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China Battery & Materials

CATL keeps charging ahead of peers; July battery production remains solid

CATL-A and China's battery supply chain stocks have pulled back about 15–35% from early-May peaks (vs. CSI300 -1%) due to sector rotation and a lack of fresh catalysts, with sentiment further pressured by rising geopolitical tensions (e.g., EU–China trade friction and the U.S.'s potential ban on Chinese ESS inverters reported on 1-July, note) and downward revisions to CATL/BYD's June production volumes (per ZE Consulting on 27 June and ICCSino shortly after). The correction has also coincided with seasonally slower battery production in June–July, weaker-than-expected domestic passenger EV demand so far in 2Q, and more cautious procurement amid softening raw material prices; however, we view it mainly as near-term seasonality and inventory adjustment rather than a medium-term growth deterioration. ZE Consulting's latest forecast indicates the top six battery producers are planning a 6% m/m and 64% y/y increase in July, moderating from stronger months earlier this year but still better than the typical seasonal pattern seen in July 2025. CATL's production momentum continues to stand out, with battery output up ~80% y/y in 2Q26 and expected to grow >70% y/y in July, outperforming peers at ~40–50% growth. **CATL remains our top pick in China's battery supply chain, while among tier-2 players CALB (OW) has delivered the highest YTD production growth at >90% y/y, tracking above its 55% volume growth target**.

- **U.S. potential ban on Chinese inverter imports?** Sungrow (OW; covered by Alan Hon—see latest note) fell ~20% over the past two trading days (vs. CSI300 -3%) following media reports (link) suggesting the FCC may be considering a rule that could restrict new foreign inverter imports into the U.S. CATL-A also declined ~3% over the same period (including -6% intraday on 1 July when the news broke, vs. CSI300 flat intraday). We see a negligible impact on CATL, as its U.S. exports are primarily battery cells or containers without PCS. In addition, we estimate U.S. ESS will account for <5% of CATL's 2026 shipment mix (down from ~10% in 2025).
- **CATL/BYD's actual June production volumes came in below prior expectations (revised down by 4-6%), mainly due to continued raw material price declines.** According to ZE Consulting data, the industry's top 6 players' June production volume was revised down to flattish growth vs. May (prior estimate at 5% m/m). Overall, as raw material prices continued to fall, battery makers became more cautious on procurement and focused on reducing inventories, resulting in slower supply-chain activity in June. However, July production plan is expected to rebound and normalize with 6% m/m growth per ZE Consulting forecasts. Looking ahead, July order recovery, stabilization in raw material prices, and the pace of inventory restocking will be key indicators to watch, while August - September should start to enter a seasonally stronger order period, potentially supporting further production momentum into 2H.
- **7M26 production by major battery makers is expected to grow ~53% y/y**; and the production trend has accelerated from 40% y/y growth in 1Q26 to 60% in 2Q26, then 64% in July. The YTD growth is driven by a combination of strong underlying trends: **(1) Solid ESS demand:** Most ESS battery production lines are still running at full capacity utilization, with Chinese

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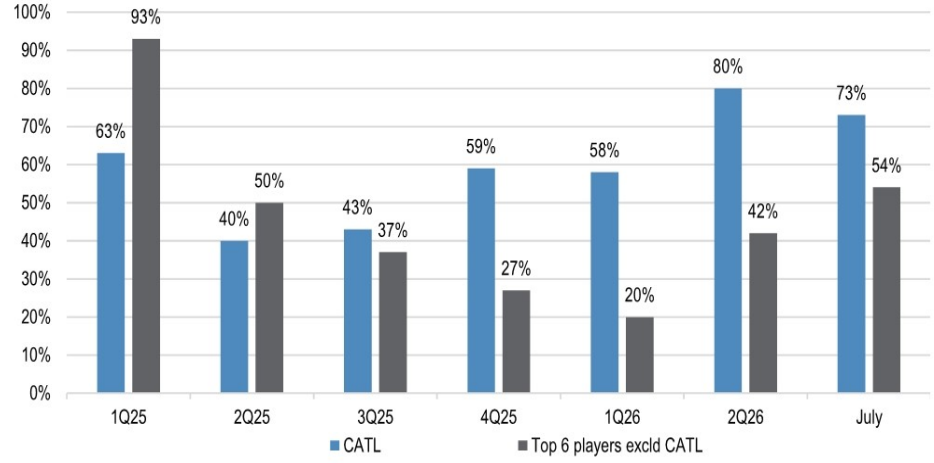
players recording 114% y/y growth in 5M26 ESS battery production, according to ICCSino. **(2) Continued strength in EV exports**, which rose 115% y/y in the 5M26, while European EV sales grew 38% y/y over the same period. **(3) Robust China CV EV performance**: Commercial EV car volumes increased ~38% y/y, while battery volumes grew ~64% y/y in 5M26. On the other hand, **(4) China passenger EV retail sales were softer than expected**, with an expected 13% y/y decline in 1H26, per CPCA estimates. However, the weakness in domestic EV sales was largely offset by **rising battery content per vehicle**, which increased by 9 kWh per car, or ~20% y/y, in 5M26 (Figure 8). We expect overall China PV demand to improve in 2H26, with yearly slippage narrowing from ~23% in 1H26 to a mid-single-digit yearly decline in 4Q26. If this materializes, it would imply that **NEV demand should see flat to positive yearly growth in 4Q26** vs. the YTD run rate down ~13%.

- **July lithium production is expected to mark the first decline since CNY.** According to ZE Consulting, China's July lithium carbonate output is expected to decline by 3% m/m, marking the first drop since the post-CNY momentum, mainly due to tight spodumene supply. Weekly lithium carbonate output in China declined slightly to below ~26kt June levels, while destocking of ~1-2kt per week continued throughout the month, bringing inventory levels to 95kt (SMM old sample) and 128kt (SMM new sample). As of 2 July, China lithium carbonate spot fell below ~Rmb150k/t while future prices rebounded to ~Rmb160k/t and remain newsflow-driven, centered on CATL's Jianxiawo project and other Jiangxi mine permit approvals. Notably, CATL obtained the required production permits on 29 June, with volume yet to be confirmed (link). **We expect lithium prices to remain near the lower end of the Rmb150k–200k/t range over the coming months**, as the market continues to factor in expectations of easing supply tightness and limited seasonal demand support across both EV and ESS segments. A more sustained upward trajectory would likely require stronger marginal support from downstream demand, in our view.
- **Battery material prices softened in general during 2Q26, reflecting easing upstream cost pressure and weaker procurement momentum across the supply chain.** On the raw material side, lithium carbonate and lithium hydroxide declined by 8% q/q and 11% q/q, respectively, while cobalt and nickel prices fell 2% q/q and 6% q/q. LiPF6 was also slightly lower, down 1% q/q following a 41%% q/q decrease in 1Q26. Battery materials were more mixed but still generally subdued: LFP cathode prices declined 2% q/q, while NCM cathodes were modestly higher. Separator prices remained relatively resilient, with wet separator prices up 4% q/q, while both NCM and LFP electrolytes declined 6% q/q. Overall, the 2Q26 trend points to a general softening in battery material prices, with easing raw material costs reducing previous cost pressures across the value chain.

