

Sector Note [Autos | Overweight *(no change)*]

China new energy vehicle market: Highly competitive but great profitability

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- China NEV sales increased by a robust 12% qoq and 23% yoy to 2.31m units in 3Q23. We anticipate China NEV sales to increase 13% qoq and 19% yoy to 2.6m units in 4Q23F.
- Market growth was led by BYD EV deliveries rising 53% yoy and Li Auto's jumping 296% yoy in 3Q23, thanks to strong consumer preference for PHEV/EREV models.
- BYD began the 3Q23 reporting season with a net profit increase of 61-97% yoy to Rmb8.6bn-10.5bn (positive profit alert), thanks to continual vehicle margin expansion from operational leveraging.
- We think EV makers are likely to post strong 3QF/4QF results due to strong EV deliveries and low lithium prices despite keen competition, aided by improved operational efficiency and expanded sales channels.
- We forecast BYD/NIO/Xpeng/Li Auto's FY23F EV shipments to increase 54%/43%/5%/159% yoy, outpacing China's NEV market's 30% growth, as they continue to gain market share due to expanded EV portfolios.
- We maintain our Overweight call on China's smart EV sector due to stable NEV sales growth and ongoing electrification and intelligence trend. Our sector top picks are BYD and Li Auto.

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China's new energy vehicle market remained strong in 3Q23, and we expect this to continue in 4Q23F

- **China's NEV remained strong in 3Q23.** New energy vehicle (NEV) sales in China increased steadily to 746k in Jul 23, 756k in Aug 23 and 808k units in Sep 23, bringing NEV sales to 2.31m units, up 12% compared to 2Q23 and 23% compared to 3Q22 (source: China Association Automobile Manufacturers, CAAM), thanks to: 1) improved consumer demand on the effect from the National Day holiday, 2) manufacturers' promotions, and 3) strong new model launches. While China delivered 7.83m units passenger cars in 3Q23 (+9% qoq, +6% yoy), NEV penetration rate in China reached 30% in 3Q23 (up 100bp from 29% in 2Q23), indicating a sustained internal combustion engine (ICE) vehicle-to-NEV migration in China's auto market due to improved mobility experience from electric vehicles (EVs), long-term policy support, and price competition for new EV models.
- **BYD and Li Auto were the market leaders in 3Q23.** BYD maintained its market share of 33.5% in China's NEV market in 3Q23, with 822k units delivered (+17% qoq, +53% yoy), due to strong sales performance of the Song series, Qin series and Dolphin, as a result of consumer preference for PHEVs and economy class price segment (Rmb100k-150k). Li Auto continued its streak from 1Q/2Q23 of record deliveries of 105k units in 3Q23 (+21% qoq, +296% yoy), attributed to its extended range EV (EREV) portfolio, which continued to gain market share from European brands in the premium (Rmb350k-450k) and luxury (Rmb450k-550k) price segments. NIO's EV deliveries jumped 136% qoq and 75% yoy in 3Q23, and Xpeng's EV deliveries surged 72% qoq and 35% yoy in 3Q23 due to new models launches, following poor EV sales in 1H23 due to model transition and competition.
- **BYD began 3Q reporting with strong earnings growth.** BYD kicked off the 3Q23 reporting season with a net profit increase of 61-97% yoy to Rmb8.6bn-10.5bn (positive profit alert announcement on 17 Oct), primarily due to vehicle margin expansion (we estimate that its vehicle margin reached 23% in 3Q23F and c.19% in 2Q23), amid higher EV deliveries and lower lithium battery costs despite increased competition. We expect NIO and Xpeng to report strong earnings recovery in 3Q-4Q23F as a result of improved vehicle margins due to strong growth in EV deliveries and a better production cost structure. We estimate NIO's vehicle gross profit margin to improve from 6.2% in 2Q23 to 11% in 3Q23F and 15% in 4Q23F as a result of improved production efficiency, whereas Xpeng's vehicle margin should return to positive c.9% in 2H23F (-8.6% in 2Q23F) as a result of lower production costs in its new EV platform. We also expect Li Auto to report robust results in 3Q23F/4Q23F due to strong EV deliveries and operational leveraging.
- **2023F EV shipment forecasts for BYD/NIO/Xpeng/Li Auto outpacing China's NEV market's 30%.** We forecast BYD/NIO/Xpeng/Li Auto's FY23F EV deliveries to increase 54%/43%/5%/159% yoy to 2.9m/175k/127k/345k units, due to expanded EV portfolios, increase in sales channels, and growing overseas market. While we project China NEV volume sales to increase 30% yoy to 8.5m units (increased 35% yoy to 5.89m units in 9M23), anticipating EV sales to reach 2.6m units (c.870k units/month), with a 13% qoq and 19% yoy growth, in 4Q23F, due to strong seasonal factor, increased price competition (more promotions from EV makers), and improved consumer sentiment in China.
- **Maintain Overweight on China's smart EV sector.** We stay Overweight on China's smart EV sector due to stable NEV sales growth, on the back of stable NEV penetration growth and an ongoing electrification and intelligence trend that is driving consumers to switch to energy-saving, cost-saving, and safe electric vehicles. We keep BYD and Li Auto as our sector top picks due to their outperformance in EV deliveries and vehicle margins in NEV sales. Sustainable strong NEV sales in China, stable EV battery costs that protect EV makers' profit margins, and fast-growing overseas shipments are all sector re-rating catalysts. Downside risks: volatile lithium battery materials prices, irrational price competition that reduces EV makers' profit margins while boosting EV sales, and Europe imposing import tariffs for China-made EVs.

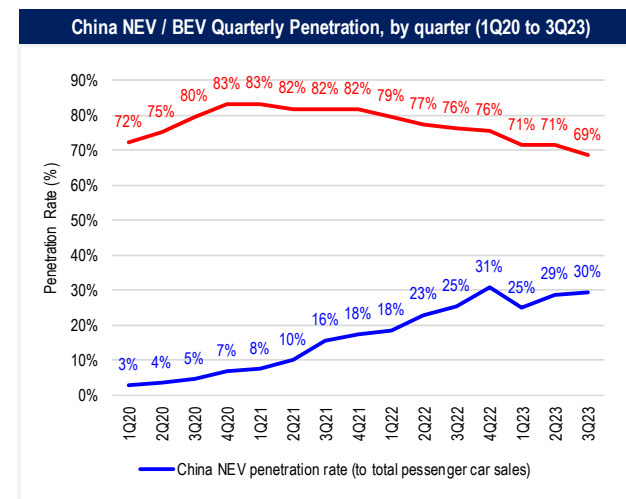
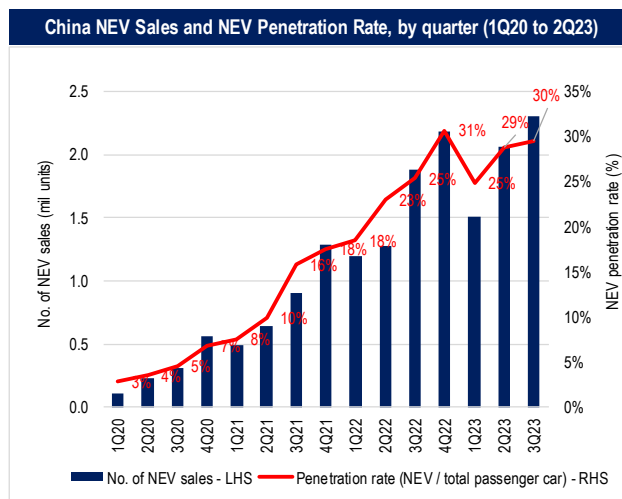
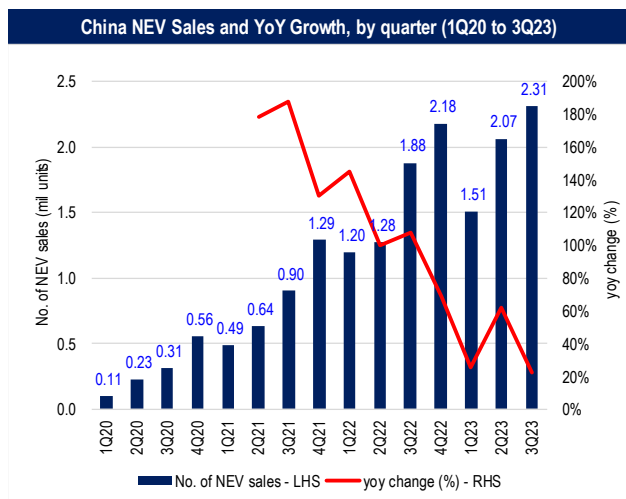
Peer comparison

Company	Bloomberg		Price	Target price	Upside (%)	Market Cap (US\$m)	P/E (x)		3-year EPS CAGR %	P/BV (x)		ROE (%)		EV/EBITDA (x)		Yield (%)	
	Code	Recom.	(local curr)	(local curr)			CY2023F	CY2024F		CY2023F	CY2024F	CY2023F	CY2024F	CY2023F	CY2024F	CY2023F	CY2024F
China Start-up EV makers																	
Li Auto	2015 HK	Add	129.80	268.0	106%	35,163	29.8	23.1	576%	4.7	3.9	17.5%	18.2%	25.5	15.0	0.0%	0.0%
NIO Inc	9866 HK	Add	66.15	93.0	41%	14,111	N/A	N/A	N/A	8.2	21.8	-87.1%	-111.1%	N/A	N/A	0.0%	0.0%
XPeng Inc	9868 HK	Hold	59.60	66.8	12%	13,202	N/A	N/A	N/A	3.0	4.1	-26.0%	-24.6%	N/A	N/A	0.0%	0.0%
Zhejiang Leapmotor	9863 HK	Not Rated	33.40	N/A	n.a.	4,878	N/A	N/A	-47.6%	4.5	7.3	-67.6%	-71.0%	na	na	0.0%	0.0%
Average							29.8	23.1	N/A	5.1	9.3	-40.8%	-47.1%	25.5	15.0	0.0%	0.0%
Electric vehicle manufacturers																	
BYD Co.	1211 HK	Add	240.80	342.0	42%	92,775	29.1	21.4	29.9%	5.1	4.5	18.7%	22.4%	10.2	8.0	0.1%	0.1%
Tesla Inc	TSLA US	Not Rated	254.85	N/A	n.a.	808,892	76.5	55.8	15.9%	15.5	12.0	20.6%	23.0%	48.4	35.3	0.0%	0.0%
Rivian Automotive	RIVN US	Not Rated	19.90	N/A	n.a.	18,868	na	na	-30.1%	2.0	2.0	-42.8%	-40.2%	na	na	0.0%	0.0%
Lucid Group	LCID US	Not Rated	5.00	N/A	n.a.	11,413	na	na	-2.5%	2.2	3.8	-63.7%	-84.9%	na	na	0.0%	0.0%
Average							52.8	38.6	3.3%	6.2	5.6	-16.8%	-19.9%	29.3	21.7	0.0%	0.0%
China Automobile manufacturers																	
Geely Automobile	175 HK	Not Rated	9.31	N/A	n.a.	11,975	18.2	12.6	21.7%	1.1	1.0	6.1%	8.1%	5.3	4.1	1.9%	2.7%
Great Wall Motor	2333 HK	Not Rated	10.58	N/A	n.a.	28,376	16.8	11.9	1.3%	1.2	1.1	7.8%	10.3%	17.4	13.8	2.6%	3.7%
Guangzhou Aub	2238 HK	Not Rated	3.80	N/A	n.a.	11,822	5.5	4.8	-6.1%	0.3	0.3	5.9%	6.4%	14.9	12.1	5.6%	5.6%
Average							13.5	9.7	5.6%	0.9	0.8	6.6%	8.3%	12.5	10.0	3.4%	4.0%
Battery manufacturers																	
CALB	3931 HK	Not Rated	20.00	N/A	n.a.	4,531	33.3	18.6	45.8%	0.7	0.7	2.1%	4.0%	18.6	13.3	0.1%	0.2%
Tianqi Lithium	9696 HK	Not Rated	42.35	N/A	n.a.	12,183	4.6	5.2	-15.4%	1.0	0.8	24.3%	18.9%	2.0	1.8	4.3%	4.3%
CATL	300750 CH	Not Rated	185.44	N/A	n.a.	111,541	17.8	13.9	37.5%	3.9	3.0	24.1%	25.1%	10.8	7.5	0.9%	1.2%
EVE Energy	300014 CH	Not Rated	44.60	N/A	n.a.	12,481	18.0	12.8	39.8%	2.6	2.2	14.8%	17.5%	15.0	10.7	0.8%	1.1%
Goion High-Tech	002074 CH	Not Rated	23.32	N/A	n.a.	5,674	39.6	25.1	93.9%	1.7	1.5	4.4%	6.5%	18.6	12.9	0.1%	0.2%
Shenzhen Desay Battery	000049 CH	Not Rated	32.09	N/A	n.a.	1,314	13.3	10.2	3.2%	2.2	2.0	13.6%	16.9%	11.8	9.1	2.3%	2.2%
LG Energy Solution	373220 KS	Not Rated	464,500	N/A	n.a.	80,262	58.3	35.3	76.7%	5.2	4.5	9.3%	13.7%	23.7	14.9	0.0%	0.0%
SK On	096770 KS	Not Rated	147,000	N/A	n.a.	10,926	21.3	7.8	2.6%	0.7	0.6	3.4%	8.4%	9.6	6.8	2.6%	2.3%
Samsung SDI	006400 KS	Add	524,000	840,000	60%	26,622	18.1	14.9	12.3%	1.9	1.7	11.2%	12.2%	5.7	4.3	0.2%	0.2%
Average							24.9	16.0	32.9%	2.2	1.9	11.9%	13.7%	12.9	9.0	1.2%	1.3%
Electric vehicle parts manufacturers																	
Fuyao Glass	3606 HK	Not Rated	37.25	N/A	n.a.	13,446	16.1	14.3	14.4%	2.8	2.5	18.0%	18.1%	11.2	9.5	4.1%	4.5%
LK Technology	558 HK	Add	7.12	11.88	67%	1,253	13.5	9.6	34.2%	2.2	1.8	17.7%	21.0%	10.3	7.5	2.6%	3.7%
Times Electric	3898 HK	Not Rated	25.50	N/A	n.a.	6,334	11.2	9.9	16.6%	0.9	0.8	8.3%	8.5%	11.1	9.6	2.5%	2.7%
Qingdao TGOOD Electric	300001 CH	Not Rated	17.73	N/A	n.a.	2,561	48.3	34.6	34.6%	2.8	2.6	6.6%	7.6%	16.2	14.6	0.4%	0.6%
Apptronics	688007 CH																
Genelec Technology Bhd	GENE MK	Add	2.46	3.60	46%	399	21.6	17.6	19.5%	4.0	3.4	21.8%	20.9%	16.1	12.8	0.5%	0.9%
Malaysian Pacific Industries	MPI MK	Reduce	26.96	23.65	-12%	1,132	42.4	25.9	N/A	2.7	2.5	6.7%	10.2%	9.7	8.0	1.2%	1.1%
Continental AG	CON GF	Not Rated	64.18	N/A	n.a.	13,564	8.8	7.0	23.5%	0.9	0.8	10.8%	11.9%	3.8	3.4	3.3%	4.3%
Valeo	FR FP	Not Rated	13.11	N/A	n.a.	3,373	10.2	5.7	57.4%	0.8	0.7	8.6%	13.1%	2.9	2.5	3.7%	5.4%
Magna International	MGA US	Not Rated	53.36	N/A	n.a.	15,278	10.2	8.1	22.8%	1.3	1.2	13.5%	15.7%	5.9	5.0	3.4%	3.5%
Average							20.3	14.7	27.9%	2.0	1.8	12.4%	14.1%	9.7	8.1	2.4%	3.0%
Automotive software providers																	
Desay SV	002920 CH	Not Rated	123.96	N/A	n.a.	9,414	45.9	32.2	36.7%	9.0	7.4	20.2%	23.1%	37.3	26.8	0.5%	0.7%
ThunderSoft	300496 CH	Not Rated	74.92	N/A	n.a.	4,707	38.7	29.5	18.5%	3.5	3.2	8.9%	10.7%	30.5	22.3	0.5%	0.7%
Average							42.3	30.9	27.6%	6.2	5.3	14.6%	16.9%	33.9	24.5	0.5%	0.7%

