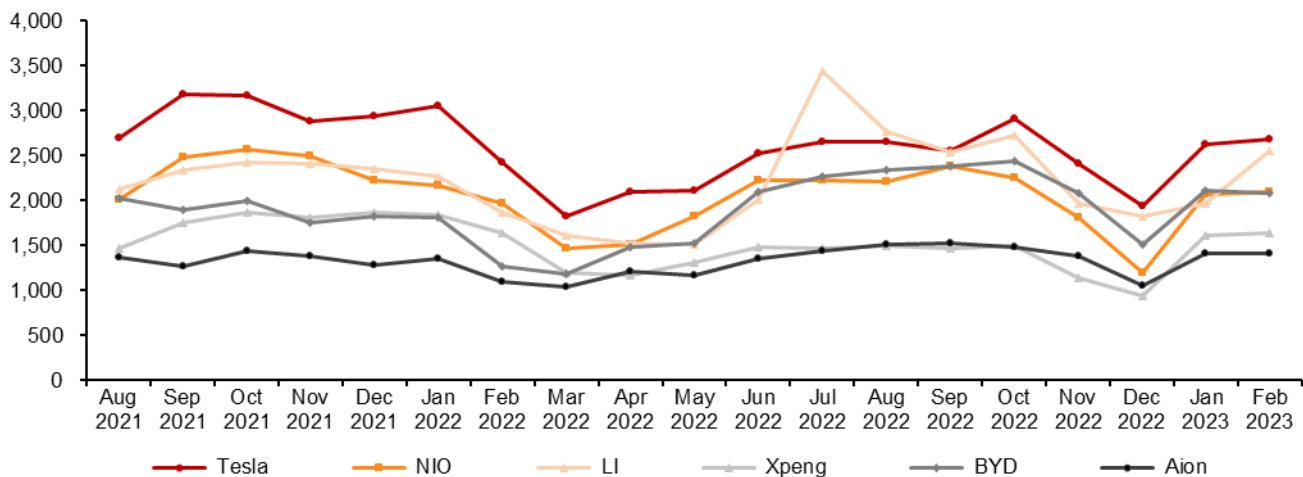
The leading indicators below, including number of leads, customer flows, and new orders generated, for Tesla, NIO, Lixiang, Xpeng, BYD and Aion are based on data from a sample size of 96 stores (15-18 stores for each brand) in 15 major cities in China.

### Number of leads: Li Auto jumped 30% MoM

Number of leads per store of Li Auto jumped 30% MoM as of Feb 2023, driven by the L7 debut. Number of leads per store for the other five brands was largely stable MoM in Feb 2023 (from -2% to 2%). Tesla's number of leads per store is still highest among all the six brands.

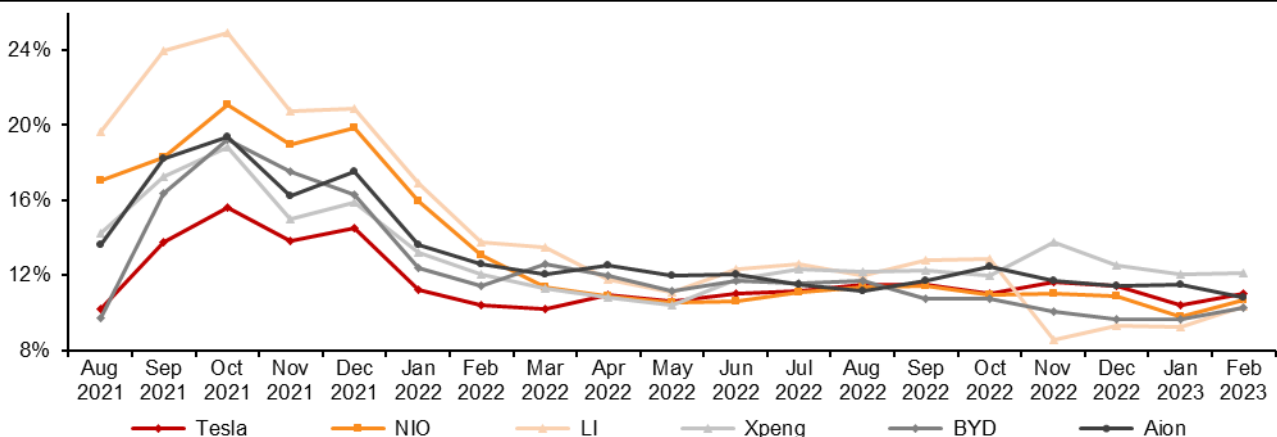
The conversion ratios from leads to store visit remained stable or increased slightly MoM in Feb 2023 for the six brands, which were ranged between 10-12%.