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Figure 1: Historical y/y growth of CATL vs others (y/y %)



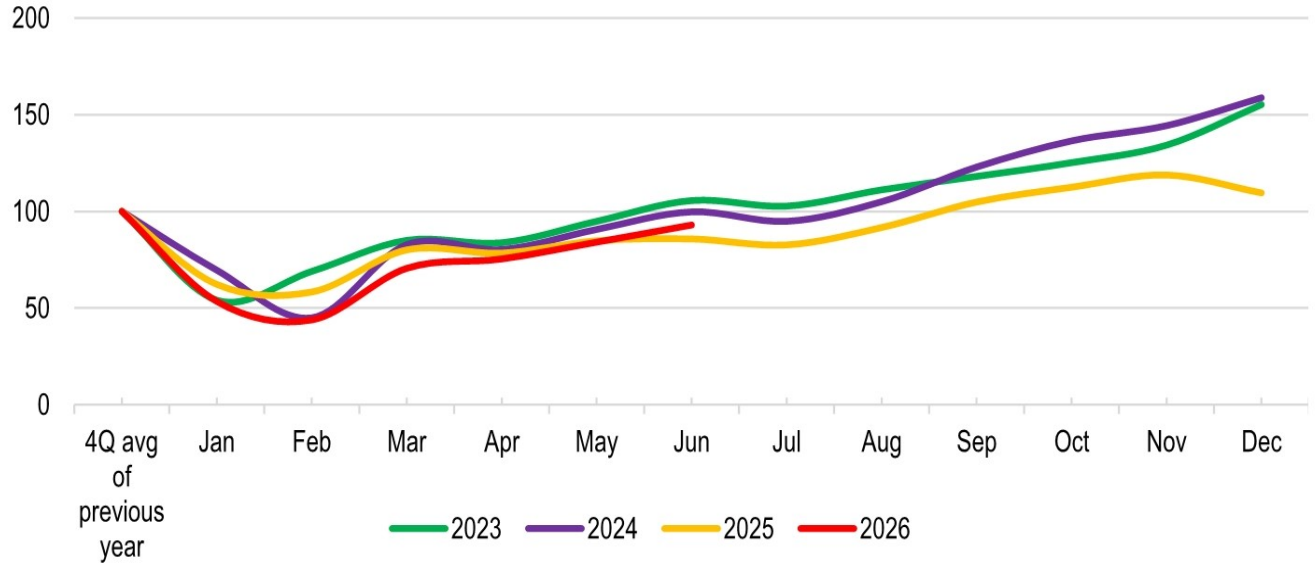
Source: ZE Consulting, J.P. Morgan. Note: Based on battery production data of top 6 battery makers: BYD, CATL, Gotion, EVE, CALB, REPT.

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NEV sales and battery production trends

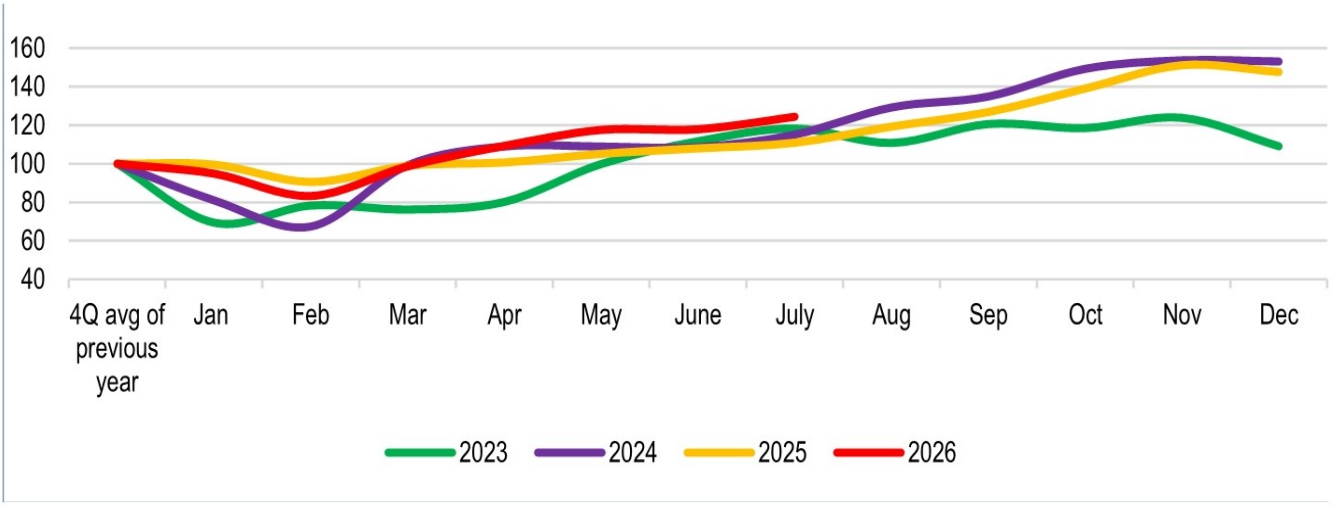
Figure 2: Historical China NEV sales monthly volume vs. previous-year 4Q average monthly sales (assumes 4Q average monthly sales volume = 100)

Est Jun-26 NEV sales up 11% m/m, trending higher than Jun-25 (9% m/m)



Source: CAAM, CPCA, J.P. Morgan

Figure 3: Historical battery production monthly volume vs. previous-year 4Q average monthly production volume (assumes 4Q average monthly production volume = 100)

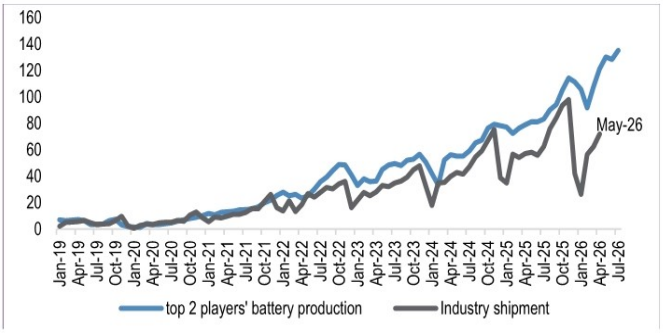


Source: ZE Consulting, J.P. Morgan. Note: Based on battery production data of top 6 battery makers.

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Figure 4: Top 2 battery makers' production volume vs. one-month lagged China NEV retail sales trend (GWh)

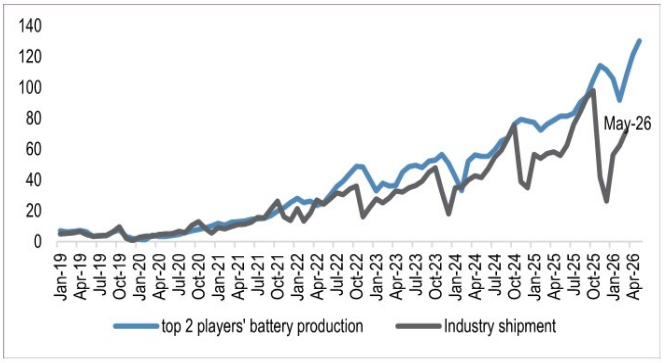
Battery production is usually one to two months ahead of NEV installation/shipments



Source: ZE Consulting, CABIA, J.P. Morgan

Figure 5: Top2 battery makers' production volume vs. two-month lagged China NEV retail sales trend (GWh)

Battery production is usually one to two months ahead of NEV installation/shipments



Source: ZE Consulting, CABIA, J.P. Morgan

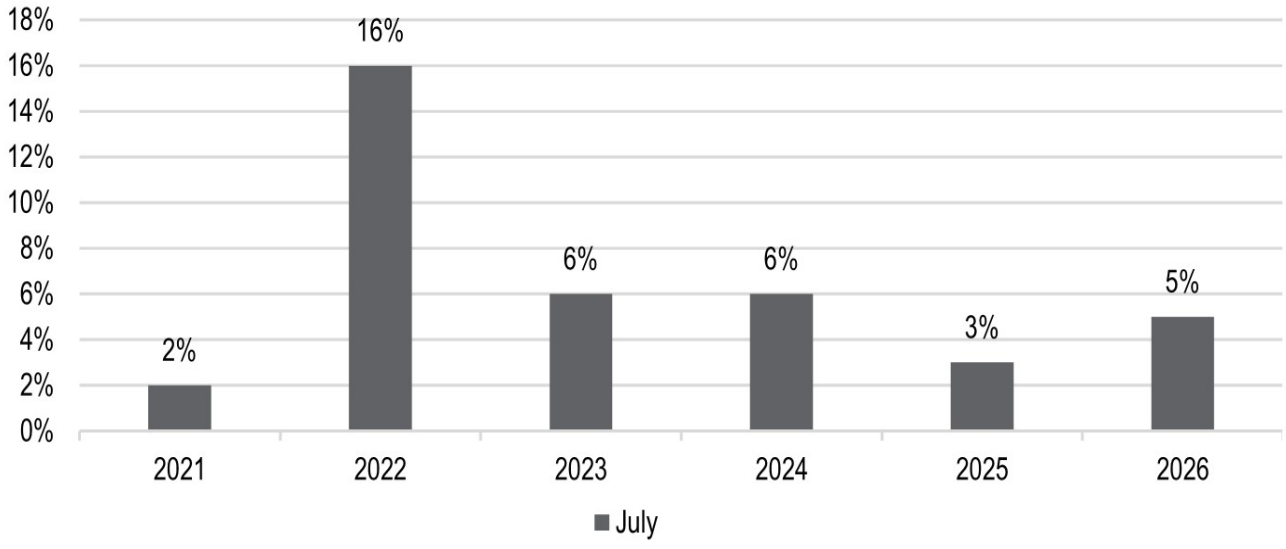
Battery production outlook

Table 1: Summary of production trends (monthly)