SOURCES: CGS-CIMB RESEARCH ESTIMATES, BLOOMBERG, COMPANY REPORTS (PRICE AS AT 17 OCT 2023)
Note: Estimates for Not Rated companies are based on Bloomberg consensus' estimates

China's NEV sales continued to rise in 3Q23

- NEV sales reached 2.31m units in 3Q23 (+23% yoy).** In 3Q23, China's NEV sales reached 2.31m units (+12% qoq, +23% yoy), according to CAAM. NEV sales in China have continued to increase, from 746k units in Jul 23 to 756k units in Aug and 808k units in Sep. We believe this increase can be attributed to the influence of the Mid-Autumn Festival and the National Day holiday, as well as manufacturers' promotions and strong new models launches. However, it is worth noting that the growth rate of NEV sales slowed down in 3Q23 (23% yoy vs. +62% yoy in 2Q23 and +26% yoy in 1Q23) due to the high sales base during the same period last year.
- BEV captured 69% of NEV market share in 3Q23.** According to CAAM, battery EV (BEV) penetration fell 250bp qoq to 69% in 3Q23 (vs. 71% in 2Q23 and 71% in 1Q23), primarily driven by higher plug-in hybrid EV (PHEV) sales (+29% qoq, +70% yoy), bolstered by BYD and Li Auto. Looking ahead, we expect the advantages of PHEVs to diminish as more battery-charging infrastructure is installed and a greater number of BEV models are launched. We expect this shift to result in an increase in BEV penetration rates in the coming years (2024F to 2025F).
- China passenger car sales up 6% yoy in 3Q23.** OEMs in China delivered 7.83m units of passenger cars in 3Q23, representing a modest increase of 9% qoq and 6% yoy, according to CAAM. The relatively slower growth rate of passenger car sales was mainly due to structural inventory pressures caused by continuous stock replenishment for NEVs as various brands rapidly launched iterations of their products. Additionally, excess inventory of ICE vehicles, due to reduced customer appeal, also contributed to the pressure, in our view. This phenomenon is evident in the high inventory warning index reported by the China Automobile Dealers Association (CADA), which stood at 57.8% in Sep (+260bp yoy, +90bp qoq).
- NEV penetration rate reached 30% in 3Q23.** NEV penetration rate rose 100bp from 29% in 2Q23 to 30% in 3Q23, or 400bp from 3Q22.



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, CAAM

BYD and Tesla's EV deliveries in 3Q23

- BYD's 3Q23 delivery exceeded 800k units, another record high.** BYD's 3Q23 passenger NEV deliveries reached 822k units, representing an increase of 17% qoq and 53% yoy. Among BYD's NEVs, the Song series climbed to the first place, having sold 172k units in 3Q23, followed by the Qin series (135k units) and BYD Dolphin (98k units). The Song/Qin/Dolphin series formed 21%/16%/12% of BYD's total NEV deliveries in 3Q23.

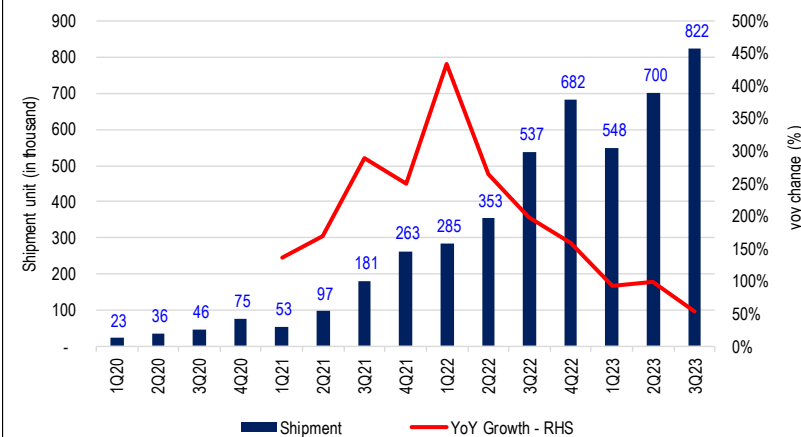
In 3Q23, BYD's subsidiary Yangwang introduced its first luxury car, the Yangwang U8, priced at Rmb1.1m, with deliveries expected to start in Oct 2023. Shortly after the launch of its first model, Yangwang established its inaugural store in Shanghai, serving as the primary outlet for customers to explore and purchase Yangwang's products. BYD aims to establish over 90 directly managed Yangwang stores in 40+ Chinese cities by year-end. We estimate total sales for Yangwang at 20k to 30k units in 4Q23F due to the high price tag.

- Tesla's deliveries were subdued in 3Q23.** Tesla, a global EV maker, delivered 140k units of EVs in China in 3Q23, up 16% yoy but down 11% qoq. This qoq drop was primarily attributed to factory downtimes for upgrades of its revamped Model 3.

In Aug 23, Tesla cut the prices of two pricier versions of Model Y by Rmb14,000 in China and started offering an Rmb8,000 insurance subsidy for the entry-level version of Model 3.

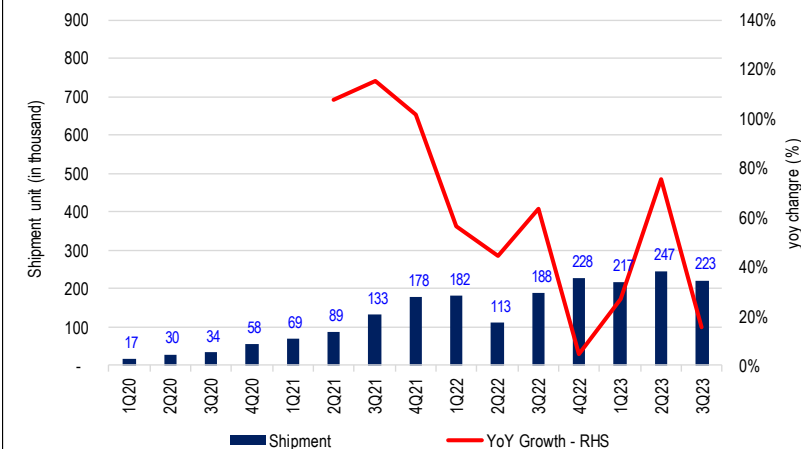
Tesla began mass production and delivered the upgraded Model 3 in China at the end of Sep 23. The new Model 3 has a fully upgraded exterior and interior.

BYD EV deliveries, by quarter (1Q20 to 3Q23)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, CAAM

Tesla EV deliveries, by quarter (1Q20 to 3Q23)

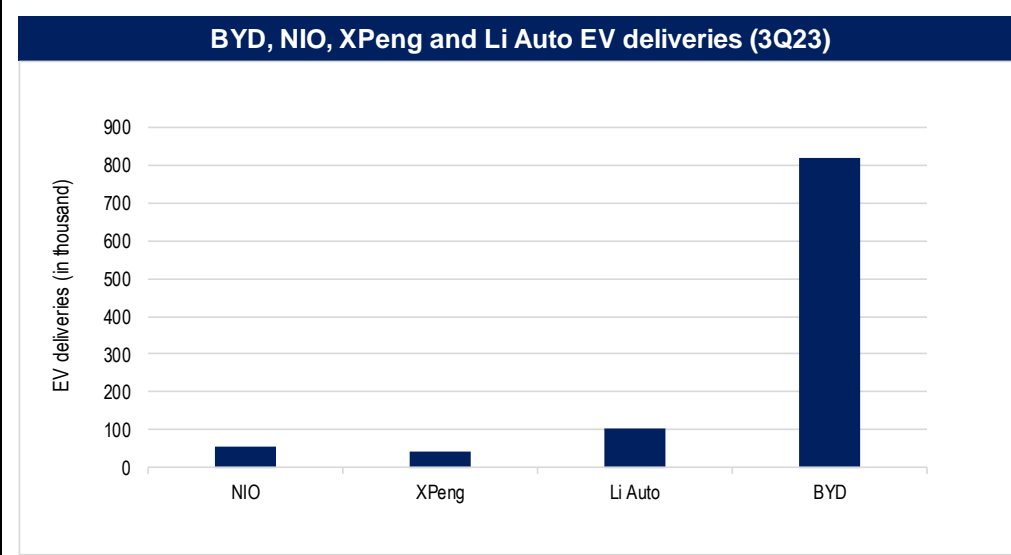
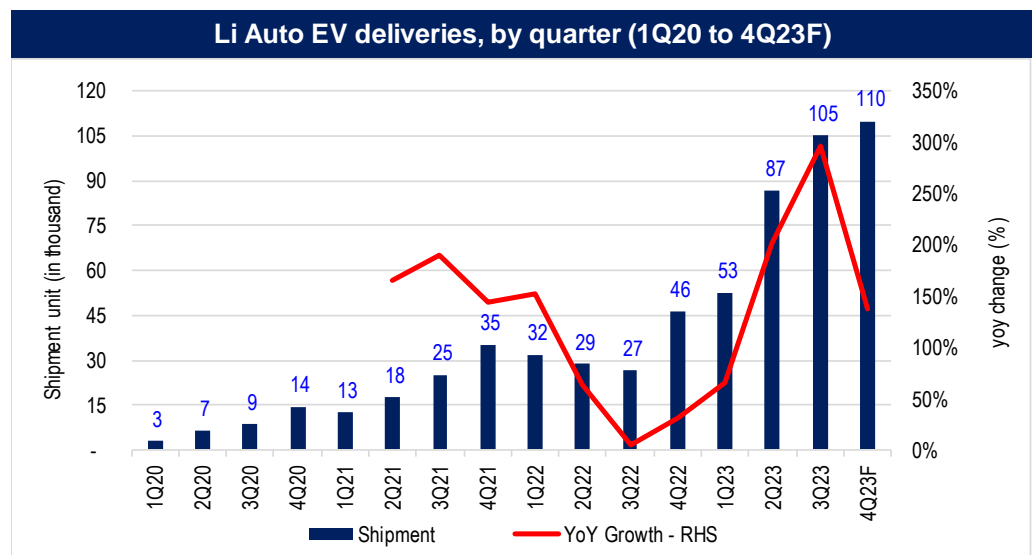
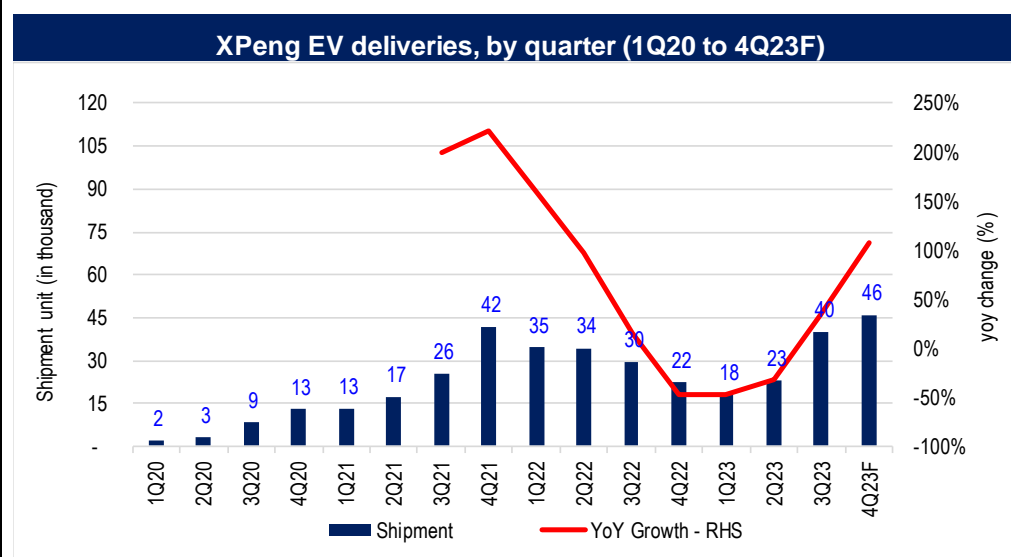
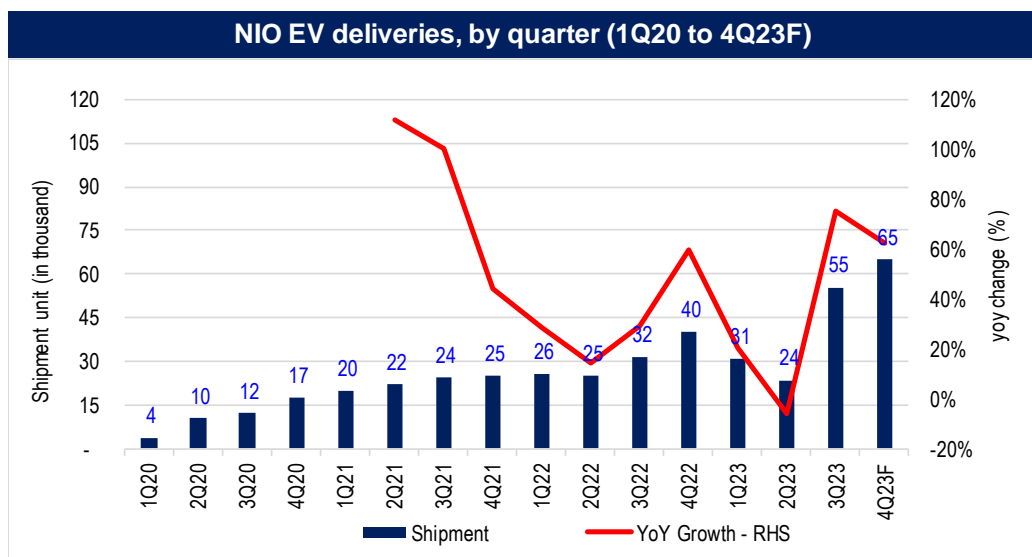


SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, CAAM

NIO, Xpeng and Li Auto's EV deliveries in 3Q23 and forecasts for 4Q23F

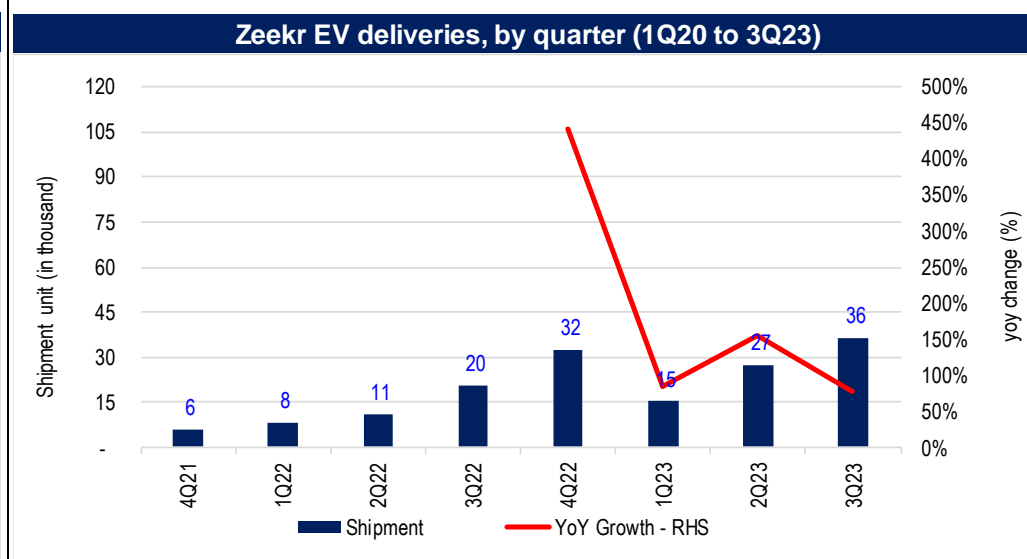
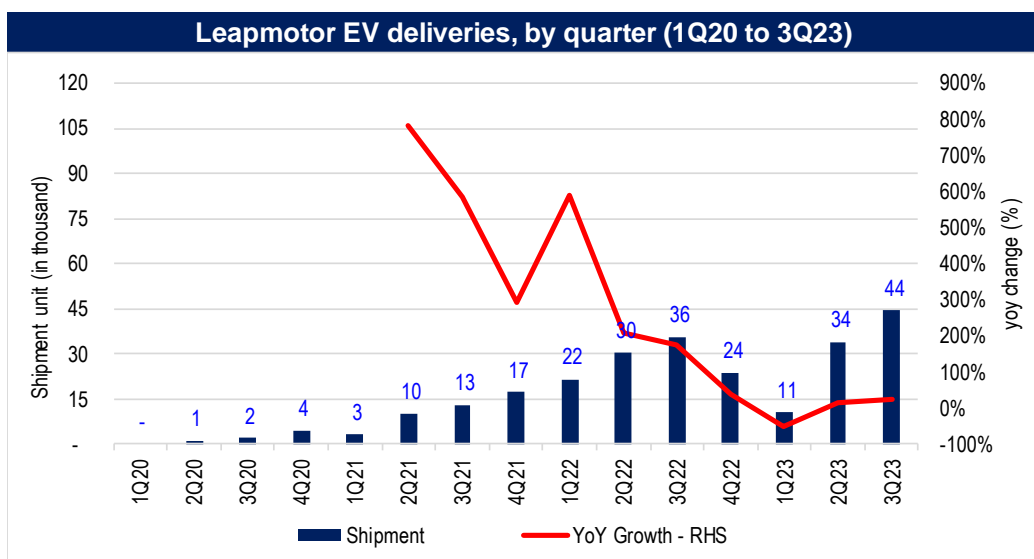
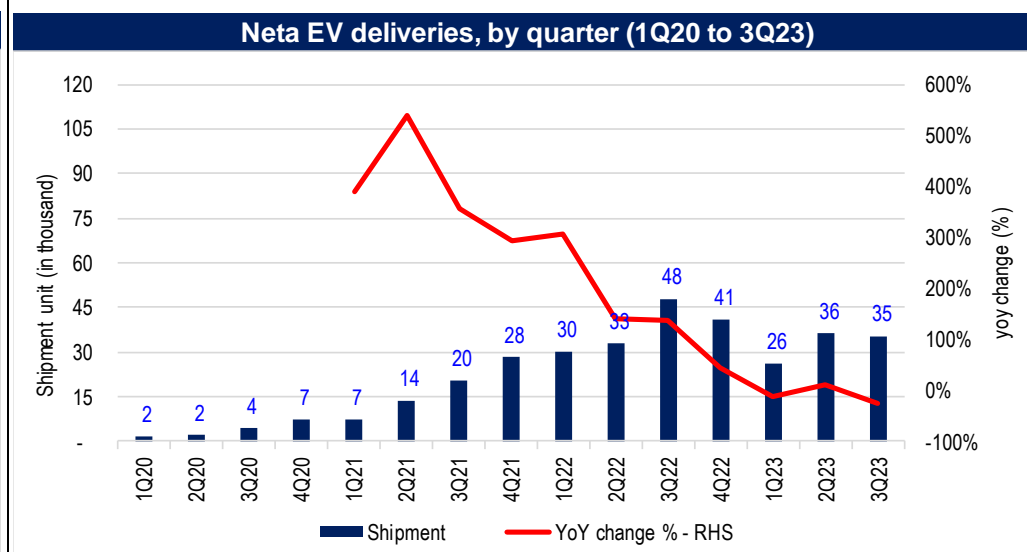
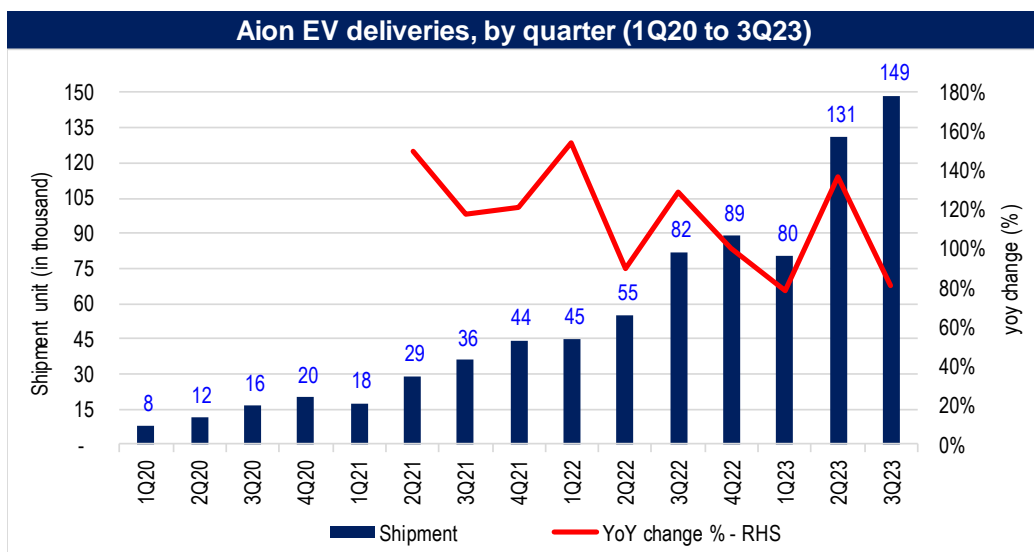
- **NIO achieved its highest quarterly delivery record in 3Q23.** NIO's 3Q23 NEV deliveries were 55k units, representing a significant increase of 136% qoq and 75% yoy. The robust shipments were mainly supported by the popularity of the new ES6, which accounted for c.50% of the total deliveries in 3Q23 and emerged as the best-selling model of NIO in this quarter. Furthermore, the ET5 series, comprising both ET5 and ET5 Touring June, contributed 30% of total deliveries in 3Q23. In addition to the strong EV shipments, NIO made a foray into the smartphone market by launching its first smartphone, which offers users interaction with their vehicles. The device is priced from Rmb6,499 and started shipping on 28 Sep 23. We expect NIO's 4Q23F EV shipments to increase by 17% qoq or 62% yoy (to c.65k units), driven by the newly upgraded mid-sized coupe SUV EC6 and expanded sales channels.
- **Xpeng experienced a significant rebound in shipments, reaching a level close to its all-time high.** Xpeng's 3Q23 NEV deliveries was 40k units, the second-highest quarterly figure for the company. Deliveries in 3Q23 increased 72% qoq and 35% yoy, primarily driven by the successful launch of the Xpeng G6, which accounted for 48% of total deliveries in 3Q23. Following closely behind was the Xpeng P7, which contributed 34% of total deliveries. On 19 Sep, Xpeng officially introduced the new G9, which garnered over 8,000 orders within 72 hours of its launch and exceeded 15,000 orders after being on the market for 15 days. Notably, 80% of customers opted for the Max version of the model. We believe that Xpeng can ship c.46k EVs in 4Q23F (+15% qoq, +107% yoy), despite increased contribution from the new G9, owing to increased competition in the high-end price segment (Rmb250k to Rmb350k).
- **Li Auto continued its streak of record-high delivery numbers.** In 3Q23, Li Auto achieved another quarterly delivery milestone, with 105,000 units delivered (+21% qoq, +296% yoy). Additionally, Li Auto celebrated the significant achievement of reaching the milestone of 500,000 total deliveries. Currently, Li Auto offers three models in the market, all of which have demonstrated balanced growth and surpassed 10,000 units of delivery for the second consecutive month since Aug. Looking back to 4Q22, when Li Auto delivered 46k units, 3Q23 marked the company's fourth consecutive record-breaking quarter in terms of deliveries, outpacing its peers by a significant margin. Following the success of its EREV models, the company said it will officially launch its first BEV model, the Li Mega, in Dec 2023F and commence deliveries in Feb 2024F. We believe that Li Auto will be able to deliver c.110k units (+5% qoq, +137% yoy) in 4Q23F, with L7, L8, and L9 continuing to drive its shipment growth.
- **Intense competition among emerging NEV manufacturers persisted.** In 3Q23, GAC Aion (Unlisted) delivered 149k units (+13% qoq, +81% yoy). According to CAAM, GAC Aion captured a 6% market share, securing the third position after BYD and Tesla. Notably, Neta (Unlisted), Leapmotor (9863 HK, Not Rated), and Geely's Zeekr (Unlisted) achieved deliveries of 35k, 44k and 36k units, respectively, in 3Q23. These figures correspond to market shares of 1.4%, 1.8%, and 1.5%, respectively. EV brands backed by Huawei, i.e. AITO (Unlisted), also saw early success with the launch of the new AITO M7 in Sep 23, with a significantly lower starting price of Rmb249,800 to compete in the EREV market.