**Figure 11: Number of leads per store on average for each brand**



Source: Thinkercar, CMBIGM

**Figure 12: Conversion ratio from leads to store visit for each brand**



Source: Thinkercar, CMBIGM

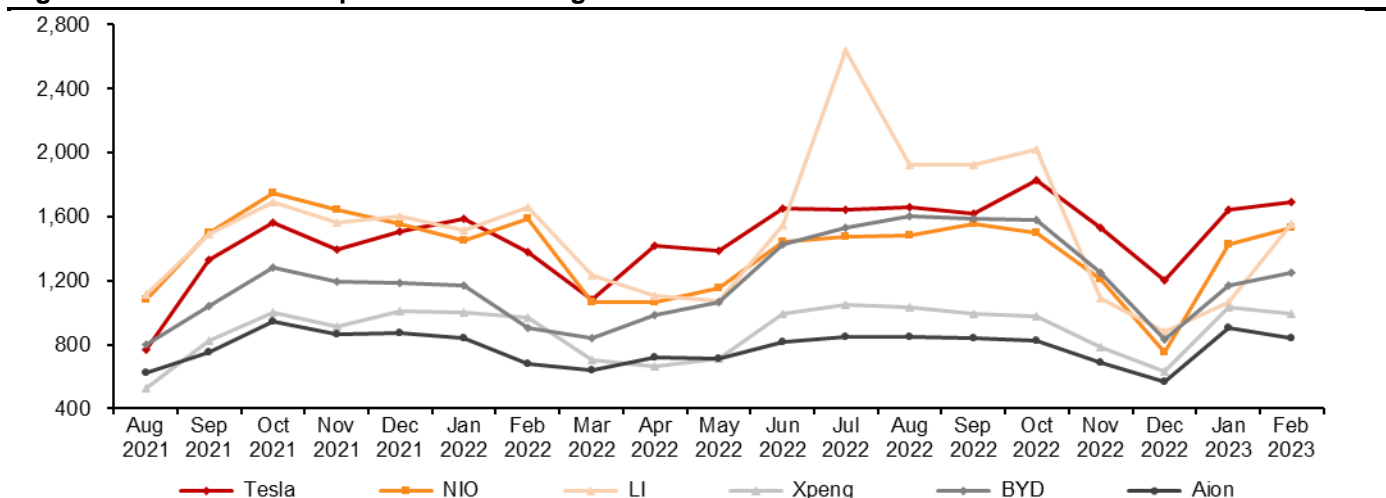
### Customer flow: Rose MoM except for Xpeng and Aion

Customer flow per store for Li Auto jumped 46% MoM in Feb 2023, aided by the L7 launch. Such number rose 3-7% MoM for Tesla, NIO and BYD, but fell 4% and 7% MoM for Xpeng and Aion, respectively, in Feb 2023.



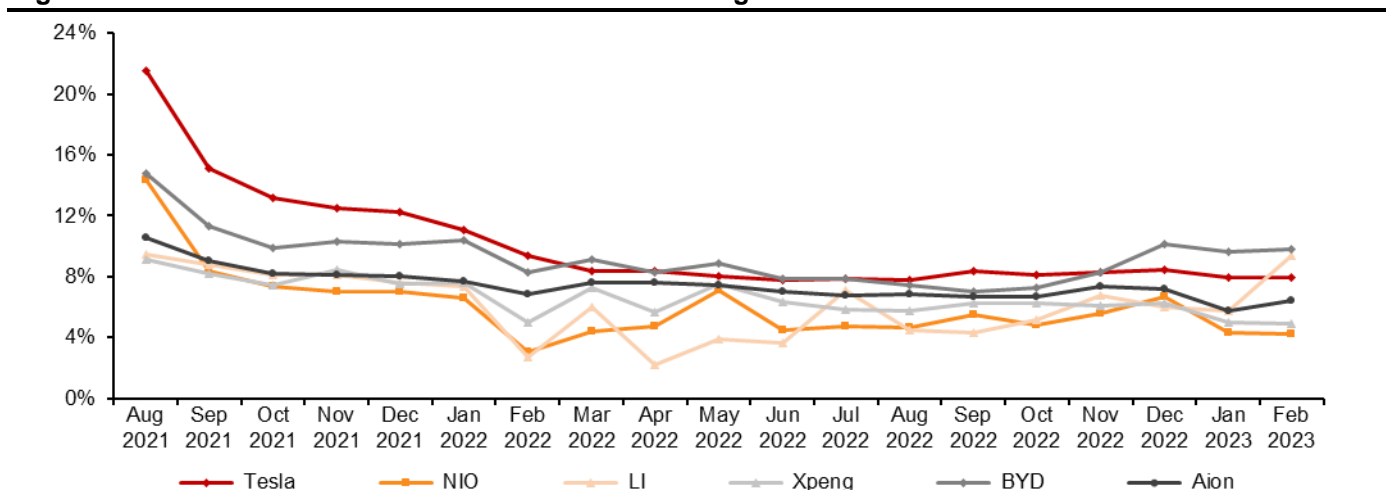
The new *L7* also helped Li Auto's conversion ratio from store visit to order generation significantly, from 6% in Jan 2023 to 9% in Feb 2023. Such ratio remained flat MoM for the other five brands. BYD still had the highest ratio (10%) among the six brands in Feb 2023.