	Jun 25		Jul 25		Aug 25		Sep 25		Oct 25		Nov 25		Dec 25		Jan 26		Feb 26		Mar 26		Apr 26		May 26		Jun 26			Jul 26	
	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Y/Y	M/M	Final vs Beg Est	Y/Y	M/M
Battery maker																													
BYD	44%	-7%	31%	-4%	34%	8%	32%	-2%	20%	13%	10%	7%	-4%	-15%	-7%	-7%	-12%	-12%	2%	27%	3%	11%	18%	6%	27%	0%	-4%	38%	5%
CATL	49%	4%	45%	5%	40%	9%	44%	7%	47%	11%	64%	10%	68%	2%	61%	-4%	48%	-14%	64%	14%	86%	13%	83%	8%	73%	-2%	-6%	73%	6%
Gotion	108%	0%	100%	0%	49%	0%	40%	10%	25%	5%	34%	13%	34%	0%	21%	-10%	20%	-11%	37%	25%	51%	0%	43%	10%	56%	9%	0%	56%	0%
EVE	31%	9%	31%	0%	31%	6%	37%	8%	37%	0%	42%	5%	40%	0%	42%	-4%	57%	-13%	65%	40%	63%	-1%	67%	10%	66%	8%	0%	73%	4%
CALB	42%	19%	40%	0%	25%	12%	41%	22%	71%	11%	97%	6%	83%	0%	68%	-8%	95%	-10%	80%	11%	99%	13%	113%	7%	79%	0%	0%	104%	14%
Rept	98%	20%	131%	17%	122%	2%	131%	4%	138%	3%	143%	12%	65%	-7%	61%	-19%	84%	0%	54%	12%	78%	11%	69%	5%	49%	6%	0%	31%	2%
Total (top 6)	**51%**	**3%**	**46%**	**3%**	**40%**	**8%**	**43%**	**7%**	**42%**	**10%**	**50%**	**9%**	**45%**	**-2%**	**39%**	**-6%**	**34%**	**-12%**	**46%**	**18%**	**58%**	**11%**	**63%**	**8%**	**59%**	**0%**	**-4%**	**64%**	**6%**
NCM (top 2)	65%	5%	49%	5%	29%	5%	35%	4%	39%	3%	52%	3%	49%	-2%	40%	-6%	19%	-20%	33%	18%	37%	3%	31%	13%	10%	-12%	-8%	12%	7%
LFP (top 2)	42%	-2%	38%	2%	42%	10%	42%	4%	37%	14%	42%	10%	40%	-3%	36%	-5%	29%	-11%	43%	17%	58%	15%	69%	6%	74%	1%	-5%	80%	5%

Source: ZE Consulting, J.P. Morgan.

Figure 6: Historical July vs. June battery production volume growth (m/m %)



Source: ZE Consulting, J.P. Morgan. Note: Based on battery production data of top 6 battery makers: BYD, CATL, Gotion, EVE, CALB, REPT.

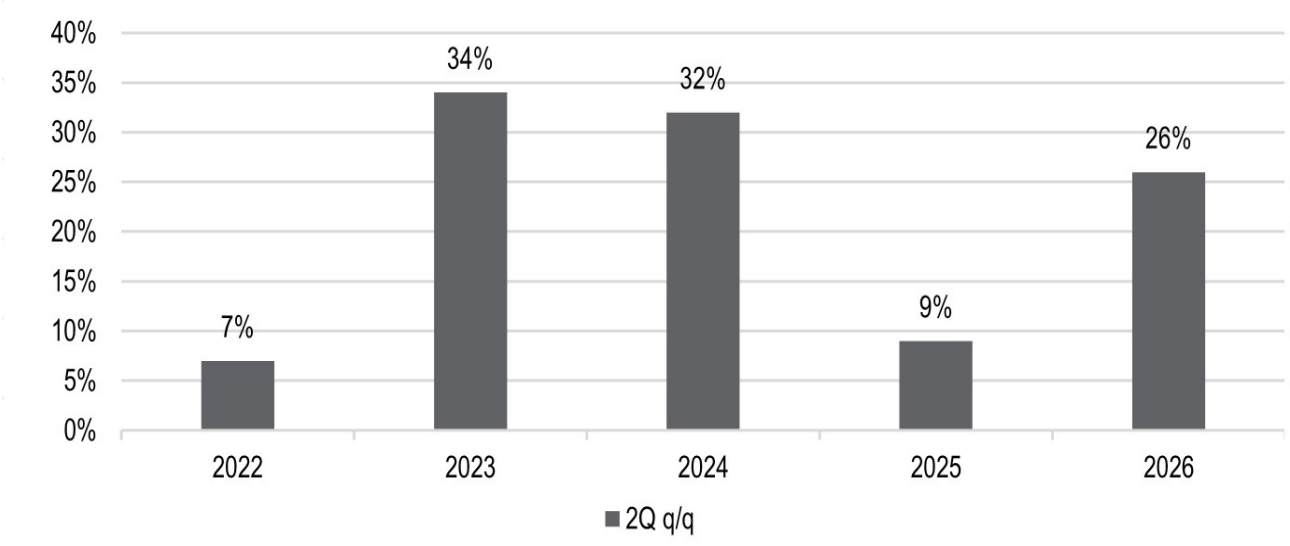
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Table 2: Summary of production trends (quarterly/semi-annually)

	1Q25		2Q25		3Q25		4Q25		1Q26		2Q26			1H24		2H24		FY24	1H25		2H25		FY25	1H26		YTD26
	Y/Y	Q/Q	Y/Y	Q/Q	Y/Y	Q/Q	Y/Y	Q/Q	Y/Y	Q/Q	Y/Y	Q/Q		Y/Y	h/h	Y/Y	h/h	Y/Y	Y/Y	h/h	Y/Y	h/h	Y/Y	Y/Y	h/h	Y/Y
Battery maker																										
BYD	109%	-3%	55%	6%	33%	-6%	8%	13%	-6%	-16%	15%	29%		36%	7%	64%	53%	52%	77%	16%	19%	2%	42%	5%	3%	9%
CATL	63%	-4%	40%	8%	43%	20%	59%	28%	58%	-5%	80%	23%		20%	-10%	27%	41%	24%	50%	7%	52%	42%	51%	69%	19%	70%
Gotion	121%	-3%	81%	2%	59%	8%	31%	21%	26%	-6%	50%	22%		54%	7%	82%	70%	70%	99%	17%	42%	21%	63%	38%	14%	41%
EVE	51%	-9%	29%	20%	33%	15%	40%	11%	55%	1%	65%	28%		92%	-8%	24%	34%	46%	38%	3%	37%	33%	37%	61%	21%	63%
CALB	61%	-8%	31%	13%	35%	30%	83%	35%	80%	-10%	96%	23%		48%	0%	48%	47%	48%	44%	-2%	59%	63%	53%	88%	16%	91%
Rept	149%	6%	64%	27%	128%	39%	109%	12%	65%	-16%	64%	26%							93%	32%	118%	65%	108%	64%	0%	58%
Total (top 6)	**79%**	**-4%**	**45%**	**9%**	**43%**	**14%**	**46%**	**23%**	**40%**	**-8%**	**60%**	**25%**		**31%**	**-4%**	**39%**	**45%**	**36%**	**60%**	**10%**	**45%**	**32%**	**51%**	**50%**	**14%**	**53%**
NCM (top 2)	**31%**	**-4%**	**44%**	**17%**	**37%**	**20%**	**47%**	**9%**	**31%**	**-14%**	**25%**	**12%**		**11%**	**-9%**	**20%**	**31%**	**16%**	**38%**	**5%**	**42%**	**35%**	**40%**	**28%**	**-5%**	**25%**
LFP (top 2)	**96%**	**-3%**	**45%**	**4%**	**41%**	**8%**	**40%**	**28%**	**36%**	**-6%**	**67%**	**28%**		**29%**	**-4%**	**44%**	**49%**	**38%**	**66%**	**11%**	**40%**	**26%**	**51%**	**52%**	**21%**	**56%**