Home-grown EV trio's – NIO, Xpeng and Li Auto (NXL) – EV deliveries in 3Q23



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Other China EV makers' EV deliveries, by quarter (1Q20 to 3Q23)

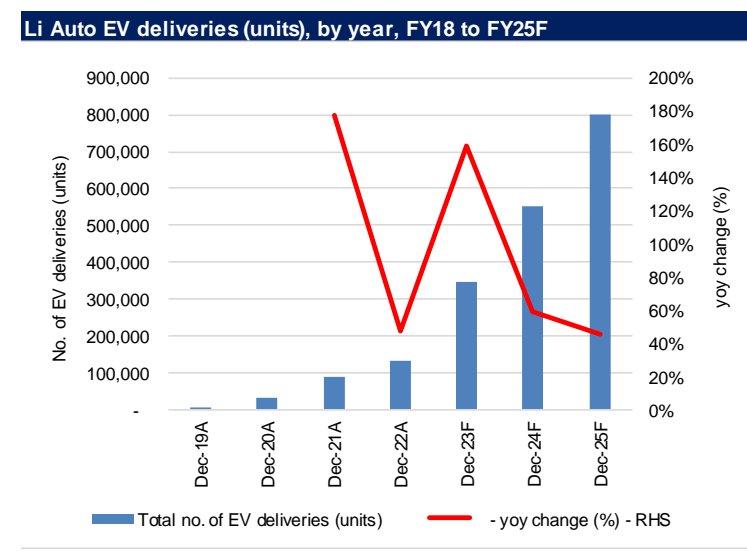
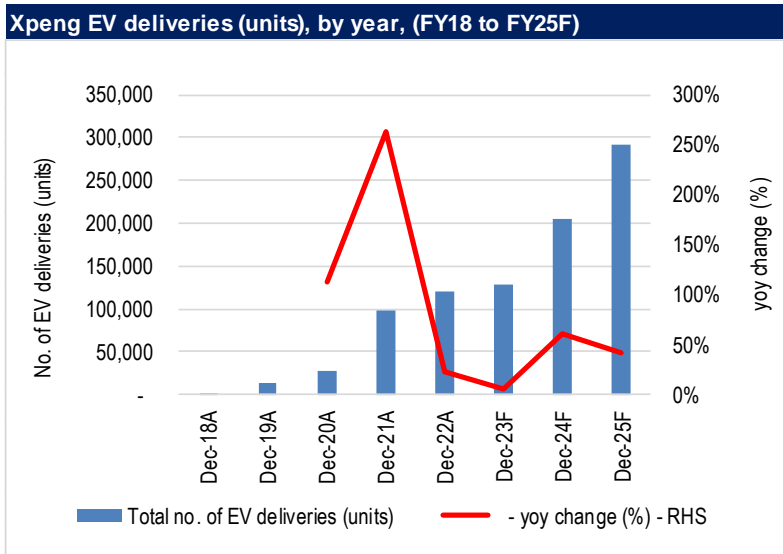
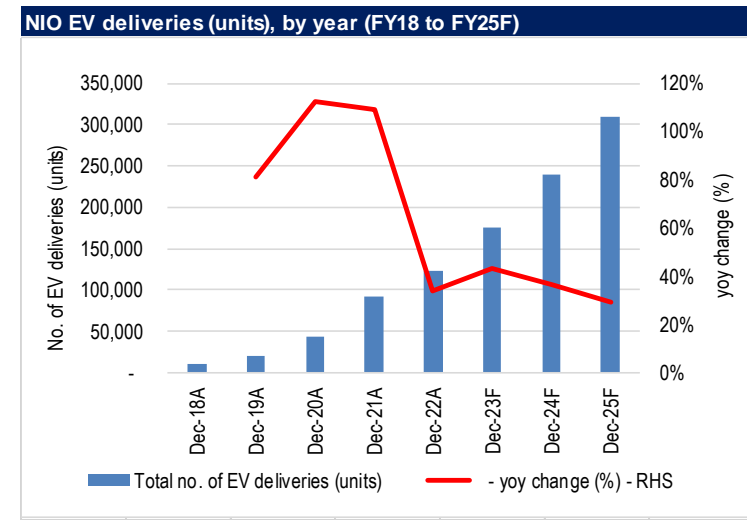
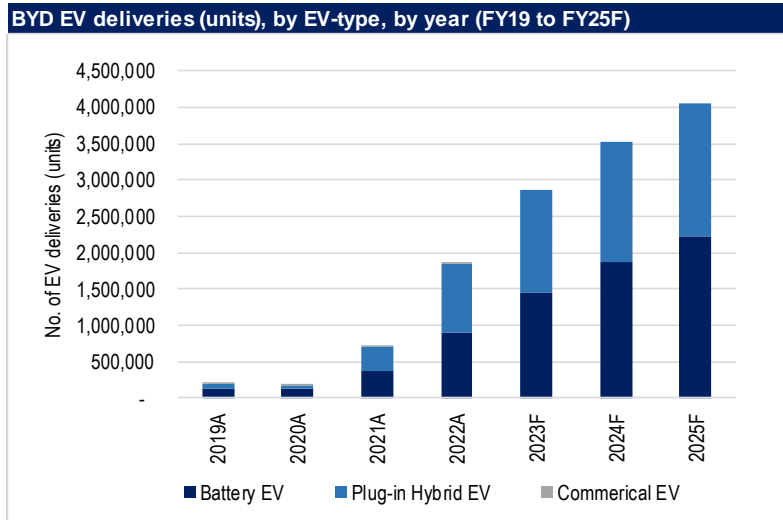


SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

CGS-CIMB's 2023F EV shipment forecasts for BYD, NIO, Xpeng and Li Auto

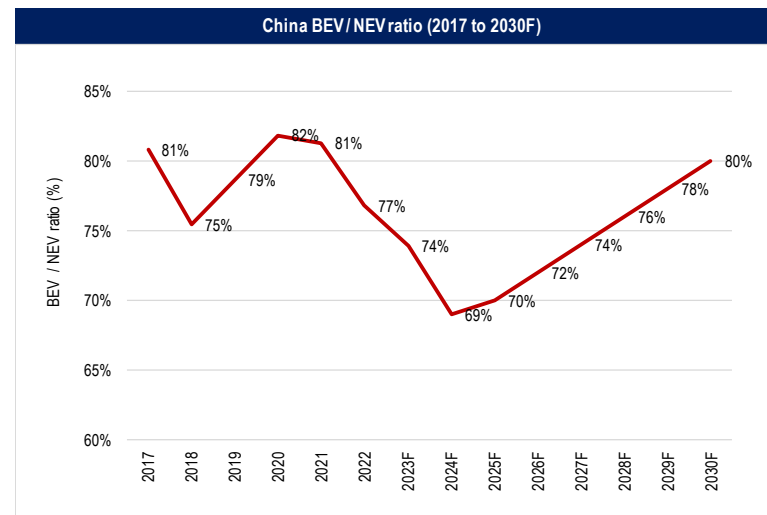
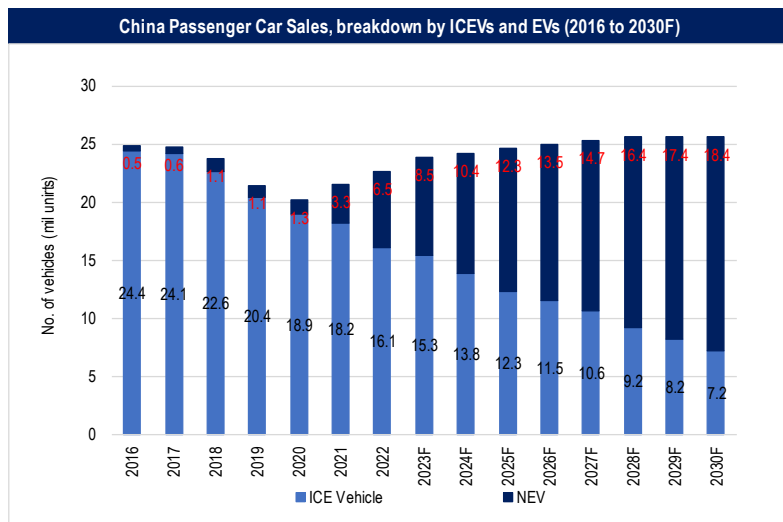
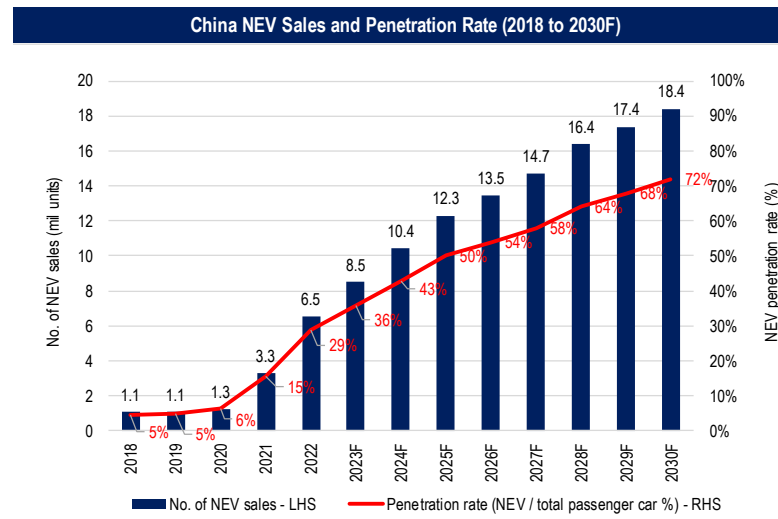
- **BYD targets to deliver 3m NEVs (+54% yoy) in FY23F.** BYD shipped 2.08m NEVs in Jan-Sep 2023 (+76% yoy), representing 69% of the company's FY23F target. We project BYD's NEV sales to reach c.2.9m in FY23F (+54% yoy) as we believe its NEV shipments would accelerate to c.300k units/month in 4Q23F, driven by: 1) strong deliveries of low- to mid-end A-class models (Qin and Dolphin), 2) further penetration into low-tier cities, 3) rising shipments from its Denza-series, and 4) rapidly growing export sales in Asia Pacific regions. We remain optimistic on BYD's market position in the global NEV market and expect its EV deliveries to increase to 3.5m units in FY24F (+23% yoy) and 4.1m units in FY25F (+25% yoy), due to its enriched EV portfolio and fast-growing overseas shipments.
- **NIO's EV shipments could grow 43% yoy to 175k units in FY23F.** NIO's EV shipments increased by 33% yoy to 111k units in Jan-Sep 23, thanks to robust sales of ES6 SUV and ET5 sedan, leading to a strong recovery in EV deliveries in 3Q23 (+136% qoq to 55k units). We anticipate stronger EV deliveries in 4Q23F as a result of the newly upgraded mid-size coupe SUV EC6 debut (delivery started in Sep 23) and expanded sales channels. We estimate FY23F EV deliveries at around 175k units, up 43% yoy due to increased competition in the high-end price segment (Rmb250k to Rmb350k). We also expect NIO's EV deliveries of 240k units in FY24F (+37% yoy) and 310k in FY25F (+29% yoy).
- **XPeng could deliver 127k units (+5% yoy) in FY23F.** XPeng only delivered 41.4k EV units to its customers in 1H23, significantly down by 40% yoy, no thanks to fierce competition in the Rmb200k-300k price segment and slower new model rollouts. Although its EV deliveries improved to 40k units in 3Q23 (+72% qoq and 35% yoy), thanks to the G6 launches. We expect the G6 SUV, new P7 sedan and new G9 SUV to be the key EV driver in 4Q23F, with c.15k units per month. We estimate XPeng's EV shipments to only grow 5% yoy to 127k units in FY23F, the slowest growth rate among China's emerging EV makers, due to poor EV sales in 1H23 and fierce competition in the mid-price segment (Rmb150k to Rmb250k). Nonetheless, we estimate Xpeng's EV deliveries to accelerate to c.206k units in FY24F and c.292k in FY25F, increasing 61% yoy and 42% yoy, respectively, due to EV portfolio expansion to A-class EVs, growing exports sales and improved domestic sales channels.
- **Li Auto's EV shipments could rise 159% yoy to c.345k units in FY23F.** Li Auto's EV shipments surged by 181% yoy to 244k units in Jan-Sep 23, the fastest growth among NEV makers, due to the strong deliveries of L7, L8, and L9. We project Li Auto to maintain strong growth momentum and ship c.110k units in 4Q23F, supported by strong order backlog. We expect Li Auto to deliver 345k EREVs in FY23F (+159% yoy), thanks to steady market share gains in the Rmb350k-450k premium segment and continued channel expansion. We expect Li Auto's EV shipments in FY24F and FY25F to be 550k units (+60% yoy) and 800k units (+45% yoy), supported by four new model launches (one EREV and three BEV) in FY24F and further production capacity expansion.
- **China's NEV sales could grow 30% yoy to 8.5m units in 2023F.** We estimate China's NEV sales to reach 8.5m units in 2023F (vs. 6.54m units in 2022), representing a growth rate of 30%, underpinned by: 1) continued government support for both consumers and EV makers, 2) lower retail price for NEV models, which can compete with ICE vehicles, 3) a change in consumer perception of EVs, and 4) increasing consumer recognition of domestic EV brands. We estimate NEV penetration rate to reach 36% in 2023F (compared with 29% in 2022).