**Figure 13: Customer flow per store on average for each brand**



Source: Thinkercar, CMBIGM

**Figure 14: Conversion ratio from store visit to new order generation for each brand**

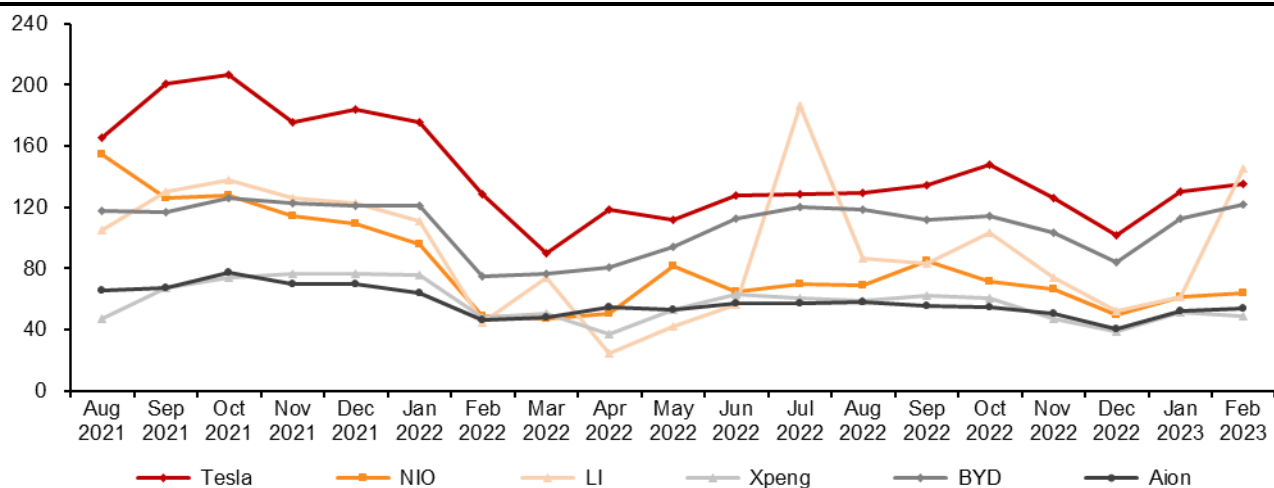


Source: Thinkercar, CMBIGM

## New orders rose for most NEV brands, led by Li Auto

The overall new orders for the six brands rose MoM in Feb 2023, consistent with our prior argument. Li Auto's new orders per store surged 136% MoM last month, which could probably partially explain a successful new model is much more important than price cuts. Tesla's new orders per store only rose 29% MoM in Jan 2023 when it cut retail prices. In fact, Li Auto's new orders per store surpassed Tesla to become the highest among the six brands last month.

New orders per store for Tesla, NIO, BYD and Aion rose 3-9% MoM in Feb 2023, but dropped 6% MoM for Xpeng. New orders for Xpeng in Mar 2023 could be a leading indicator for how successful the new *P7i* would be.

**Figure 15: New orders per store on average for each brand**

Source: Thinkercar, CMBIGM

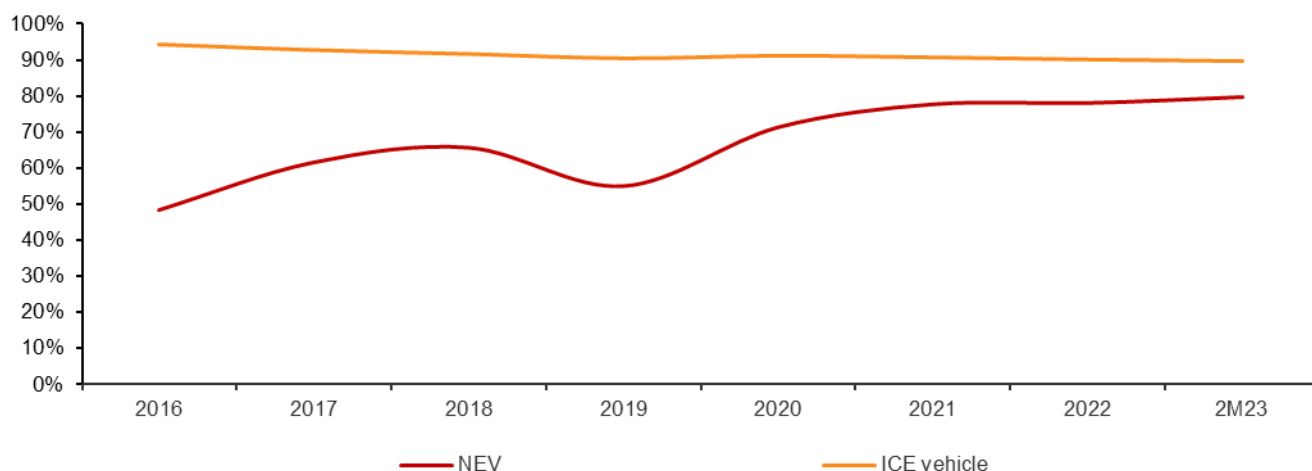
## NEV Segment

### When will NEV makers start destocking amid 2.5-month inventories?

In Feb 2023, retail sales volume of passenger NEVs rose 60% YoY and 35% MoM to about 400,000 units, slightly higher than our prior forecast of 390,000 units. NEV's market share rose to 30.9% as of Feb 2023 from 22.7% in Jan 2023, amid price cuts of some NEV brands and post Chinese New Year recovery. The trailing 12-month NEV market share rose for 32 months in a row to 27.4% as of Feb 2023.

Individual customers accounted for about 77% of total NEV retail sales in Feb 2023, down from a 59-month record high of 83% in Jan 2023. We expect such ratio to be stable this year as NEV subsidies were phased out at the end of 2022.

**Figure 16: Proportion of NEVs sold to individual customers vs that of ICE vehicles in China**



Source: CATARC, CMBIGM

Wholesale volume of passenger NEVs rose 56% YoY and 27% MoM to about 500,000 units in Feb 2023, with a market share of 30.2%. We estimate that about 31,000 units of inventory NEVs were added into dealers last month. That makes us more worried about the market volatility, as about 670,000 units of NEV inventories have been added into dealers in the past 12 months. We estimate the current industrywide NEV inventory level to be about 2.5 months based on our NEV sales forecasts for the next few months. In fact, the figure could be even higher for individual NEV makers because about 18% of total NEVs sold in 2022 were through direct-sales model which is supposed to have minimal inventories.

NEV exports rose 71% YoY and 5% MoM to about 74,000 units in Feb 2023. Tesla accounted for 55% of China's total NEV exports, followed by BYD and MG. BYD's NEV export increased 44% MoM to about 15,000 units in Feb 2023. Should the momentum continue, BYD's export this year could exceed our prior expectation.

### NEV by city-tier: NEV market share rose the most in tier-3 cities

NEV market share in all city tiers, on a trailing 12-month basis, rose MoM in Feb 2023. The market share in tier-2 and -3 cities increased faster than tier-1 and tier-4 and below cities. Every 10 PVs sold in tier-1 cities in China, four of them are now NEVs.