Source: ZE Consulting, J.P. Morgan.

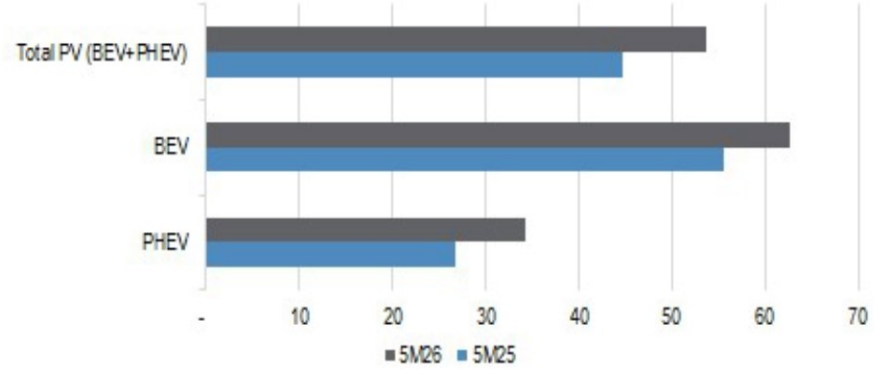
Figure 7: Historical 2Q average vs. 1Q average production volume growth (q/q %)



Source: ZE Consulting, J.P. Morgan. Note: Based on battery production data of top 6 battery makers: BYD, CATL, Gotion, EVE, CALB, REPT.

Figure 8: Average battery content per passenger vehicle in China: +20% y/y in 5M26

kWh/car



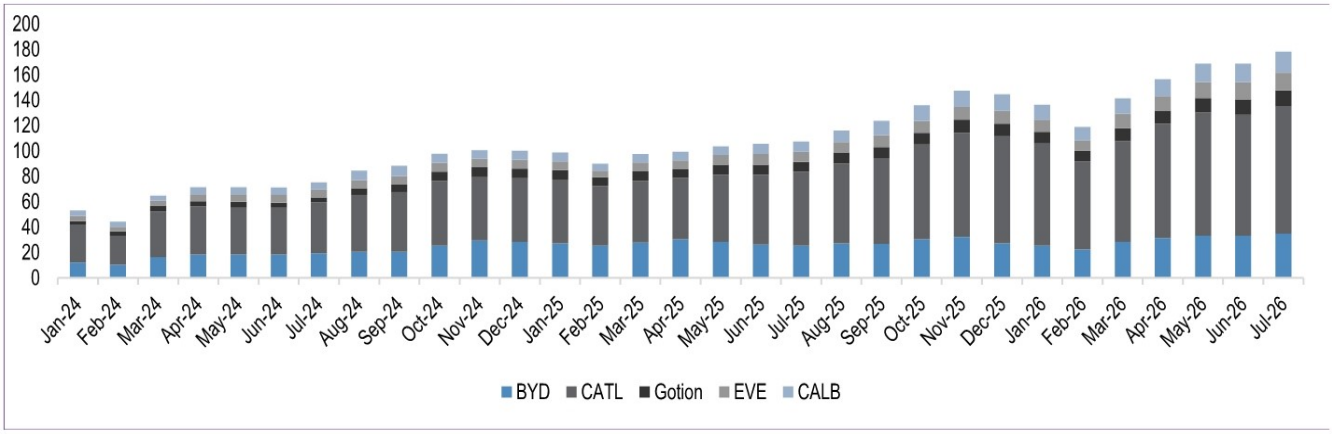
Source: ZE Consulting, GGII, J.P. Morgan.

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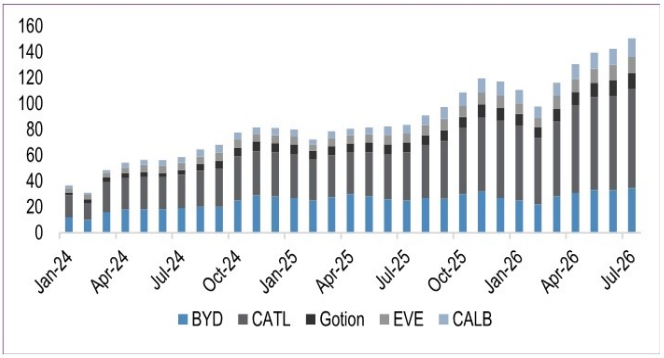
China battery & material production trend

Figure 9: Select battery makers' total production trends (GWh)



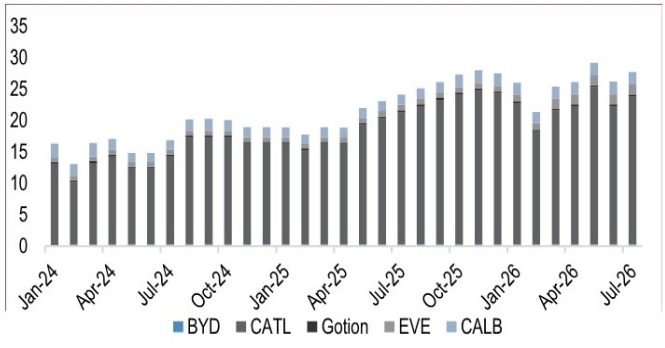
Source: ZE Consulting, GGII, J.P. Morgan. Data of the last month are based on ZE Consulting estimates.

Figure 10: Select battery makers' LFP production trends (GWh)



Source: ZE Consulting, GGII, J.P. Morgan. Data of the last month are based on ZE Consulting estimates.

Figure 11: Select battery makers' NCM production trends (GWh)



Source: ZE Consulting, GGII, J.P. Morgan. Data of the last month are based on ZE Consulting estimates.