CGS-CIMB's EV deliveries forecasts for BYD, NIO, Xpeng and Li Auto



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

CGS-CIMB's forecasts for China's NEV sales

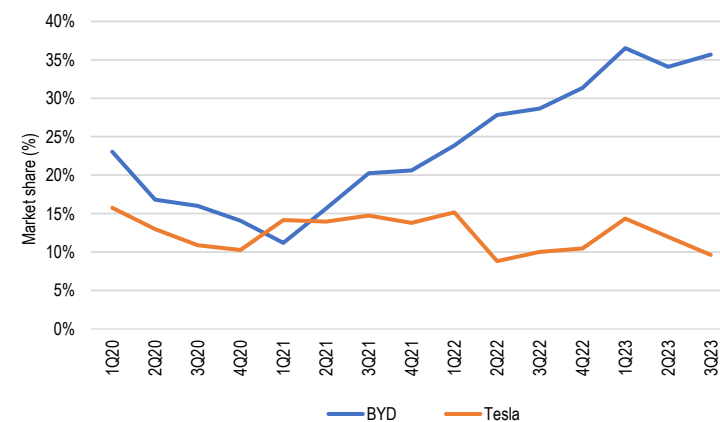


SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

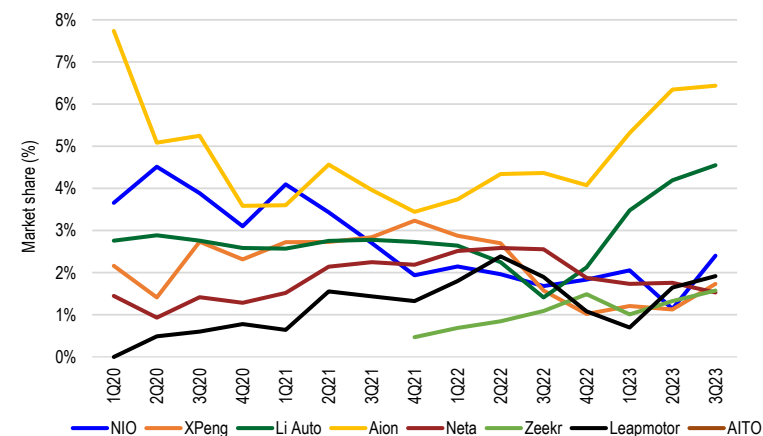
EV makers' market share in China (1Q20 to 3Q23): second-tier EV makers are catching up

- BYD And Tesla are facing unprecedented challenges from emerging NEV makers.** In 3Q23, BYD maintained its position as the top carmaker in China's NEV market with a 33.5% market share (-60bp qoq), according to CAAM data. On the other hand, Tesla's market share further decreased to 9.1% (-290bp qoq), mainly due to factory downtimes for upgrades. We believe the declines in market share for both companies, excluding the temporary effect of factory upgrades in Tesla's case, indicates that emerging NEV manufacturers are posing a greater threat to the two companies. For instance, Li Auto saw a strong recovery in deliveries of both NIO and Xpeng, following their sluggish delivery performance in 1H23.
- GAC Aion and Li Auto are a step ahead of the rest.** NEV manufacturers, aside from BYD and Tesla, faced more intensified competition in 3Q23. GAC Aion and Li Auto took the lead in market share with 6.0% (+260bp yoy, -10bps qoq) and 4.3% (+290bp yoy, +10bp qoq) respectively. NIO and Xpeng saw strong recovery in their deliveries, leading to market shares of 2.3% (+60bp yoy, +120bp qoq) and 1.6% (+0bp yoy, +50bp qoq), respectively, while Neta, Leapmotor, and Zeek each held market shares of 1.4%, 1.8%, and 1.5%, respectively. Huawei-backed AITO's market share increased to 0.9% in 3Q23 as a result of the M7 EREV launch.
- Different delivery distribution patterns observed in NIO, Xpeng and Li Auto (NXL) and among emerging EV makers.** Li Auto demonstrated a well-balanced portfolio across its available models, implying that each model possesses its own loyalty base, in our view. In 3Q23, the Li L9 accounted for 31% of sales, the Li L8 accounted for 32%, and the Li L7 claimed the largest share at 37%.
 On the other hand, the delivery performance of NIO and Xpeng was each primarily driven by a single model. The new ES6 model from NIO and the Xpeng G6 accounted for over 50% and 48% of their respective total deliveries, implying a more fluctuating EV sales pattern observed in the market share of these two automakers.

BYD & Tesla's market share, by quarter (1Q20 to 3Q23)



NXL and other emerging EV makers' market share, by quarter (1Q20 to 3Q23)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, CAAM

Launch and delivery of new NEV models in 3Q23

- **BYD's sub-brands have been actively making notable moves in 3Q23.** Denza, a sub-brand of BYD, introduced its latest SUV, the Denza N8, on 6 Aug, just a month after the launch of its previous SUV. The Denza N8 is available in two versions: a seven-seat variant and a six-seat variant, with starting prices of Rmb319,800 and Rmb326,800, respectively.

Another sub-brand of BYD, Fang Cheng Bao, unveiled its inaugural model, the Bao 5 (also known as the Leopard 5), on 17 Aug, with a price range spanning from Rmb300,000 to Rmb400,000.

On 31 Aug, BYD also unveiled the new Tang, which is available in three versions, with starting prices of Rmb249,800, Rmb269,800, and Rmb299,800, respectively.

In Sep, BYD has introduced two new variants of its existing models. The Seal DM-i, an addition to the Seal family, was launched on 6 Sep, with prices ranging from Rmb166,800 to Rmb236,800.

BYD's premium brand, Yangwang, introduced the U8's Premium Edition on 20 Sep, with a starting price of Rmb1,098,000, following the model's initial launch in the first quarter of 2023.

- **NIO's new EC6 launched on 15 Sep.** The new EC6, which includes the battery, is available at different price points. The model equipped with a 75-kWh standard range battery pack starts at Rmb358,000, while the model with a 100-kWh long-range battery pack starts at Rmb416,000. Alternatively, customers opting for the battery-as-a-service (BaaS) model can purchase the vehicle at a starting price of Rmb288,000. Under the BaaS model, monthly rental fees for the 75kWh and 100kWh battery packs are Rmb980 and Rmb1,680, respectively. Notably, the introduction of the new EC6 signifies the completion of transitioning all models from the older NT 1.0 platform to the latest NT 2.0 platform.
- **Xpeng launched new G9 on Sep 19.** Xpeng has unveiled an upgraded version of its flagship G9 SUV, aiming to address the disappointing sales during the model's initial launch a year ago. The new G9 is available in five different versions, with a starting price of Rmb263,900. This marks a reduction of Rmb46,000 from the previous model's starting price of Rmb309,900.

Product portfolio of BYD, Tesla, NIO, XPeng, Li Auto, AION, and Leapmotor in 3Q23

	Manufacturer's Suggested Retail Price (MSRP)	SUV	Sedan	MPV	Off-riding / Sport-car
Extremely luxury	US\$77,000 or above RMB 550,000 or above	Company			BYD
		Model			Yangwang U8
Luxury	US\$63,000 to 77,000 RMB 450,000 to 550,000	Company	NIO NIO Li Auto NIO	NIO	
		Model	ES8 ES7 Li L9 EC7	ET7	
Premium	US\$49,000 to US\$62,999 RMB 350,000 to 449,999	Company	BYD NIO Tesla Li Auto Li Auto	NIO	BYD BYD
		Model	Tang Family ES6 Model Y Li L8 Li L7	ET5	Denza D9 Bao 5 (Leopard 5)
Mid-to-high end	US\$35,000 to US\$48,999 RMB 250,000 to RMB 349,999	Company	BYD XPeng NIO BYD	XPeng BYD Tesla	
		Model	Frigate 07 G9 EC6 Denza N8	P7/P7i Han Family Model 3	
Economy Class	US\$14,000 to US\$21,000 RMB 100,000 to 149,999	Company	BYD Leapmotor	BYD BYD BYD BYD GAC	
		Model	Yuan Family S01	Qin Family Dolphin Destroyer 05 BYD e2 AION S	
A0 / Mini Class	US\$14,000 or Below RMB 100,000 or Below	Company	Leapmotor BYD		
		Model	T03 Seagull		
		First Delivery Date	May-20 Apr-23		
		Latest Version	Dec-21 Apr-23		

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

EU launches anti-subsidy investigation into EVs from China

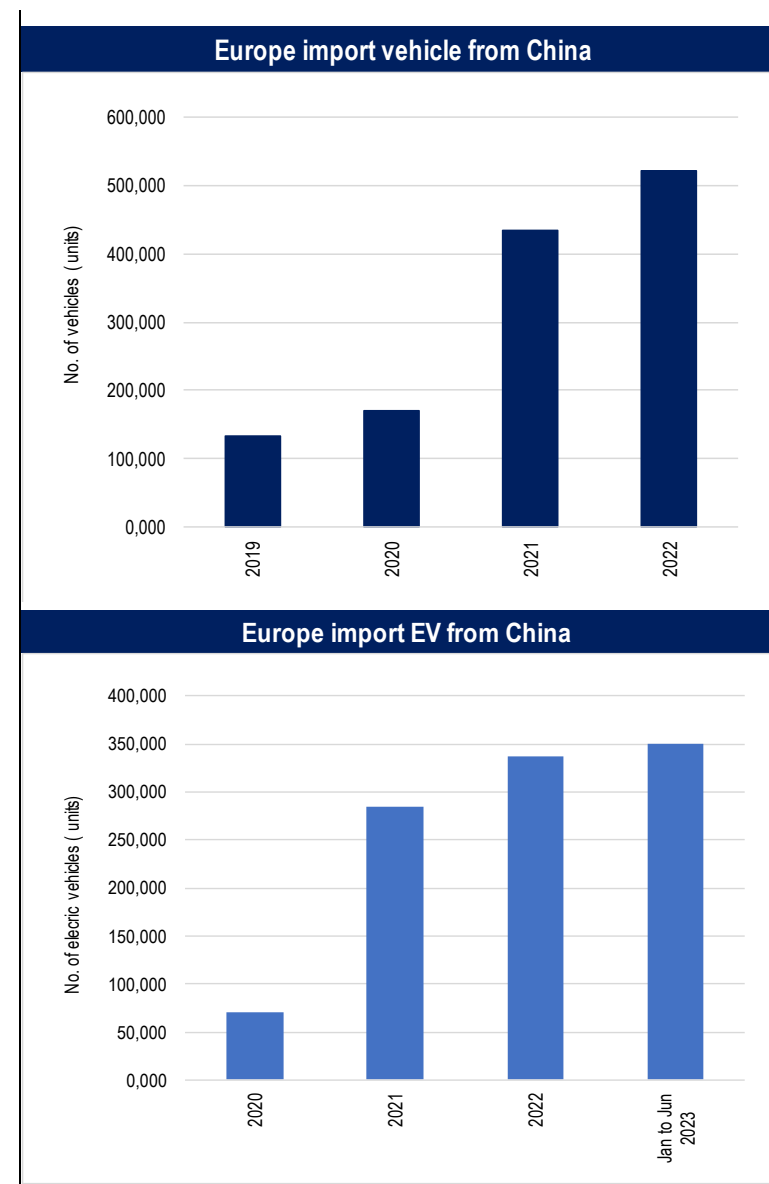
- EU launches anti-subsidy investigation.** On 4 Oct 2022, the EU initiated an investigation into the import of BEVs from China. The President of the EU Commission, Ursula von der Leyen, expressed concerns about the influx of low-priced Chinese EVs into the EU market, which are allegedly supported by substantial state subsidies, thereby distorting the EU market.

According to data from the European Automobile Manufacturers' Association (ACEA), YTD, China's auto exports to the EU (excluding Russia) accounted for 22% of the total volume of EU's import cars. Approximately 70% of these exported units were EVs, and around 25% of all EVs sold in Europe this year were manufactured in China. This includes vehicles from companies such as Tesla China, SAIC-MG (67 units), DFM-Dacia (33k units), and BYD (5k units).

- Current stage of the EU's anti-subsidy probe.** The ongoing anti-subsidy probe by the EU is currently in progress. The first stage of the investigation aims to evaluate if China's EV value chain has received "illegal subsidisation" and if such subsidies have resulted in or pose a threat of economic harm to the EU's EV producers.

The whole investigation is expected to be completed within a maximum of 13 months from its initiation, according to The European Commission announcement. If deemed necessary by legal standards, provisional anti-subsidy duties may be imposed within 9 months of the investigation's start. Any definitive measures would then be implemented within 4 months after that or within a total of 13 months since the investigation's initiation.

- BYD remains confident and unperturbed by the anti-subsidy probe.** Despite the investigation taking place in Europe, BYD is committed to pursuing robust growth in the region. As a publicly traded company, BYD understands the importance of transparency and willingly intends to provide all requested information to EU authorities, said Stella Li, BYD's executive vice president, as quoted by Bloomberg. This proactive approach aims to ensure clarity regarding BYD's production practices and eliminate any potential confusion, according to Stella Li.



SOURCES: CGS-CIMB RESEARCH, ACEA

NIO Phone – The world’s first phone to be designed for cars

- NIO Phone aims to enhance the appeal of its EVs.** During NIO’s 2023 Innovation Day on 21 Sep, the company introduced the NIO Phone, a high-end smartphone running on the Android platform. The NIO Phone is specifically designed for NIO vehicles and incorporates an action button that grants users swift access to over 30 vehicle control functions. These functions encompass various aspects, such as adjusting air conditioning temperature and activating/deactivating seat massage. The phone became available for purchase immediately after its launch and is scheduled to commence shipping on 28 Sep. NIO's CEO, William Li, envisions a successful smartphone launch if half of NIO's user base adopts the NIO Phone. Additionally, the company intends to release a new smartphone model on an annual basis going forward.
- Main features of NIO Phone.** The NIO Phone is available in three different configurations, each catering to varying storage and memory needs. The options include a 12GB RAM with 512GB storage variant, a 12GB RAM with 1TB storage variant, and a 16GB RAM with 1TB storage variant. These are priced at Rmb6,499, Rmb6,899, and Rmb7,499, respectively.

The NIO Phone operates on the SkyUI operating system and is equipped with a Qualcomm Snapdragon 8 Gen 2 SoC, the same powerful processor found in leading flagship Android smartphones. We believe this processing capability enables the NIO Phone to seamlessly connect and display a virtual phone interface on the center screen of NIO vehicles, allowing users to access and utilise installed apps. One of the standout features of the NIO Phone is its utilisation of UWB (ultra-wideband) technology, which ensures a robust and efficient connection between the phone and the vehicle, in our view. This technology enhances functions such as vehicle unlocking and delivers an array of enhanced user experiences. Notable specifications include a 6.81-inch curved screen from Samsung, offering a 2K resolution and supporting a refresh rate range of 1 to 120 Hz. The device is powered by a 5,200mAh battery that supports 66W wired fast charging, 50W wireless fast charging, and 10W reverse charging.