The Tesla *Model Y* surpassed the BYD *Song Plus* PHEV to become the best-selling NEV model again in tier-1 and -2 cities in the first two months of 2023. The *Wuling Hongguang Mini* still dominates lower-tier cities, with declining market share (13% in tier-3 and below

cities in the first two months of 2023 vs. 15% in 2022). Market share for mini-size BEVs has been falling as we expected. Mini BEVs accounted for 22% of total BEV retail sales volume nationwide in the first two months of 2023, down from 26% in 2022.

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

Market Share	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023
Tier 1	34.4%	35.2%	35.8%	37.1%	38.4%	39.6%	39.9%
Tier 2	23.6%	24.5%	25.3%	26.3%	27.1%	28.3%	28.9%
Tier 3	19.6%	20.4%	21.1%	21.9%	22.8%	23.8%	24.4%
Tier 4 and below	15.6%	16.3%	17.1%	17.8%	18.3%	19.4%	19.9%
<b>Nationwide</b>	<b>22.2%</b>	<b>23.1%</b>	<b>23.9%</b>	<b>24.9%</b>	<b>25.7%</b>	<b>26.9%</b>	<b>27.4%</b>

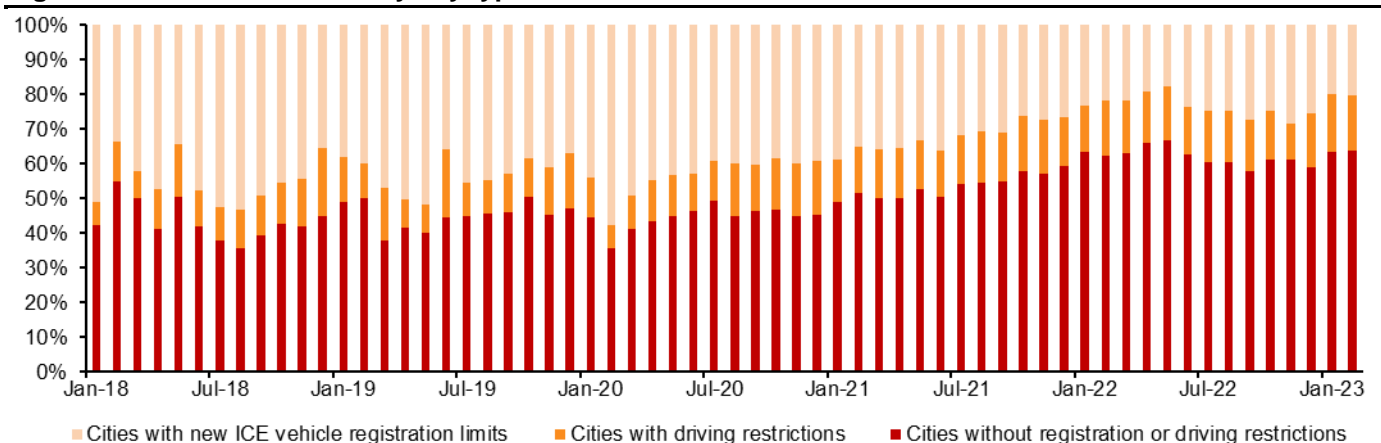
Source: CATARC, CMBIGM

### NEV by city type: Cities without ICE restrictions gain market share

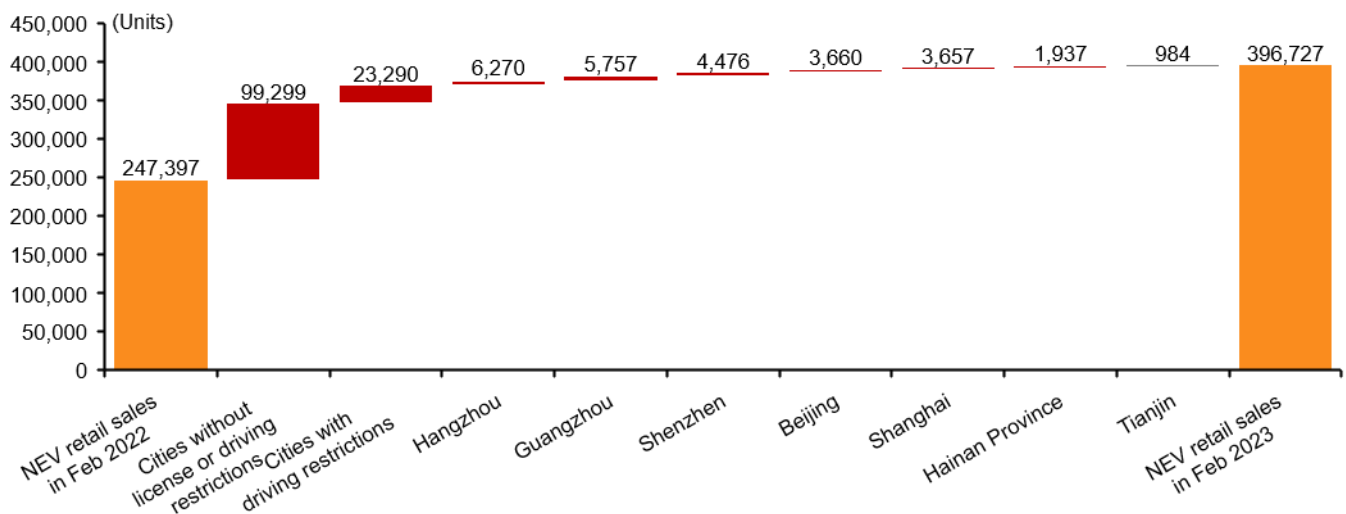
We divided cities in China into three types based on whether there are restrictions for ICE vehicle registration or driving. In Feb 2023, only 20% of NEV retail sales volume came from the seven regions with new ICE vehicle registration limits (Beijing, Shanghai, Shenzhen, Guangzhou, Tianjin, Hangzhou and Hainan province), largely stable MoM, down from 24% in 2022, mainly due to Shanghai's cancellation of green license for PHEVs from 2023. Shanghai accounted for 4.5% of nationwide NEV retail sales in Feb 2023, down from 6.4% in 2022. Despite that, China's PHEV retail sales volume YoY growth still outpaced BEV in Feb 2023, which underscored our previous argument that Shanghai's green license cancellation for PHEVs should have limited dent on PHEVs.