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Global NEV Sales Trend

Table 3: EV+PHEV monthly penetration trend by region (monthly)

K units (cars sold), % (penetration)

	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26
EV+PHEV mix												
EU-5	26%	25%	27%	29%	29%	31%	33%	28%	28%	30%	31%	32%
China	53%	54%	54%	58%	57%	59%	59%	39%	45%	52%	61%	63%
U.S.	10%	11%	12%	14%	7%	6%	7%	7%	7%	7%	7%	7%
Total	**34%**	**33%**	**35%**	**39%**	**37%**	**38%**	**37%**	**26%**	**25%**	**31%**	**33%**	**35%**
M/M or Q/Q	*2%*	*-1%*	*2%*	*4%*	*-2%*	*1%*	*-1%*	*-12%*	*-1%*	*5%*	*3%*	*1%*
Y/Y	*5%*	*3%*	*2%*	*4%*	*3%*	*3%*	*4%*	*-2%*	*-4%*	*0%*	*3%*	*3%*
EV+PHEV												
EU-5	225	187	137	263	219	236	254	184	188	346	246	254
China	1111	987	1100	1298	1282	1320	1337	596	464	852	850	950
U.S.	122	154	179	172	84	82	101	76	82	97	93	105
Total	**1,457**	**1,328**	**1,416**	**1,733**	**1,585**	**1,638**	**1,692**	**856**	**734**	**1,295**	**1,189**	**1,309**
EV+ PHEV y/y growth												
EU-5	*23%*	*43%*	*44%*	*39%*	*46%*	*42%*	*34%*	*31%*	*33%*	*42%*	*41%*	*39%*
China	*30%*	*12%*	*7%*	*16%*	*7%*	*4%*	*3%*	*-20%*	*-32%*	*-14%*	*-6%*	*-7%*
U.S.	*-7%*	*14%*	*19%*	*27%*	*-37%*	*-44%*	*-40%*	*-40%*	*-35%*	*-35%*	*-31%*	*-21%*
Total	***24%***	***16%***	***11%***	***20%***	***7%***	***4%***	***2%***	***-15%***	***-23%***	***-6%***	***-2%***	***-2%***
PV												
EU-5	868	737	507	901	757	753	777	660	677	1166	799	791
China	2,084	1,844	2,019	2,241	2,242	2,225	2,261	1,544	1,034	1,648	1,384	1,510
U.S.	1,280	1,406	1,480	1,267	1,284	1,292	1,488	1,114	1,196	1,405	1,380	1,480
Total	**4,232**	**3,987**	**4,006**	**4,409**	**4,283**	**4,270**	**4,526**	**3,318**	**2,907**	**4,219**	**3,563**	**3,781**
PV y/y growth												
EU-5	*-6%*	*0%*	*4%*	*10%*	*5%*	*2%*	*0%*	*-1%*	*3%*	*11%*	*8%*	*3%*
China	*17%*	*6%*	*5%*	*5%*	*-2%*	*-8%*	*-14%*	*-14%*	*-25%*	*-15%*	*-21%*	*-22%*
U.S.	*-4%*	*9%*	*4%*	*7%*	*-4%*	*-6%*	*-2%*	*-1%*	*-4%*	*-12%*	*-6%*	*0%*
Total	***5%***	***6%***	***5%***	***7%***	***-1%***	***-6%***	***-8%***	***-8%***	***-12%***	***-8%***	***-10%***	***-9%***

Source: Bloomberg Finance L.P., Industry associations, J.P. Morgan. * EU-5 includes Germany, France, Spain, Italy and the U.K. China use CPCA retail data. Note: China Dec monthly sales are estimated by CPCA

Table 4: EV+PHEV monthly penetration trend by region (quarterly)

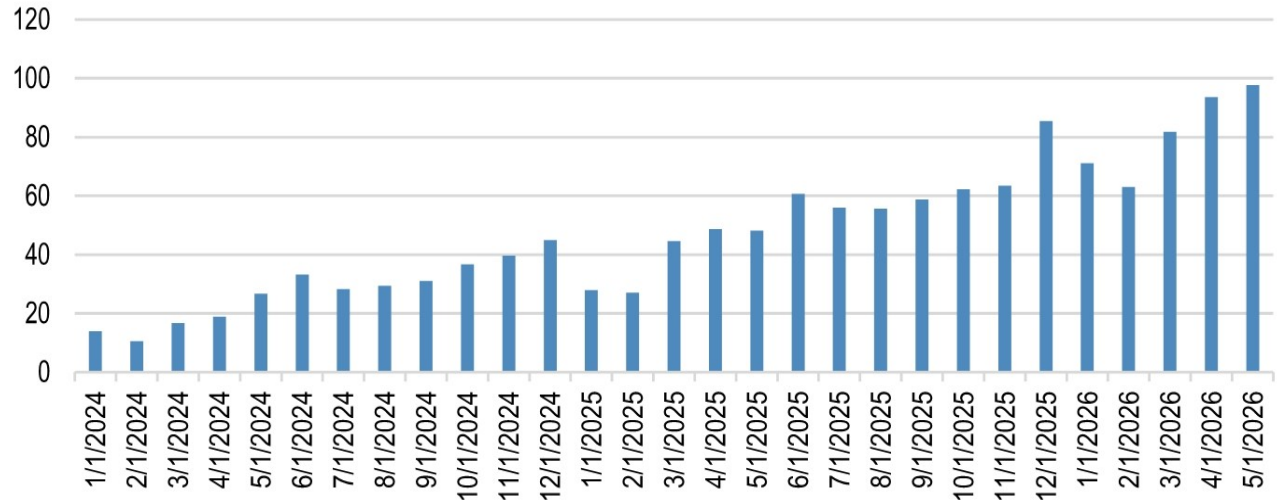
K units (cars sold), % (penetration)

	1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	4Q25	1Q26	FY22	FY23	FY24	FY25	YTD26
EV+PHEV mix														
EU-5	18%	18%	20%	23%	22%	24%	27%	31%	29%	22%	21%	20%	26%	30%
China	36%	46%	52%	51%	47%	53%	55%	59%	45%	27%	35%	47%	54%	52%
U.S.	10%	10%	11%	11%	10%	9%	12%	7%	7%	7%	9%	10%	10%	7%
Total	**23%**	**27%**	**33%**	**34%**	**29%**	**32%**	**36%**	**38%**	**28%**	**20%**	**24%**	**30%**	**34%**	**30%**
M/M or Q/Q	*-4%*	*4%*	*6%*	*1%*	*-5%*	*3%*	*4%*	*1%*	*-10%*					
Y/Y	*3%*	*6%*	*8%*	*7%*	*6%*	*5%*	*3%*	*3%*	*-2%*	*8%*	*4%*	*6%*	*4%*	*0%*
EV+PHEV														
EU-5	429	449	415	505	526	581	587	709	718	1,728	1,870	1,798	2,403	1,218
China	1,768	2,334	3,027	3,767	2,421	3,037	3,385	3,939	1,912	5,661	7,747	10,896	12,782	3,712
U.S.	363	402	420	447	402	390	505	267	255	928	1,434	1,632	1,564	453
Total	**2,560**	**3,185**	**3,863**	**4,719**	**3,349**	**4,008**	**4,477**	**4,915**	**2,885**	**8,317**	**11,051**	**14,326**	**16,749**	**5,383**
EV+ PHEV y/y growth														
EU-5	*7%*	*-1%*	*-15%*	*-3%*	*23%*	*29%*	*41%*	*41%*	*36%*	*16%*	*8%*	*-4%*	*34%*	*38%*
China	*34%*	*32%*	*44%*	*47%*	*37%*	*30%*	*12%*	*5%*	*-21%*	*89%*	*37%*	*41%*	*17%*	*-15%*
U.S.	*16%*	*13%*	*7%*	*20%*	*11%*	*-3%*	*20%*	*-40%*	*-37%*	*60%*	*55%*	*14%*	*-4%*	*-32%*
Total	***26%***	***23%***	***29%***	***37%***	***31%***	***26%***	***16%***	***4%***	***-14%***	***64%***	***33%***	***30%***	***17%***	***-9%***
PV														
EU-5	2,412	2,434	2,046	2,238	2,378	2,373	2,145	2,287	2,503	7,924	9,089	9,130	9,184	4,093
China	4,874	5,055	5,778	7,338	5,120	5,771	6,104	6,728	4,226	20,809	21,955	23,045	23,723	7,120
U.S.	3,787	4,118	3,901	4,220	3,960	4,221	4,153	4,064	3,715	13,853	15,633	16,027	16,398	6,575
Total	**11,073**	**11,607**	**11,725**	**13,797**	**11,458**	**12,365**	**12,402**	**13,079**	**10,444**	**42,585**	**46,677**	**48,202**	**49,304**	**17,788**
PV y/y growth														
EU-5	*7%*	*4%*	*-6%*	*-4%*	*-1%*	*-2%*	*5%*	*2%*	*5%*	*-4%*	*15%*	*0%*	*1%*	*5%*
China	*12%*	*-5%*	*0%*	*12%*	*5%*	*14%*	*6%*	*-8%*	*-17%*	*2%*	*6%*	*5%*	*3%*	*-19%*
U.S.	*5%*	*0%*	*-2%*	*8%*	*5%*	*2%*	*6%*	*-4%*	*-6%*	*-8%*	*13%*	*3%*	*2%*	*-5%*
Total	***9%***	***-1%***	***-2%***	***8%***	***3%***	***7%***	***6%***	***-5%***	***-9%***	***-2%***	***10%***	***3%***	***2%***	***-9%***