NIO Phone's key specifications

Processor	Qualcomm SM8550-AC
Ram	12 GB, 16 GB
Storage	512 GB, 1 TB
Display	6.81 inches
Camera	Triple Camera
Battery	Li-Po 5200 mAh

Updates on Xiaomi's NEV progress

- Greenlight from NDRC.** On Aug 23, Xiaomi received approval from China's National Development and Reform Commission (NDRC) to commence EV production. As a result, Xiaomi's EVs have entered the trial production phase, which has been ongoing for nearly a month Sep 23. According to a report from Jiemian, a local media outlet, approximately 50 prototypes are being produced each week.

Although obtaining approval from the NDRC brings Xiaomi closer to mass-producing EVs, the company still needs to seek approval from China's Ministry of Industry and Information Technology (MIIT). The MIIT evaluates the technical and safety aspects of new automakers and models. According to sources cited in Jiemian's report, Xiaomi could potentially receive MIIT approval at Nov 23, with a maximum timeline extending until the end of the year. This final approval will be a crucial step for Xiaomi's EV production plans.

Disclosure of EV wireless charging patent. On 10 Oct, Xiaomi's patent application for "Charging Vehicle and Method of Charging" was published. The patent encompasses three main components: a battery compartment designed to house batteries, a wireless charging device responsible for transmitting electrical energy from the batteries to an EV without the need for physical connections, and an automatic driving system that governs the movement of the charging vehicle to a prearranged position in relation to the EV that requires charging.

- EREV first.** Xiaomi's EV division is planning to develop EREVs. This move aligns with a growing trend among local EV manufacturers, who are increasingly introducing EREVs to cater to a broader market. EREVs are considered advantageous compared to BEVs as they eliminate range anxiety, making them more appealing to the average consumer. This creates more market opportunity for Xiaomi, as evidenced by Li Auto's recent success in outperforming NIO and Xpeng in this segment.

Xiaomi's pilot EV with Lei Jun



Xiaomi's EV prototype



SOURCES: CGS-CIMB RESEARCH, CARNEWSCHINA.COM, XIAOMI

EV Battery: CATL maintained dominant position in China's EV battery market

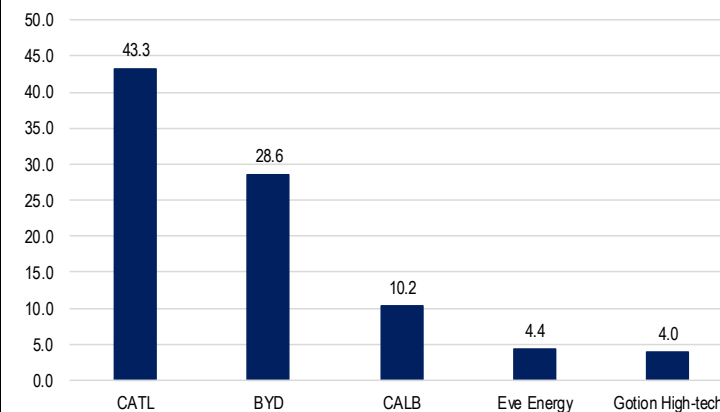
- CATL is dominant in China's EV battery market.** From Jan 23 to Sep 23, Contemporary Amperex Technology (CATL, 300750 CH, Not Rated) has consistently held the top position in terms of power battery installations and market share among various EV battery manufacturers in China, according to China Automotive Battery Innovation Alliance (CABIA). Following behind CATL are BYD and CALB Group (CALB, 3931 HK, Not Rated).

In 3Q23, CATL secured the top spot in the rankings for power battery installed capacity, reaching an impressive 43.3 GWh and commanding a significant 42% market share, in term of volume. BYD followed closely in second place, with its power battery installations totaling 28.6 GWh, accounting for a 28% market share. CALB and EVE Energy (300014 CH, Not Rated) claimed third and fourth positions, respectively, with power battery installations of 10.2 GWh and 4.4 GWh, representing 10% and 4% market shares.

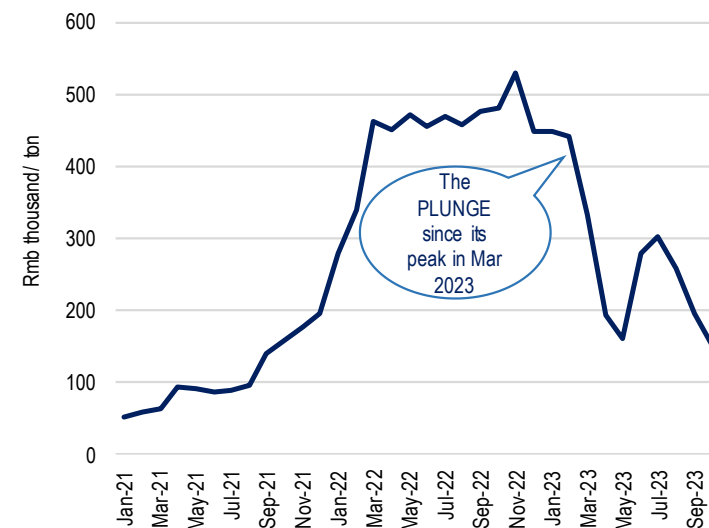
- CATL has introduced Shenxing Battery.** In 3Q23, CATL unveiled the Shenxing Battery, which is capable of achieving a 400km range with just a 10-minute charge, according to CnEVPost. This groundbreaking battery is designed to cater to the growing demand for lithium-iron phosphate (LFP) batteries. Notably, it is the world's first LFP battery capable of supporting 4C charging. With the Shenxing Battery, CATL aims to capture a larger market share in the affordable segment, particularly as it has been trailing behind BYD in the LFP battery market.
- BYD's multiple plans to secure market shares in different regions.** In 3Q23, BYD's battery unit, FinDreams Battery, entered into a partnership with the energy storage division of South Korean conglomerate LG Electronics (LGE, 066570 KS, Add). The aim of this collaboration is to develop competitive and tailored products for the EU and American markets, according to the company. Although specific details about the partnership are currently limited, it appears that LGE will utilise LFP cells sourced from BYD's battery division to manufacture energy storage solutions.

In Asia, BYD said it is currently engaged in discussions with KG Mobility (003620 KS, Not Rated) for the establishment of a joint battery cell plant in South Korea. The purpose of this joint venture is to support the integration of LFP batteries into KG Mobility's upcoming mid-sized electric SUV model. By situating the battery cell plant close to its car factories, KG Mobility aims to enhance production efficiency and streamline operations, according to the company.

Power Battery Installed Capacity by EV Battery Makers (3Q23) (By GWh)



Battery-grade Lithium Carbonate Price in China



SOURCES: CGS-CIMB RESEARCH, LI AUTO, COMPANY REPORTS

Other major NEV news in 3Q23

- **Shell opens its largest-ever charging station in Shenzhen, capable of serving over 3,300 EVs daily**

On 19 Sep, Shell, the leading global gasoline retailer, unveiled a significant milestone in its transformation by launching a large-scale EV charging station in China. This station, operated through a collaboration between Shell and BYD, boasts an impressive infrastructure with 258 fast-charging terminals, enabling it to cater to the charging needs of over 3,300 EVs daily, Shell said.

- **China's public charging piles reach nearly 2.3m**

On 12 Sep, China Electric Vehicle Charging Infrastructure Promotion Alliance (EVCIPA) released data indicating that c.61,000 public charging stations were newly installed in China in Aug 2023. This noteworthy addition brings the total number of charging stations in the country to 2.27m. Among these, there are 963k DC charging stations and 1.307m AC charging stations. Interestingly, the top 10 cities with the highest concentration of public charging stations — namely Guangdong, Jiangsu, Zhejiang, Shanghai, Hubei, Beijing, Shandong, Anhui, Henan, and Fujian — account for an impressive 71.2% of the total charging facilities in the country.

- **Challenges confronting Chinese EV manufacturers in conquering the European market**

On 21 Aug, Reuters reported that Chinese brands such as BYD and Nio face various obstacles, including stereotypes associated with Chinese manufacturing and import costs, in their quest to establish a strong presence in Europe. The Europe CEO of Zeekr highlighted the cost concerns faced by Chinese EV manufacturers, including logistics expenses, sales taxes, import duties, and the need to meet European certification requirements, all of which contribute to the overall costs. Furthermore, surveys indicate that a majority of potential EV buyers in Europe are not familiar with Chinese brands. For example, only 14% of the 1,629 German consumers surveyed by YouGov in 2022 were aware of BYD, a comparable EV giant of Tesla. Similarly, 17% had heard of the premium brand Nio, while 8% were familiar with XPeng.

- **Fresh price reductions by Chinese EV manufacturers**

On 14 Aug, The Standard reported that the Chinese EV market is witnessing a new wave of price reductions, as at least 10 companies, including Zeekr and Leapmotor, engaged in a price war to stimulate sales. Zeekr recently announced a significant price cut of up to Rmb37,000 for its Zeekr 001 model, with the lowest-priced variant now available at Rmb269,000. Leapmotor also joined the price-cutting trend in Oct 23, reducing prices by up to Rmb20,000 for certain versions of its C11 and C01 models. Other automakers, such as Great Wall Motor, Nio, SAIC Volkswagen, and Neta, have also either lowered prices or intensified their promotional campaigns during this month.

- **Chinese automakers claimed a significant majority of the EV market in Southeast Asia in 1Q23**

On 20 Jul, Counterpoint reported that Chinese automakers have contributed c.75% of all EVs sold in the Southeast Asia region in 1Q23, showing their dominant presence in the rapidly growing market. Notably, Thailand, which accounted for c.79% of all EV sales in Southeast Asia in 1Q23, has implemented various incentives and subsidies to encourage local EV production. Traditionally, the Japanese companies have held sway over Thailand's automotive industry for many years. However, the government's proactive efforts in encouraging the development of NEVs have resulted in Chinese EV manufacturers' commitments to invest a minimum of \$1.44bn in establishing production facilities in Thailand, thus, dramatically altering the market share landscape.

NEV policy update in 3Q23

- In 3Q23, there were no significant updates regarding NEV policies, except for the city of Shenzhen. Shenzhen introduced a subsidy programme offering up to Rmb10,000 to individuals who replace their vehicles with emission standards at or below China IV with new NEVs instead.

Relevant Policies/Announcements for NEV Industry			
Date	Department	Policy Type	Policy Details
2023			
Jun-23	Ministry of Industry and Information Technology	Financial Policy	Revision on dual-credit policy <ul style="list-style-type: none"> - New credit calculation formula for BEV: $0.0034 \times R + 0.2$, where R is the range in km (Original: $0.0056 \times R + 0.4$) - Credit of one plug-in hybrid passenger car dropped from 1.6 to 1 - New credit calculation formula of fuel cell vehicles: $0.05 \times P + 0.2$, where P is the rated power of the fuel cell system in kW (Original: $0.08 \times P$) - Upper limit of the standard model credit for BEV dropped from 3.4 to 2.3 - Upper limit of the standard model credit for fuel cell vehicles dropped from 6 to 4 - Credit pool management system was introduced, which allows automakers to voluntarily store positive credits in the pool (valid for five years). When their number of credits is too low, they can withdraw their stored positive credits.
Jun-23	Ministry of Finance	Financial Policy	Extension of the NEV purchase tax exemption <ul style="list-style-type: none"> - NEVs with a purchase date between 1 Jan 2024 and 31 Dec 2025 will continue to be exempt from vehicle purchase tax, with an exemption amount no more than Rmb30,000 - Vehicle purchase tax for NEVs purchased between 1 Jan 2026 and 31 Dec 2027 will be levied at half the normal rate, with the tax reduction not exceeding Rmb15,000 per vehicle. - E.g.: For an NEV with a sales price of Rmb500,000 purchased between 1 Jan 2024 and 31 Dec 2025, the normal tax amount is Rmb50,000 (10% of sales price). According to the tax exemption policy, the owner is entitled to a tax exemption of Rmb30,000 (maximum exemption amount) and would need to pay the balance purchase tax of Rmb20,000.
May-23	China's National Energy Administration National Development and Reform Commission (NDRC)	Overall Policy	Supporting measures for the development of NEVs in rural areas <ul style="list-style-type: none"> - Local governments are encouraged to provide consumption voucher support for local rural residents to purchase NEVs, offering trade-in incentives for them to phase out low-speed electric vehicles and purchase regular NEVs. - Credit support for auto consumption in rural areas will also be increased, and financial institutions are encouraged to reasonably determine the downpayment ratio, loan interest rate, and repayment period, on the premise of risk control. - Local governments are encouraged to promote the construction of centralised public charging stations, and any suitable locations such as gas stations should also promote the construction of charging piles.
Mar-23	Beijing Municipal Commerce Bureau	Financial Policy	Beijing NEV Purchase Subsidy Scheme 2023 <ul style="list-style-type: none"> - Between 1 Mar and 31 Aug 23, Beijing residents who transfer or scrap passenger vehicles they have owned for more than a year and buy NEVs can receive a subsidy of up to Rmb10,000.
Mar-23	Hefei Municipal People's Government	Financial Policy	Hefei New Car Subsidy Scheme 2023 <ul style="list-style-type: none"> - Between 4 Feb and 30 Jun 23, individual consumers who scrap or sell non-business passenger cars that are registered in Hefei and meet relevant standards under their own name, and purchase new non-business new energy passenger cars from sales agencies registered with the Hefei State Administration for Market Regulation (SAMR) priced at Rmb50,000, Rmb100,000 and Rmb200,000 are granted government subsidies of Rmb1,000, Rmb3,000 and Rmb5,000 per car respectively,
Mar-23	Xi'an Municipal People's Government	Financial Policy	Xi'an NEV Purchase Subsidy Program 2023 <ul style="list-style-type: none"> - Between 21 Mar and 30 Apr 23, consumers who buy a NEV produced by a local carmaker in Xi'an will receive a subsidy of up to Rmb6,000. - Local consumers who install their own charging facilities by 31 Dec 23 will receive a subsidy of Rmb10,000.
Jan-23	Shanghai Municipal People's Government	Financial Policy	Shanghai NEV Purchase Subsidy Scheme 2023 <ul style="list-style-type: none"> - Individual consumers who scrap or transfer their Shanghai-registered vehicles and purchase pure EVs by 30 Jun 23, will receive a financial subsidy of Rmb10,000 per vehicle.