About 16% of NEV retail sales volume was from cities with driving restrictions (including 24 cities, like Baoding, Chongqing, Wuhan, Xi'an, etc.) in Feb 2023, up from 14% in 2022. The remaining 64% of NEV retail sales volume was contributed by cities without license or driving restrictions in Feb 2023, rising from 62% in 2022.

**Figure 18: NEV market share by city type**

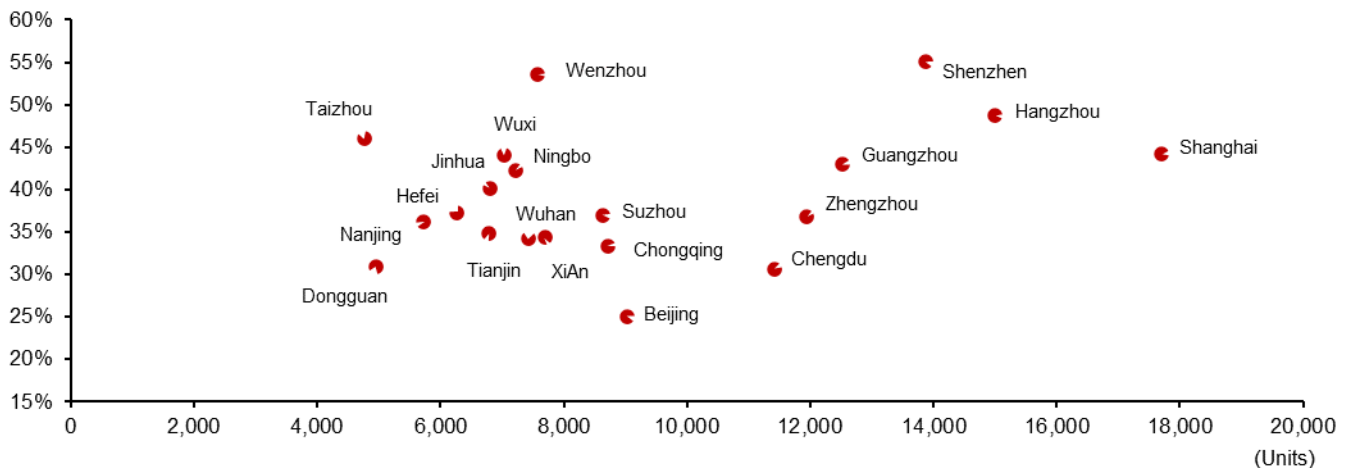


Source: CATARC, CMBIGM

**Figure 19: NEV retail sales volume YoY growth contribution by city type in Feb 2023**

Source: CATARC, CMBIGM

Tianjin is the only one of the seven regions with new ICE vehicle registration limits that posted NEV sales volume YoY decline in Feb 2023. Shanghai retained the NEV retail sales crown among all cities in China in Feb 2023, despite only 1,076 units of PHEVs were sold during the period. Shenzhen still had the largest NEV market share (55%) among all the cities in China in Feb 2023, but was surpassed by Hangzhou and fell to the third position in terms of total NEV retail sales volume.

**Figure 20: NEV retail sales volume in top 20 cities with corresponding NEV market share in Feb 2023**

Source: CATARC, CMBIGM

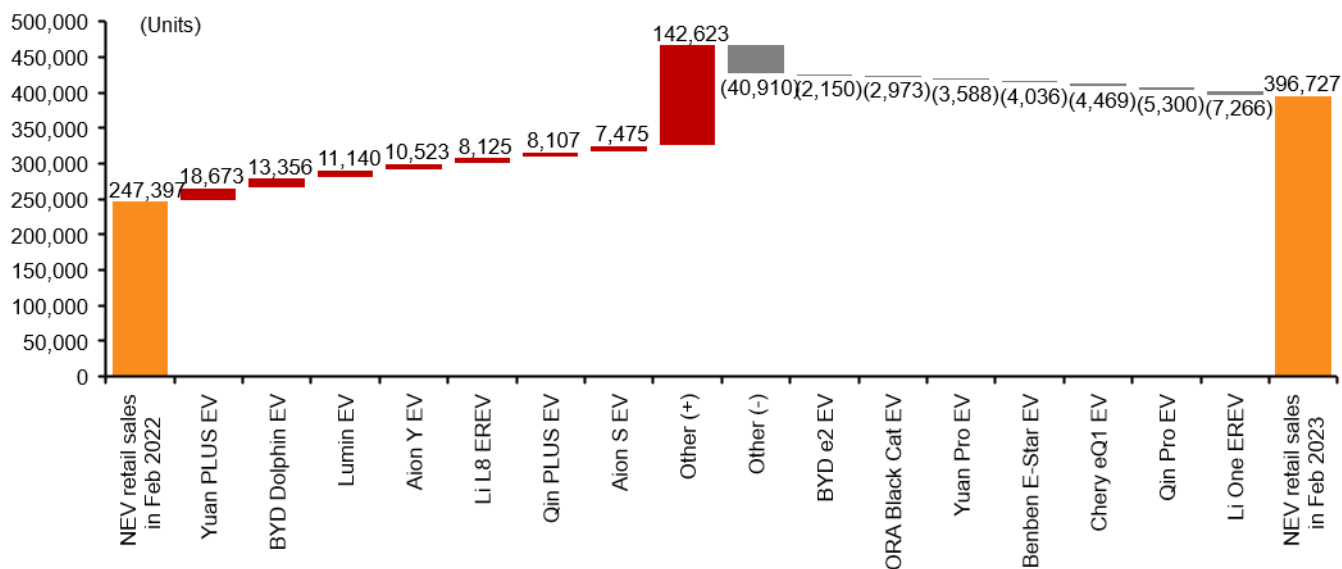
### NEV by model: *Wuling Hongguang Mini* recovered from large decline