Source: Bloomberg Finance L.P., Industry associations, J.P. Morgan. * EU-5 includes Germany, France, Spain, Italy and the U.K. China uses CPCA retail data. Note: China Dec monthly sales are estimated by CPCA

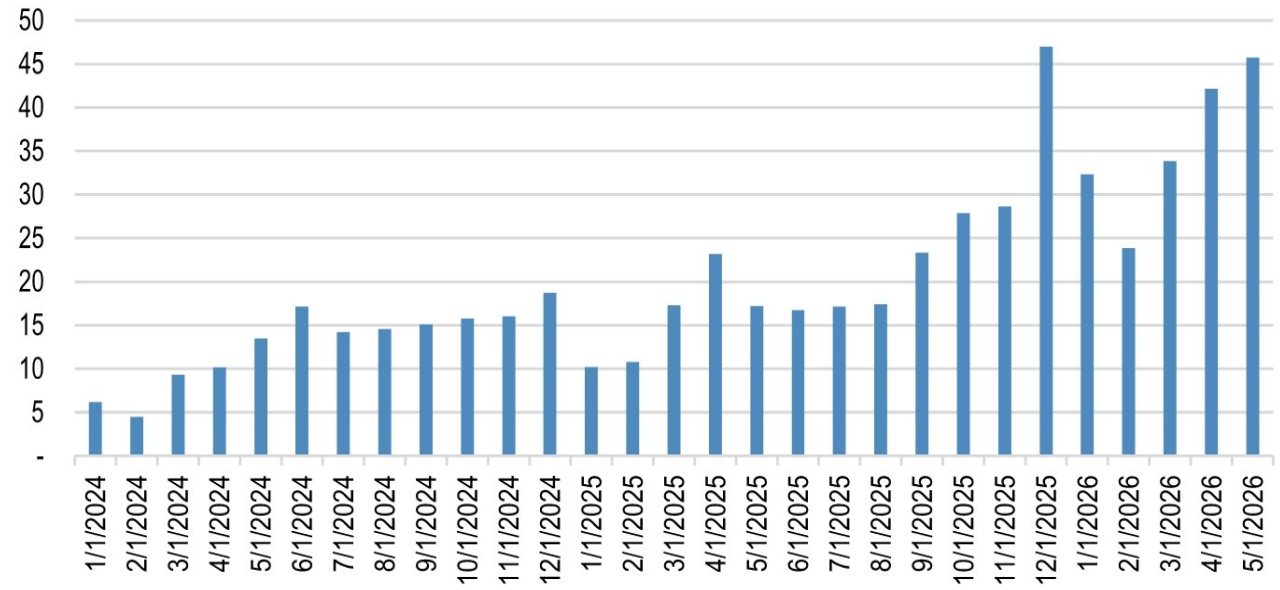
Chinese players ESS battery shipments in different regions

Figure 12: Global ESS battery shipments (monthly) (Unit: Gwh)



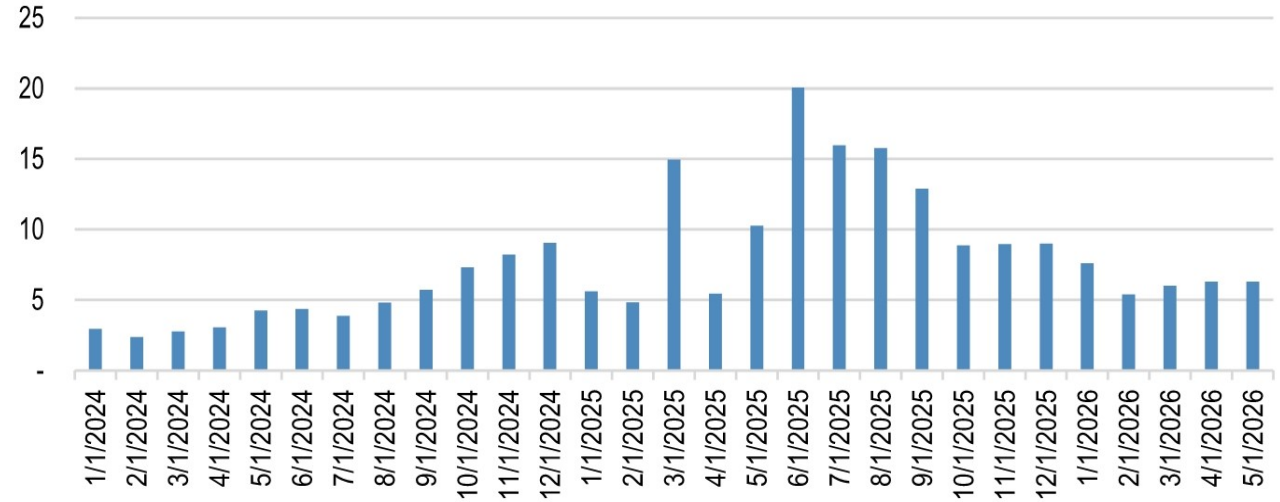
Source: ICCSino

Figure 13: China domestic demand ESS shipments (monthly) (Unit: Gwh)



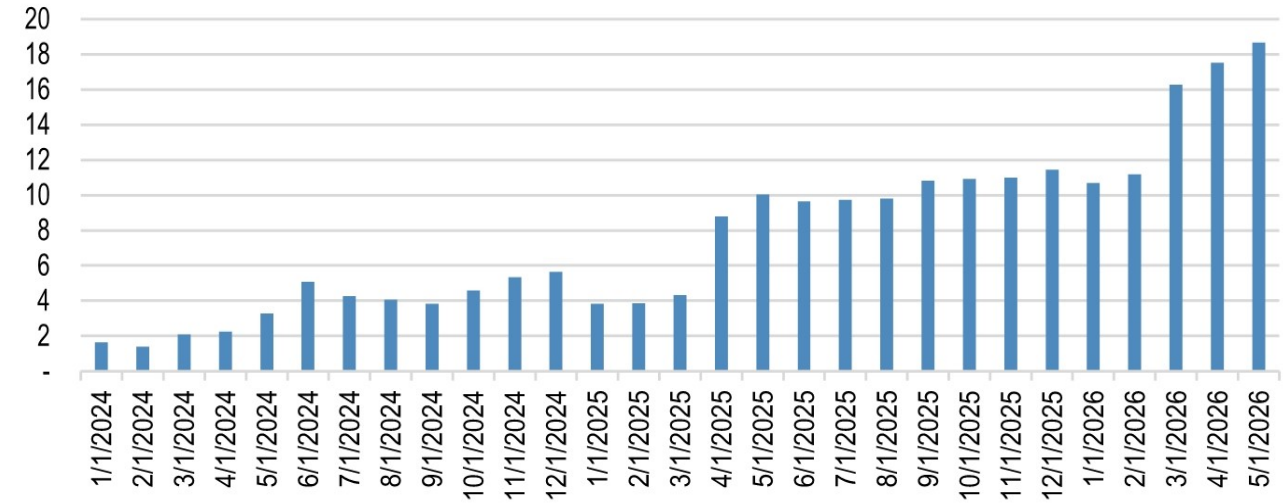
Source: ICCSino

Figure 14: Chinese players' ESS battery export to US (monthly) (Unit: Gwh)