SOURCES: CGS-CIMB RESEARCH, THE STATE COUNCIL OF PRC

Company Brief

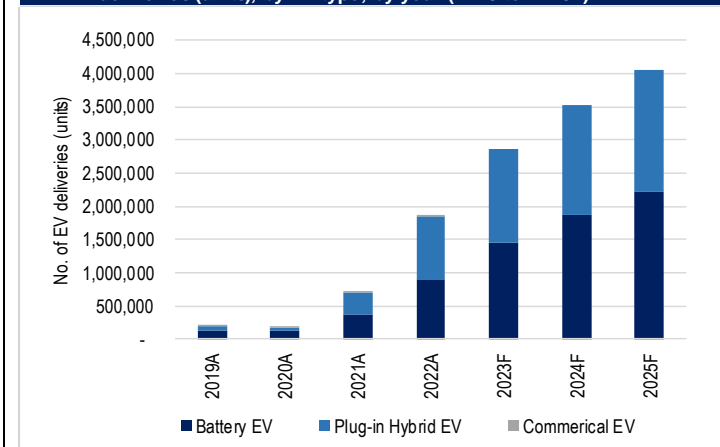
- **BYD Co Ltd (1211 HK, Add, top pick)**
- **Li Auto Inc (2015 HK/LI US, Add, top pick)**
- **NIO Inc (9866 HK/NIO US, Add)**
- **Xpeng Inc (9868 HK/XPEV, Hold)**

BYD Co Ltd (1211 HK, Add): share price: HK\$240.0, mkt cap: US\$92.8bn, target price: HK\$342.0

- Bright earnings growth prospects.** BYD is the largest NEV maker in China, with an NEV market share by sales volume of 36% in 2Q23 (source: CAAM). We like BYD because of its strong earnings growth prospects (+36%/+35% in FY23F/24F), which are supported by fast-growing NEV shipments and rising EV profitability, as well as cost-control advantages, better operational scale, falling EV battery material prices, and integration production capabilities (self-production of batteries and partial semiconductors).
- Robust NEV shipments outlook.** BYD shipped 1.25m NEV in 1H23 (+96% yoy), representing 42% of the company's FY23F target. We project BYD's NEV sales to reach c.2.9m in FY23F (+54% yoy) as we believe its NEV shipments would accelerate to c.300k units/month in 4Q23F, driven by: 1) strong deliveries of low- to mid-end A-class models (Qin and Dolphin), 2) further penetration into low-tier cities, 3) rising shipments from its Denza-series, and 4) rapidly growing export sales in Asia Pacific regions. We remain optimistic on BYD's market position in the global NEV market and expect its EV deliveries to increase to 3.5m units (+23% yoy) and 4.1m units (+25% yoy) in FY24F and FY25F, respectively, due to its enriched EV portfolio and fast-growing overseas shipments.
- Vehicle sales gross margin trend.** Despite increased competition in the mid-price segment (Rmb150k to Rmb250k), we anticipate that its vehicle margin will increase further in 2H23F due to operational leveraging and lower lithium costs.
- Reiterate Add.** We reiterate Add on BYD due to its robust NEV deliveries, driven by its enriched EV portfolio and overseas shipment growth. Our SOP-based target price of HK\$342.0 is equivalent to 39x FY23F P/E and 19x FY23F EV/EBITDA.
- Share price catalysts and risks.** Valuation re-rating catalysts include: 1) robust NEV shipments in China and overseas, 2) sustained margin improvements in EV sales, and 3) rapid EV battery capacity expansion. Downside risks are: 1) increasing competition in China's NEV market hurting its vehicle profit margins, 2) higher-than-expected marketing expenses incurred to grow its overseas markets, and 3) export restriction from Europe. Risks are keener competition in China's NEV market and higher-than-expected marketing expenses incurred to grow its overseas shipments.















Financial Summary	Dec-21A	Dec-22A	Dec-23F	Dec-24F	Dec-25F
Revenue (Rmbm)	216,142	424,061	618,432	773,507	916,755
Operating EBITDA (Rmbm)	16,405	41,041	50,196	59,019	66,976
Net Profit (Rmbm)	3,045	16,622	22,535	30,633	37,321
Normalised EPS (Rmb)	1.07	5.71	7.74	10.52	12.82
Normalised EPS Growth	(31%)	435%	36%	36%	22%
FD Normalised P/E (x)	215.3	39.4	29.1	21.4	17.6
DPS (Rmb)	0.11	0.11	0.15	0.21	0.26
Dividend Yield	0.049%	0.051%	0.069%	0.093%	0.114%
EV/EBITDA (x)	37.46	14.91	10.92	8.67	7.05
P/FCFE (x)	335.1	171.2	10.3	18.1	16.6
Net Gearing	(28%)	(32%)	(73%)	(90%)	(102%)
P/BV (x)	6.76	5.91	5.08	4.53	3.96
ROE	4.0%	16.1%	18.8%	22.4%	24.1%
EPS/Consensus EPS (x)			0.87	0.86	0.78
Normalised EPS/consensus EPS (x)			0.87	0.86	0.78

BYD EV deliveries (units), by EV-type, by year (FY19 to FY25F)



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

BYD's EV portfolio

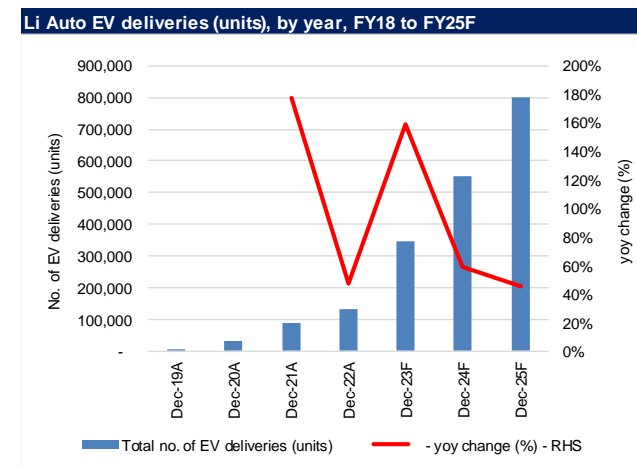
	Model	Delivery Date	Segment	Wheelbase (mm)	Driving range (km)	Acceleration time (0 to 100km/h) (s)	Peak Power (kW)	Maximum Torque (NM)	Autonomous driving package	MSRP starting from (RMB)
2018	 TANG / TANG DM-pi	Jul - 2018	Mid-large size SUV (BEV/PHEV)	2,820	PHEV - 112/252 BEV - 505/565	PHEV - 4.3 (0-50) BEV - 4.4/8.9	PHEV - 102 BEV - 168/180/380	PHEV - 231 BEV - 350/700	Dipilot	PHEV 205,800-279,800 BEV 279,800 - 339,800
	 YUAN / YUAN PLUS	Jun - 2018	Mid Size A-Class SUV (BEV/PHEV)	2,720	430/510	7.3	150	310	Dipilot	137,800-165,800
2020	 HAN / HAN DM-pi	Jul - 2020	Mid size B/C-class Sedan (BEV/PHEV)	2,920	PHEV - 121/242 BEV - 550/550/605	PHEV - 7.9 BEV - 3.9/7.9	PHEV - 102 BEV - 163/363	PHEV - 231 BEV - 350	Dipilot	PHEV 215,800-289,800 BEV 214,800 - 234,800
	 SONG PLUS EV / SONG PLUS DM-pi	Sept - 2020	Mid large size SUV (BEV/PHEV)	2,765	PHEV - 51/100/110 BEV - 505	PHEV - 5.9/7.9/8.5 BEV - 4.4(0-50)	PHEV - 132/145 BEV - 135	PHEV - 316/325 BEV - 280	Dipilot	PHEV 145,800-172,800 BEV 180,800-197,800
2021	 Dolphin	Aug - 2021	Subcompact A0-class sedan (BEV)	2,700	301/405/401	3.9/3 (0-50)	70/130	180/290	Dipilot	102,800-130,800
2022	 Destroyer 05	Mar - 2022	Sedan (BEV)	2,718	55/120	7.3/7.9	132/145	316/325	Dipilot	119,800-155,800
	 Seal	Late 2022	Sedan-Coupe (BEV)	2,920	550/650/700	3.8/5.9/7.5	150/230	310/360	Dipilot	209,800-286,800
	 Frigate 07	Late 2022	Mid Large SUV (PHEV)	2,820	100/175/205	4.7	145/150	102/231	Dipilot	220,000-280,000
	 Danza D9	May - 2022	Premium MPV (BEV/PHEV)	3,110	620	/	166/230	/	Dipilot	389,800-459,800
2023	 QIN Plus DM-i Champion Ver.	Feb -2023	Sedan (PHEV)	2,718	55/120	7.3/7.9	132/145	316/325	Dipilot	99,800-135,800
	 Seagull	May - 2023	Sedan (BEV)	2,500	305/405	4.9 (0-50)	55	135	Dipilot	73,800-89,800
	 Yangwang U8	Sep - 2023	Luxury G-Class off-roading vehicle (PHEV)	3,050	180/1000	3.6	220/240	320/420	Dipilot	800,000-1,500,000
	 BYD e2	Feb - 2023	Compact Sedan (BEV)	2,610	405	4.9 (0-50)	70	180	Dipilot	102,800-109,800
2024	 Yangwang U9	2024	Luxury G-Class off-roading vehicle (PHEV)	/	/	2	/	/	/	> 1,000,000

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Li Auto Inc (2015 HK/LI US, Add): share price: HK\$129.8, mkt cap: US\$35.2bn, target price: HK\$268.0





- **Market leader in China's premium EV market.** Li Auto held a c.10% market share by volume in China's premium EV segment (Rmb300k-Rmb500k price range) in 2022 (source: CAAM). We believe Li Auto's robust EV deliveries in FY22 (+47% yoy to 133k units) and Jan-Sep23 (+181% yoy to 244k units) were supported by its expanding portfolio of EREV models, which are particularly attractive to young families.
- **EV deliveries could rise 159% yoy to c.345k units in FY23F.** Li Auto's EV shipments surged by 181% yoy to 244k units in Jan-Sep 23, the fastest growth among NEV makers, due to the strong deliveries of L7, L8, and L9. We project Li Auto to maintain strong growth momentum and ship c.110k units in 4Q23F, supported by its strong order backlog. We expect Li Auto to deliver 345k EREVs in FY23F (+159% yoy), thanks to steady market share gains in the Rmb350k-450k premium segment and continued channel expansion. We expect Li Auto's EV shipments in FY24F and FY25F to be 550k units (+60% yoy) and 800k units (+45% yoy), supported by four new model launches (one EREV and three BEV) in FY24F and further production capacity expansion.
- **Vehicle sales gross margin trend.** We believe Li Auto's vehicle sales gross margin will be slightly lower than 2Q23's 21% to around 19-20% in 3Q-4Q23F due to higher operational costs for the BEV model launches in Dec 23 and greater price discipline in the L-series due to competition.
- **Reiterate Add.** We reiterate Add on Li Auto as we expect it to deliver the strongest growth in EV deliveries in 2023F among leading China smart EV makers, and a stable GPM outlook. Our DCF-based target price of HK\$268.0 is equivalent to 46x FY24F P/E and 44x FY24F EV/EBITDA.
- **Share price catalysts and risks.** Re-rating catalysts include strong take-ups of the L9, L8 and L7 and the successful launch of its BEV model. Downside risks include keener competition in China's premium EV segment, which could hurt EV margins, and lower-than-expected vehicle gross margins due to increased competition.