Retail sales volume of *Wuling Hongguang Mini EV* rose 68% MoM to about 30,000 units in Feb 2023, the best-selling BEV model nationwide last month. Wuling announced a price discount of RMB 3,000 for its *Hongguang Mini EV* on 31 Jan 2023.

The retail sales volume of the *Chery eQ1*, a mini-size BEV, continued to drop about 4,500 units YoY in Feb 2023. Another mini-size BEV, the Changan *Benben E-Star*, showed retail sales volume decline of about 4,000 units YoY in Feb 2023. Their market share might be partly gained by Changan *Lumin EV*, which posted retail unit sales YoY growth of 11,000 units in Feb 2023.

It appears to us that the low-end BEV market also shows consumption upgrade, as small-size and compact BEVs are gaining market share from mini-size BEVs. BYD *Yuan* BEVs (including the *Yuan Plus* and *Yuan Pro*) combined posted YoY unit growth of about 15,000 units in Feb 2023. *BYD Dolphin EV* also posted YoY growth of about 13,000 units in Feb 2023.

**Figure 21: NEV retail sales volume growth contribution by model in Feb 2023**



Source: CATARC, CMBIGM

## BEV brands: BMW retained the No.7 place YTD

In Feb 2023, total BEV retail sales volume rose 48% YoY and 52% MoM to about 280,000 units. BEV's market share in the NEV segment dropped to 66.7% in the first two months of 2023 from 75.3% in 2022.

BYD and Tesla's market share increased to 27% and 13% in the BEV segment in the first two months of 2023, from 20% and 11% in 2022, respectively. GAC Aion regained the 4th place from NIO, which slipped to the 6<sup>th</sup> place in Feb 2023.

BMW retained the 7th place in terms of the BEV retail sales volume in the first two months of 2023, after it entered the top 10 list for the first time in Jan 2023. About 53% of BMW's NEV retail sales volume in China was contributed by the *i3* in the first two months of 2023. The competition for the 6th-10th positions in China's BEV segment has been intensified. Tesla, Wuling, Neta, Chery and Xpeng underperformed the overall BEV segment in Feb 2023 in terms of YoY sales volume growth.

**Figure 22: Top 10 BEV brands' retail sales volume in China**

Units	Feb 2023	YoY	YTD	YTD YoY	YTD Market Share in BEV Segment
<b>Total BEV</b>	<b>278,232</b>	<b>48.4%</b>	<b>460,941</b>	<b>7.6%</b>	<b>100.0%</b>
BYD	71,614	141.0%	123,691	78.0%	26.8%
Tesla	34,064	40.8%	61,271	39.9%	13.3%
Wuling	31,327	7.8%	50,219	-16.6%	10.9%
GAC Aion	28,795	291.7%	36,868	101.1%	8.0%
Changan	13,147	104.3%	22,546	57.2%	4.9%
NIO	11,904	110.2%	21,971	38.7%	4.8%
BMW	5,647	325.2%	12,135	262.5%	2.6%
Neta	7,441	15.1%	11,585	-28.4%	2.5%
Chery	6,972	-46.6%	11,067	-58.8%	2.4%
Xpeng	5,872	-4.6%	10,900	-43.1%	2.4%

Source: CATARC, CMBIGM

**PHEV brands: Fewer foreign brands in the top 10 list**

In Feb 2023, total PHEV (EREV included) retail sales volume rose 98% YoY and 6% MoM to about 120,000 units. PHEV's market share in the NEV segment increased to 33.3% in the first two months of 2023 from 24.7% in 2022, in line with our previous forecast that PHEV's sales volume growth would outpace BEV's in 2023.

BYD's market share in the PHEV segment dropped slightly to 58% in the first two months of 2023 from 61% in 2022. However, BYD and Denza's market share combined rose to 63% in the first two months of 2023, as BYD-controlled Denza brand climbed to the 3rd place with only one model (the *D9*) on sale.

Lixiang's market share in the PHEV segment rose to 14.1% in the first two months of 2023 from 10.4% in 2022. Li Auto started deliveries of its new mid-to large-size 5-seat SUV, the *L7*, from Mar 2023, which could further aid the company's sales volume and market share in 2023.

VW climbed to the 4th position in the PHEV segment in the first two months of 2023, from the 7th place in Jan 2023, driven by the *Magotan GTE* (about 3,200 units in Feb 2023). BMW dropped to the 13th place in the PHEV segment YTD. Only two foreign brands (Mercedes-Benz and VW) are still in the top 10 list, vs. four last year (Nissan was out of the top 10 in Jan 2023).

Chinese brands' combined market share in the PHEV segment rose to 89.3% in the first two months of 2023, from 87.1% in 2022. We expect such trend to continue based on the model pipeline.