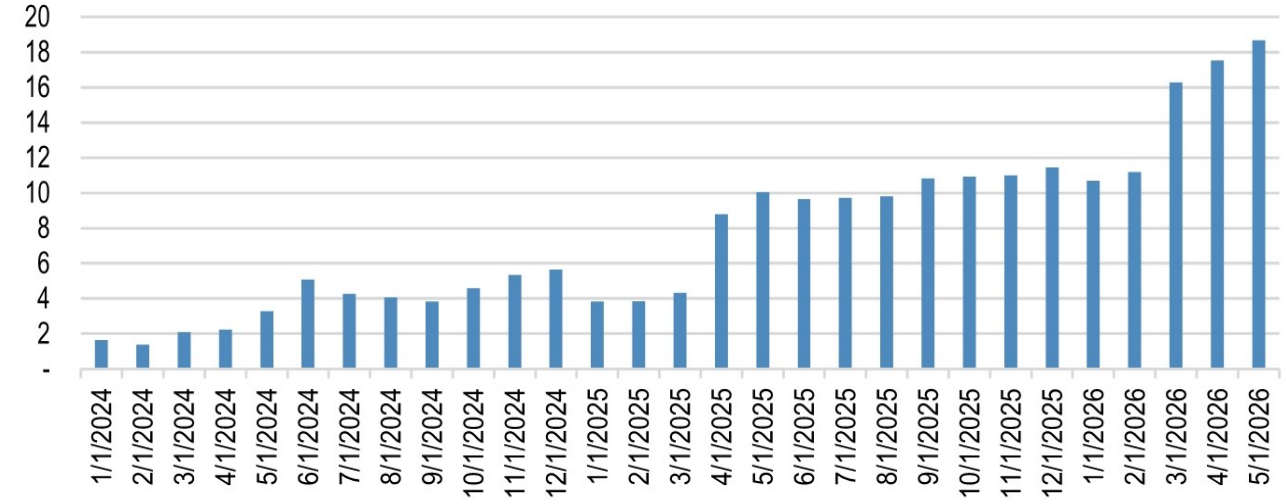
Source: ICCSino

Figure 15: Chinese players' ESS battery exports to EU (monthly) (Unit: Gwh)



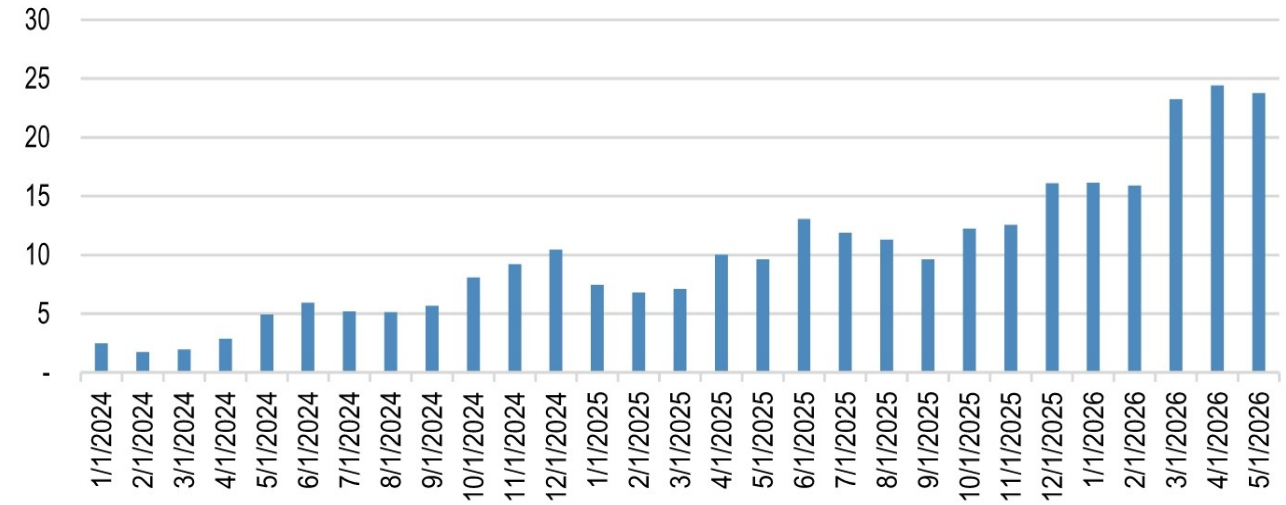
Source: ICCSino

Figure 16: Chinese players' ESS battery exports to EU residential market (monthly) (Unit: Gwh)



Source: ICCSino

Figure 17: Chinese players' ESS battery exports to RoW (markets excluding China, US and EU) (monthly) (Unit: Gwh)



Source: ICCSino

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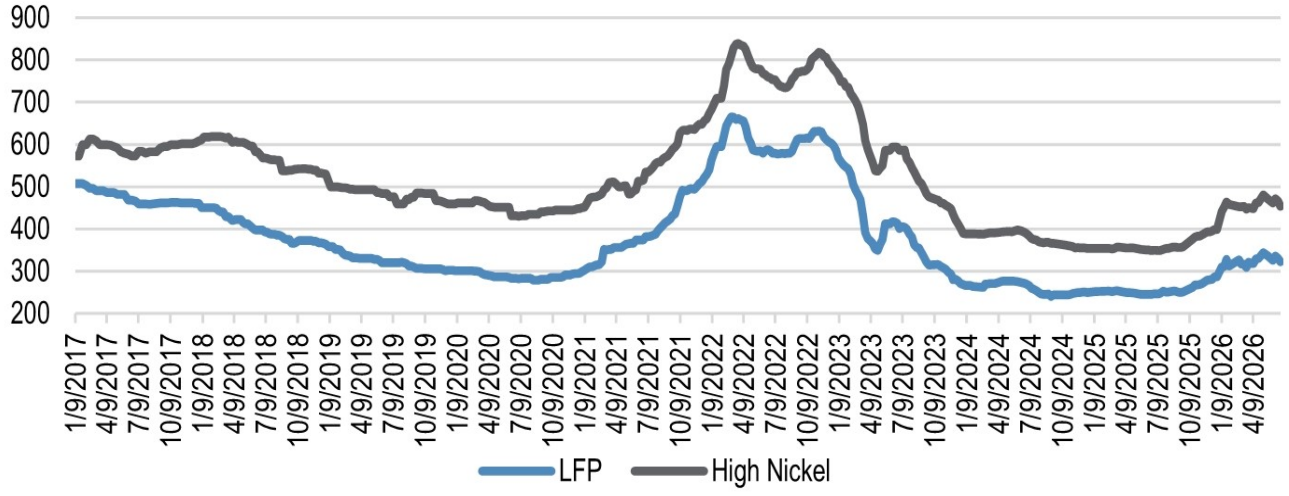
Summary of battery and material prices

Table 5: Summary of battery and material price changes (market spot price changes)

	1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	4Q25	1Q26	2Q26
Battery cell										
Consumer (mid-end cylindrical)	-	-	-	-	-	-	-	-	-	
Consumer (high-end cylindrical)	-	-	-	-	-	-	-	-	-	
EV (NCM prismatic)	-10%	-3%	-1%	-	-2%	-5%	-	4%	9%	-
EV (LFP prismatic)	-13%	-5%	-2%	-	-4%	-9%	-	-	9%	-
EV (18650 cylindrical)	-	-	-	-	-	-	-	-		
ESS (CH player)	-	-	-	-	-1%	-4%	7%	-	10%	6%
Battery material										
LFP cathode	0.20%	-10%	-17%	-2%	-	-10%	13%	31%	16%	-2%
NCM cathode (NCM523)	2%	-11%	-4%	-2%	18%	-6%	3%	30%	18%	1%
NCM cathode (NCM811)	1%	-6%	-1%	-1%	5%	-3%	2%	16%	17%	3%
Artificial graphite anode	-6%	-	-	-	1%	1%	-1%	-	-3%	-
Natural graphite anode	-5%	-2%	-	-	-	-	-	-	-	-
Separator (Wet 9□: mid-end)	-20%	-2%	-	-	-7%	-8%	3%	17%	-	4%
Separator (Dry 16□: mid-end)	-23%	-	-5%	-	5%	-	-	-	-	-
NCM Electrolyte	-6%	-18%	-1%	2%	-9%	-5%	2%	66%	-16%	-6%
LFP Electrolyte	-3%	-19%	-3%	3%	-10%	-6%	2%	93%	-17%	-6%
Copper foil processing fee (8um)	-	-	-	6%	-6%	-	-	6%	-	-
Copper foil processing fee (6um)	-6%	13%	-	6%	-	-	-3%	5%	-	-
Raw material										
Lithium carbonate (mainly for LFP)	21%	-15%	-17%	-	-3%	-16%	19%	63%	32%	-8%
Lithium hydroxide (mainly for NCM)	12%	-18%	-14%	-1%	-3%	-15%	26%	40%	52%	-11%
Cobalt	1%	-5%	-13%	5%	37%	-3%	5%	50%	4%	-2%
Nickel	3%	2%	-2%	-6%	3%	-5%	-0.40%	8%	1%	-6%
LiPF6	-1%	-11%	-13%	13%	-3%	-15%	18%	195%	-41%	-1%