Financial Summary	Dec-21A	Dec-22A	Dec-23F	Dec-24F	Dec-25F
Revenue (Rmbm)	27,010	45,287	117,953	179,302	257,100
Operating EBITDA (Rmbm)	(427)	(2,441)	7,354	11,509	15,616
Net Profit (Rmbm)	(321)	(2,012)	6,594	9,096	12,716
Normalised EPS (Rmb)	0.42	0.02	4.15	5.35	7.09
Normalised EPS Growth	29%	(95%)	19565%	29%	32%
FD Normalised P/E (x)	288	5,755	30	23	17
DPS (Rmb)	-	-	-	-	-
Dividend Yield	0%	0%	0%	0%	0%
EV/EBITDA (x)	268.1	NA	20.8	13.0	8.7
P/FCFE (x)	61.6	100.1	48.2	19.7	13.6
Net Gearing	(108%)	(108%)	(107%)	(117%)	(128%)
P/BV (x)	6.11	5.64	4.66	3.85	3.30
ROE	2.2%	0.1%	17.4%	18.6%	20.7%
EPS/Consensus EPS (x)			1.08	0.84	0.73
Normalised EPS/consensus EPS (x)			1.41	1.03	0.85



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Li Auto's EV portfolio

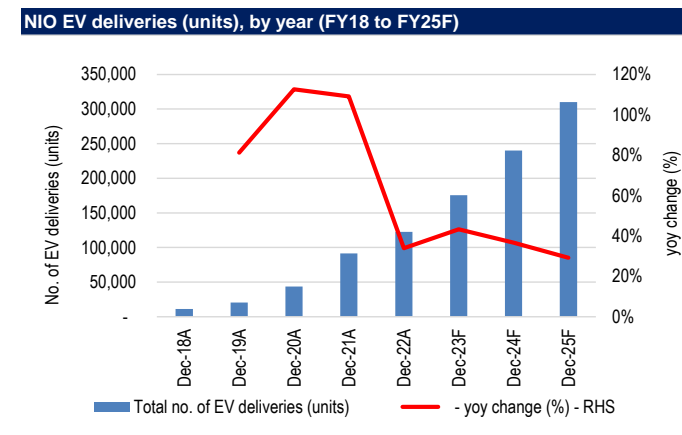
	Model	Delivery Date	Segment	Wheelbase (mm)	CLTC driving range (km)	Acceleration time (0 to 100km/h) (s)	Peak Power (kW)	Maximum Torque (N-m)	Autonomous driving package	MSRP starting from (RMB)
2019	Li ONE 	Dec 19 (discontinued, replaced by L8)	7-Seater Luxury large-size SUV (EREV)	2,935	245/1080 (with 40.6kWh battery pack only/battery pack + petrol engines)	6.5	245	455	NVIDIA Orin SoC	348,000
2022	Li L9 	Aug-22	6-Seat mid-large SUV (EREV)	3,105	215/1315 (with 44.5kWh battery pack only/ battery pack + petrol engines)	5.3	330	620	NVIDIA Orin SoC	459,800
2022	Li L8 	Nov-22	6-Seat Family SUV (EREV)	3,005	210/1315 (with 42.8kWh battery pack only/ battery pack + petrol engines)	5.5	330	620	NVIDIA Orin-X SoC	339,800
2023	Li L7 	Mar-23	5-Seat Family SUV (EREV)	3,005	210/1315 (with 42.8kWh battery pack only/ battery pack + petrol engines)	5.3	330	620	Horizon Robotic Journey 5	319,800
2023	Li Mega	Dec-23	Premium 5C Pure (BEV)							around 500,000
2024	Li L6	2024	5-Seat mid-size SUV (EREV)	2,955						around 250,000

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

NIO Inc (9866 HK/NIO US, Add): share price: HK\$66.15, mkt cap: US\$14.1bn, target price: HK\$93.0








- **NIO ranked 7th best-selling sedan in China in Mar 2023.** We are positive on NIO due to its market-leading position in China's premium sedan segment (Rmb300k-Rmb400k price range), thanks to its unique battery swap technology and industry-leading autonomous driving system. NIO held market shares of 76% and 55% in China's premium EV segment priced over Rmb400k and over Rmb300k, respectively, in 2022, according to China Passenger Car Association (CPCA).
- **EV deliveries to grow 43% yoy to 175k units in FY23F.** NIO's EV shipments increased by 33% yoy to 111k units in Jan-Sep 23, thanks to robust sales of ES6 SUV and ET5 sedan, leading to a strong recovery in EV deliveries in 3Q23 (+136% qoq to 55k units). We anticipate stronger EV deliveries in 4Q23F as a result of the newly upgraded mid-size coupe SUV EC6 debut (delivery started in Sep 23) and expanded sales channels. We estimate FY23F EV deliveries at around 175k units, up 43% yoy, mainly driven by strong delivery of ET5T and EC6 in 3Q/4Q23F despite increased competition in the high-end price range (Rmb250k to Rmb350k). We also expect NIO's EV deliveries in FY24F and FY25F at 240k and 310k units, up 37% and 29% yoy, respectively.
- **Vehicle sales gross margin trend.** We expect NIO's gross profit margin to recover to 9% (11% in vehicle margin) in 3Q23F and 12% (15% in vehicle margin) in 4Q23F, underpinned by improved production efficiency and lower losses from its swapping battery businesses (NIO discontinued the free battery swap entitlement package on 1 Aug 23). We also expect its vehicle margin to rise to 18% and 20% in FY24F and FY25F, respectively, due to lower production costs from moving all eight models to its second-generation production platform (NT2.0 platform).
- **Reiterate Add.** We maintain Add on NIO as we expect its EV deliveries to accelerate and vehicle margin to improve in 2H23F, thanks to the contributions from five new models. Our DCF-based target price is HK\$93.0.
- **Share price catalysts and risks.** Share price catalysts are strong EV deliveries in 4Q23F and sustained vehicle margin improvement on stronger EV deliveries. Downside risks include increasing competition in China's premium EV segment and slower-than-expected ramp-up of the production for the all-new ES6, EC6 and ET5T.

Financial Summary	Dec-21A	Dec-22A	Dec-23F	Dec-24F	Dec-25F
Revenue (Rmbm)	36,136	49,269	60,958	90,720	120,900
Operating EBITDA (Rmbm)	(2,788)	(12,788)	(14,620)	(7,921)	1,841
Net Profit (Rmbm)	(10,572)	(14,559)	(18,216)	(10,914)	(711)
Normalised EPS (Rmb)	(2.32)	(7.55)	(9.14)	(5.75)	0.21
Normalised EPS Growth	(46%)	225%	21%	(37%)	
FD Normalised P/E (x)	NA	NA	NA	NA	301.4
DPS (Rmb)	-	-	-	-	-
Dividend Yield	0%	0%	0%	0%	0%
EV/EBITDA (x)	15.08	NA	NA	NA	38.35
P/FCFE (x)	94.84	NA	NA	NA	NA
Net Gearing	(101%)	(99%)	(46%)	21%	30%
P/BV (x)	2.96	4.39	8.23	21.85	20.17
ROE	(12%)	(42%)	(85%)	(111%)	7%
EPS/Consensus EPS (x)			1.03	1.05	0.17
Normalised EPS/consensus EPS (x)			0.87	0.94	(0.08)



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

NIO's EV portfolio

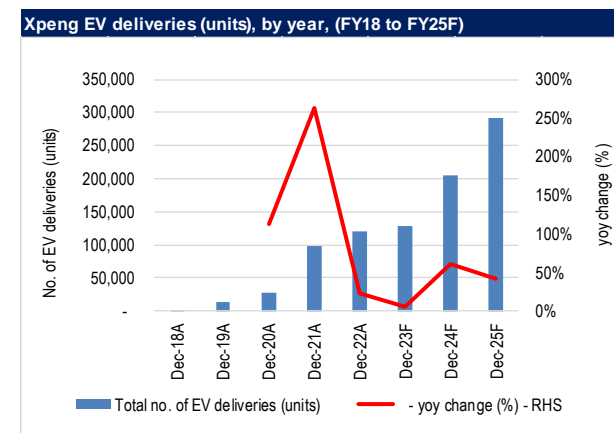
	Model	Delivery Date	Segment	MSRP starting from (RMB)	Wheelbase (mm)	Driving range (km)	Acceleration time (0 to 100km/h) (s)	Peak Power (kW)	Maximum Torque (N·M)	Autonomous driving package
2022	 ET7	Mar-22	Mid-large sedan	448,000	3,060	550/705/1000 (with 75/100/150kWh battery pack)	3.8	480	850	NIO Autonomous Driving
	 ES7	Aug-22	Mid-large SUV	468,000	2,960	485/620/930 (with 75/100/150kWh battery pack)	3.9	480	850	NIO Autonomous Driving
	 ET5	Sep-22 (five seater)	Mid-size sedan	328,000	2,888	550/700/1000 (with 75/100/150kWh battery pack)	4.3	360	700	NIO Autonomous Driving
2023	 EC7	Apr-23	Mid-large coupe SUV	488,000	2,960	490/635/940 (with 75/100/150kWh battery pack)	3.8	480	850	NIO Digital System Banyan and NIO AQUILA
	 All-new ES6	Jun-19 (five seater) May-23 (all-new)	Mid-size SUV	368,000	2,900	465/610/900 (with 75/100/150kWh battery pack)	4.7	400	725	NIO Pilot
	 All-new ES8	Jun-18 (seven-seater) Mar-19 (six-seater) Apr-20 (all-new) Jun-23 (Redefine Prime)	Luxury full-size SUV	468,000	3,070	465/605/900 (with 100/150kWh battery pack)	4.1	480	850	NIO Digital System Banyan and NIO AQUILA
	 ET5T	23-Jun	Electric station wagon	298,000	2,888	990 (with 150kWh battery pack)	4.0	360	700	NIO Assisted and Intelligent Driving
	 EC6	Sep-20 (five seater) Sep-23 (all-new)	Mid-size coupe SUV	368,000	2,900	475/615/910 (with 75/100/150kWh battery pack)	4.5	482	725	NIO Pilot
2024	Alps	2H24	mid-end family sedan							
	Firefly	3Q24	Budget-friend sedan (for European market)							

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS











Xpeng Inc (9868 HK/XPEV, Hold): share price: HK\$59.60, mkt cap: US\$13.2bn, target price: HK\$66.80

- **Moving up the value chain from China's mass EV market to premium EV market.** We believe XPeng is the preference of middle-class consumers in China for its self-developed advanced driver assistance system (ADAS) software (XPiLOT) and in-car intelligent operating system (Xmart OS) capabilities. The company's cooperation with DiDi Global (DIDIY US, Not Rated) to expand to A-class smart EVs should accelerate its shipment growth in FY24-25F, in our view.
- **Xpeng to deliver 127k units (+5% yoy) in FY23F.** XPeng only delivered 41.4k EV units to its customers in 1H23, significantly down by 40% yoy, no thanks to fierce competition in the Rmb200k-300k price segment and slower new model rollouts, although its EV deliveries improved to 40k units in 3Q23 (+72% qoq and 35% yoy), thanks to the G6 launches. We expect the G6 SUV, new P7 sedan and new G9 SUV to be the key EV delivery drivers in 4Q23F, with a collective c.15k units per month. We estimate XPeng's EV shipments to only grow 5% yoy to 127k units in FY23F, the slowest growth rate among China's emerging EV makers, due to poor EV sales in 1H23 and fierce competition in the mid-price segment (Rmb150k to Rmb250k). Nonetheless, we estimate Xpeng's FY24F and FY25F EV deliveries to accelerate to c.206k and c.292k units, increasing 61% yoy and 42% yoy, respectively, due to EV portfolio expansion to A-class EVs, growing exports sales and improved domestic sales channels.
- **Vehicle sales gross margin to improve in FY23F.** Despite increased competition in the mid-end price segment (Rmb150k to 250k), we expect XPeng's vehicle sales margin to improve to c.9% in 2H23F (-2.5% in 1Q23 and -8.6% in 2Q23) due to various cost-cutting measures based on its new EV platform (SEPA 2.0), which lowers production costs and improves production efficiency.
- **Maintain Hold.** We have Hold rating on XPeng due to its slow EV delivery growth, but we still anticipate consistent quarterly EV shipments growth and profitability improvements. Our DCF-based target price is HK\$66.80.
- **Share price catalysts and risks.** Potential re-rating catalysts include stronger-than-expected G6 deliveries and better-than-expected vehicle margin improvement. Downside risks include keener competition hurting its EV sales and profit margins, and higher-than-expected SG&A expenses due to elevated R&D and marketing expenses.

Financial Summary	Dec-21A	Dec-22A	Dec-23F	Dec-24F	Dec-25F
Revenue (Rmbm)	20,988	26,855	28,452	44,547	59,414
Operating EBITDA (Rmbm)	(6,198)	(7,833)	(8,850)	(6,367)	(3,149)
Net Profit (Rmbm)	(4,863)	(9,139)	(9,557)	(7,715)	(5,067)
Normalised EPS (Rmb)	(2.71)	(4.88)	(5.04)	(3.92)	(2.34)
Normalised EPS Growth	161%	80%	3%	(22%)	(40%)
FD Normalised P/E (x)	NA	NA	NA	NA	NA
DPS (Rmb)	-	-	-	-	-
Dividend Yield	0%	0%	0%	0%	0%
EV/EBITDA (x)	NA	NA	NA	NA	NA
P/FCFE (x)	NA	7.00	NA	NA	NA
Net Gearing	(91.7%)	(64.7%)	(51.0%)	(29.2%)	(2.5%)
P/BV (x)	2.27	2.61	3.03	4.15	5.39
ROE	(11.6%)	(21.2%)	(25.3%)	(24.6%)	(19.7%)
EPS/Consensus EPS (x)			1.12	1.30	2.00
Normalised EPS/consensus EPS (x)			1.02	1.14	1.59



XPeng's EV portfolio

	Model	Delivery Date	Segment	Wheelbase (mm)	Driving range (km)	Acceleration time (0 to 100km/h) (s)	Peak Power (kW)	Maximum Torque (NM)	Autonomous driving package	Manufacturer suggested retail price (MSRP) starting from (RMB)
2018	 G3	Dec-18	Compact SUV	2,625	401/520 (with 50.5/65.5kWh battery pack)	8.6	145	300	XPILOT 2.5	149,800 - 199,800
2020	 P7	Jun-20	Mid-size sedan	2,998	480/586/706 (with 60.2/70.8/80.9kWh battery pack)	6.8	196	390	XPILOT 3.0	229,900 - 349,900
2021	 P5	Oct-21	Mid-size sedan	2,768	600 (with 60.2k/80.9Wh battery pack)	7.5	155	310	XPILOT 3.0	157,900 - 223,900
	 G3i	Sep-21 (G3 updated facelift version)	Compact SUV	2,625	460/520 (with 60.2/70.8/80.9kWh battery pack)	8.6	170	380	XPILOT 2.5	149,800 - 185,800
2022	 G9	Sep-22, New G9 Sep-23	Mid-to large-size SUV	2,998	702 (with 98kWh battery pack)	5.0	200	551	XPILOT 4.0	263,999 - 359,900
2023	 P7i	Feb-23	Mid-size premium sedan EV	2,998	702 (with 86.2kWh battery pack)	6.4	203	440	XNGP	249,900-269,900
	 G6	Jun-23	small-size premium SUV	2,890	702 (with 86.2kWh battery pack)	N/A	218	N/A	XNGP	209,900 - 276,900
	 X9	4Q23	Large-size premium MPV						XNGP	200,000 - 300,000 (estimate)
2024	 P9	2024 (Estimate)	Large-size premium SUV	3,100					XNGP	300,000 (estimate)
	 G5	2024 (Estimate)	Mid-size premium SUV	2,800					XNGP	200,000 - 250,000 (estimate)

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Hold	23.7%	0.0%
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