**Figure 23: Top 10 PHEV (EREV included) brands' retail sales volume in China**

Units	Feb 2023	YoY	YTD	YTD YoY	YTD Market Share in PHEV Segment
<b>Total PHEV</b>	<b>118,495</b>	<b>98.0%</b>	<b>229,836</b>	<b>70.0%</b>	<b>100.0%</b>
BYD	67,898	84.9%	133,742	81.3%	58.2%
Lixiang	17,003	103.1%	32,473	56.2%	14.1%
Denza	6,307	3566.9%	11,743	1942.3%	5.1%
VW	4,986	148.8%	7,204	56.7%	3.1%
Deepal	2,316	N/A	5,658	N/A	2.5%
Mercedes-Benz	2,261	95.3%	4,970	7.2%	2.2%
Aito	2,274	165.7%	4,893	462.4%	2.1%
Changan	2,311	97.9%	3,879	76.7%	1.7%
Geely	1,505	437.5%	2,475	248.1%	1.1%
Lynk & Co	976	-22.8%	2,089	-36.7%	0.9%

Source: CATARC, CMBIGM

## Other Industry Indicators to Watch

### PV by city tier: Higher-tier cities outperformed post Spring Festival

Total PV retail sales volume rose 11% YoY and dropped 0.6% MoM to 1.29mn units in Feb 2023. Tier-1 and -2 cities outperformed tier-3 and below cities in terms of YoY growth in Feb 2023 amid post Chinese New Year effect. Although the city-level dent by the COVID recurrence last year could be unpredictable, tier-1 and -2 cities were more resilient. The picture could be mixed this year, in our view.

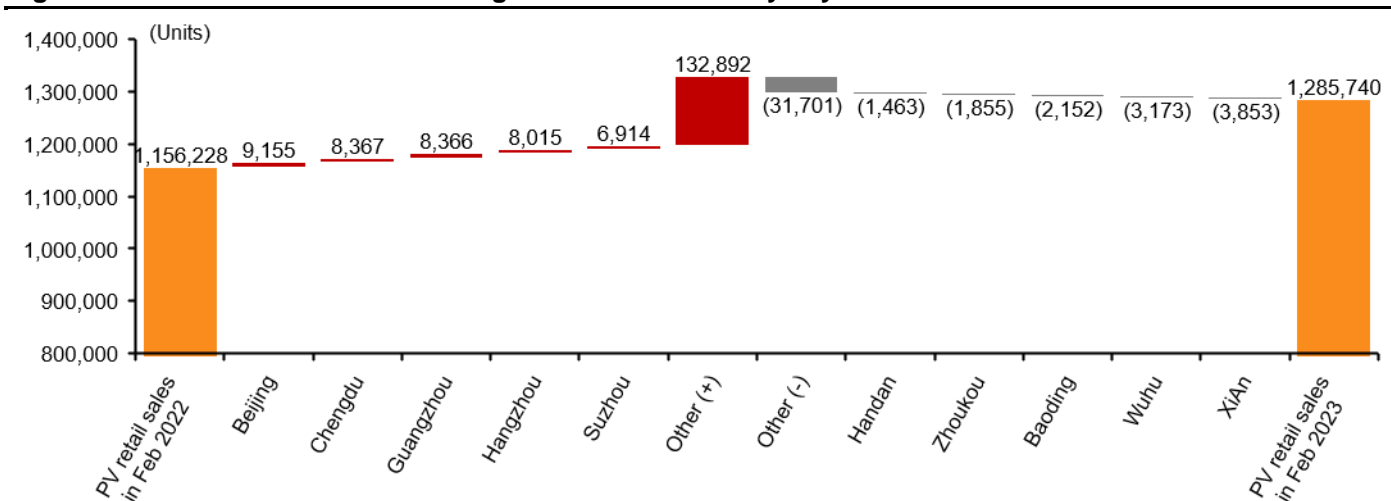
**Figure 24: China auto retail sales growth by city tier**

Retail Sales YoY Growth	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	YTD
Tier 1	24.6%	25.7%	16.8%	14.0%	13.2%	-48.6%	28.2%	-23.6%
Tier 2	22.4%	11.1%	5.1%	-1.4%	13.2%	-43.2%	17.4%	-22.0%
Tier 3	16.5%	4.1%	-8.4%	-23.8%	6.7%	-39.4%	-0.2%	-25.9%
Tier 4 and below	4.6%	-2.9%	-16.1%	-19.4%	11.6%	-42.8%	2.9%	-28.4%
<b>Nationwide</b>	<b>17.6%</b>	<b>8.6%</b>	<b>-1.2%</b>	<b>-7.9%</b>	<b>11.5%</b>	<b>-42.8%</b>	<b>11.2%</b>	<b>-24.5%</b>

Source: CATARC, CMBIGM

The Chinese New Year effect dominated the city-level retail sales volume YoY growth in Feb 2023, in line with our expectation in the report published on 15 Feb 2023. We see no indication for future sales volume growth in these cities based on the Feb data.

**Figure 25: PV retail sales volume YoY growth contribution by city in Feb 2023**

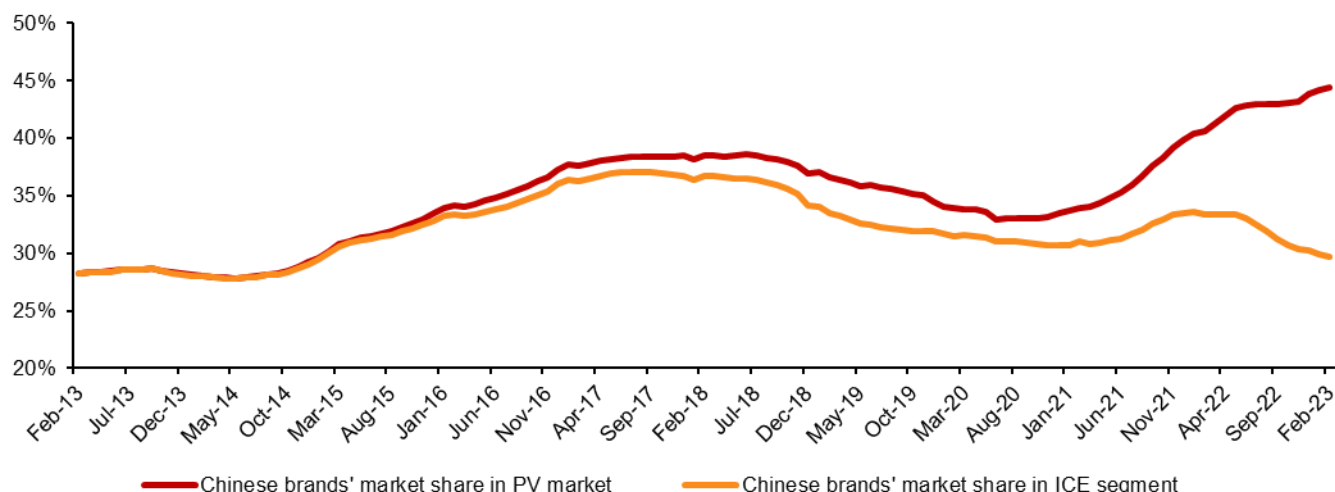


Source: CATARC, CMBIGM

### Chinese-brand trailing 12-month market share reached 44.4%

Retail sales volume for Chinese brands rose 21% YoY in Feb 2023, outpacing the overall industry by 10 ppts. Chinese-brand NEV retail sales volume rose 64% YoY in Feb 2023, outperformed the overall NEV segment by 3 ppts. Excluding NEVs, retail sales volume of Chinese-brand ICE vehicles fell 8% YoY in Feb 2023, weaker than the overall ICE segment by 6 ppts.

The trailing 12-month market share for Chinese brands rose to 44.4% as of Feb 2023. We project Chinese brands to gain market share for a third consecutive year in 2023, aided by NEVs.

**Figure 26: Chinese brands' market share (trailing 12-month basis)**

Source: CATARC, CMBIGM

### Traditional luxury outperformed for six months in a row on low base

The total retail sales volume of traditional luxury brands rose 27% YoY to 0.21mn units in Feb 2023, outperforming the overall industry by 16 pts, due to low base. We have been expecting a slight underperformance for luxury brands compared with the overall industry in 2023. Luxury market share, on a trailing 12-month basis, increased to 15.0% as of Feb 2023.

**Figure 27: China traditional luxury auto market share by city tier (trailing 12-month basis)**

Market Share	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023
Tier 1	21.2%	21.2%	21.3%	21.1%	20.9%	20.7%	20.8%
Tier 2	18.1%	18.2%	18.3%	18.4%	18.4%	18.3%	18.4%
Tier 3	10.2%	10.4%	10.6%	10.7%	10.8%	10.8%	11.0%
Tier 4 and below	6.8%	6.9%	7.0%	7.1%	7.2%	7.3%	7.4%
<b>Nationwide</b>	<b>14.4%</b>	<b>14.5%</b>	<b>14.7%</b>	<b>14.8%</b>	<b>14.9%</b>	<b>14.8%</b>	<b>15.0%</b>

Source: CATARC, CMBIGM

Mercedes-Benz grabbed the No.1 place from BMW among the traditional luxury brands in China in Feb 2023, with about 3,500 units more vehicles sold. The German "Big Three" (Mercedes-Benz, BMW, Audi) accounted for market share of 74.5% YTD, up from 72% in 2022. The competition between BMW and Mercedes-Benz could be interesting again this year, as BMW has set a more aggressive sales target (0.9mn units in 2023) vs. Mercedes-Benz's 0.85mn units. We are more pessimistic than both brands' sales targets.

Volvo retained the 4th place in Feb 2023, which may not be sustainable, in our view. The competition between Lexus, Cadillac and Volvo for the 4th place this year could also be intensifying. Porsche targets a slight YoY sales volume decline to 90,000 units in 2023, although we expected it to be one of few traditional luxury brands to post sales volume growth in 2023. Smart retained the 10th place, with its *Smart #1 EV* ramping up.

**Figure 28: Top 10 traditional luxury auto brands' retail sales volume in China**

Units	Feb 2023	YoY	YTD	YTD YoY	YTD Market Share in Luxury Segment
<b>Total Luxury</b>	<b>209,348</b>	<b>27.5%</b>	<b>421,901</b>	<b>-19.7%</b>	<b>100.0%</b>
Mercedes-Benz	58,802	43.3%	119,669	-11.4%	28.4%
BMW	55,323	41.6%	117,331	-20.4%	27.8%
Audi	40,221	1.8%	77,058	-31.3%	18.3%
Volvo	10,852	37.9%	20,598	-11.3%	4.9%
Lexus	10,154	-12.5%	19,185	-34.8%	4.5%
Cadillac	8,831	-8.0%	17,211	-43.8%	4.1%
Porsche	6,498	122.2%	13,759	25.3%	3.3%
Land Rover	6,221	55.1%	12,507	6.4%	3.0%
Lincoln	3,943	-6.4%	9,135	-30.0%	2.2%
Smart	3,530	N/A	6,704	N/A	1.6%

Source: CATARC, CMBIGM

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