Source: WIND, ICCSino, SMM, J.P. Morgan. Note: "-" means no changes. Note: LFP cathode price changes since 2Q26 refer to LFP premium (EV) cathode price changes.

Figure 18: Estimated battery material cost (Rmb/kWh)

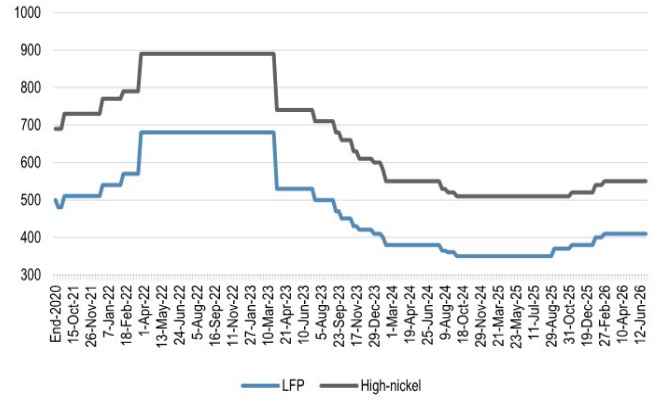


Source: ZE Consulting, J.P. Morgan.

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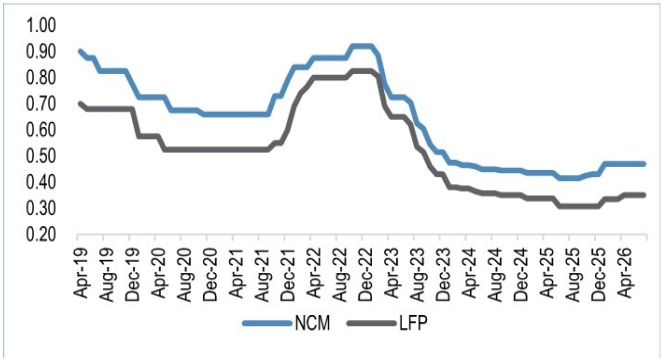
Battery prices

Figure 19: China EV battery price at cell level (excl. VAT, Rmb/kWh), as per ZE Consulting



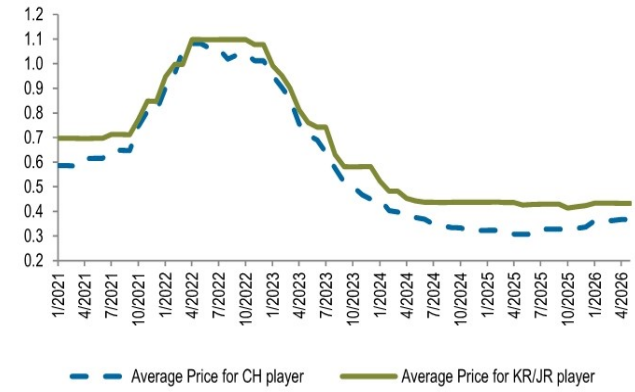
Source: ZE Consulting., J.P. Morgan.

Figure 20: China EV battery price at cell level (excl. VAT, Rmb/Wh), as per CIAPS



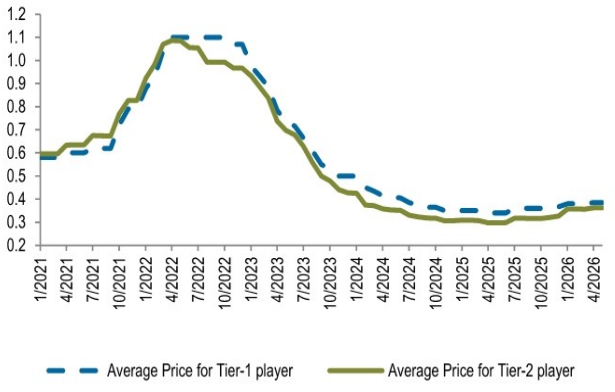
Source: CIAPS, ICCSino, J.P. Morgan.

Figure 21: ESS battery prices: CH vs. KR/JP players



Source: ICCSino, J.P. Morgan. Note: Prices include VAT and are based on new contract prices.

Figure 22: ESS battery prices: Chinese tier-1 vs. tier-2

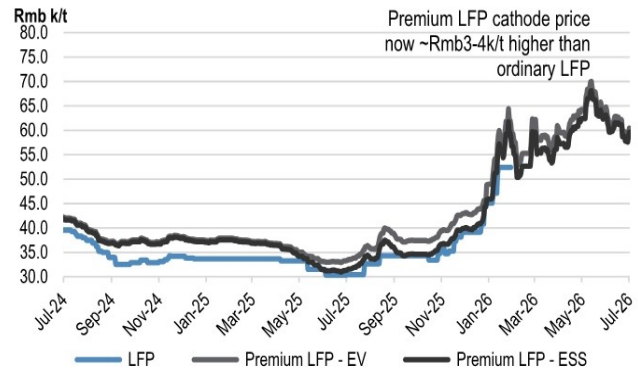


Source: ICCSino, J.P. Morgan. Note: Prices include VAT and are based on new contract prices.

Battery material prices

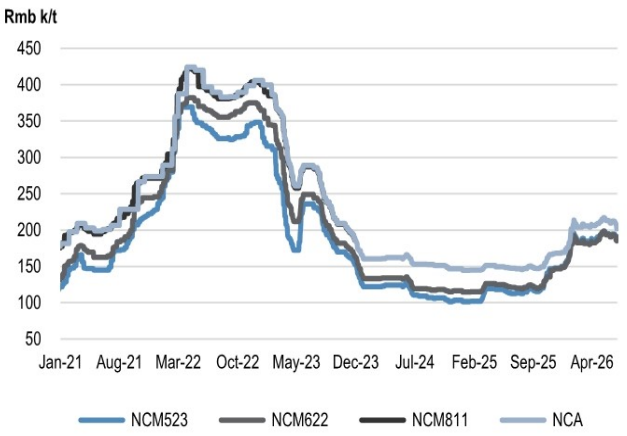
Battery material

Figure 23: LFP cathode price (Rmb10k/ton)



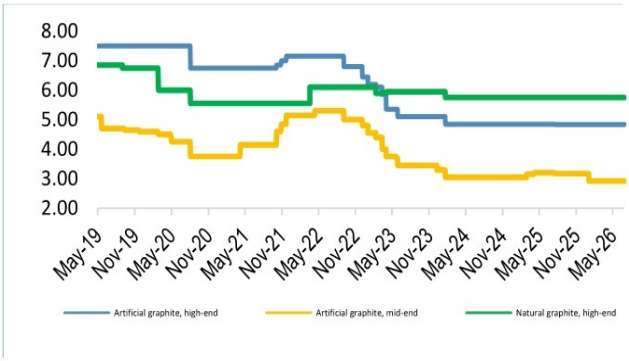
Source: Wind, ICCSino, J.P. Morgan.

Figure 24: NCM cathode prices (Rmb10k/ton)



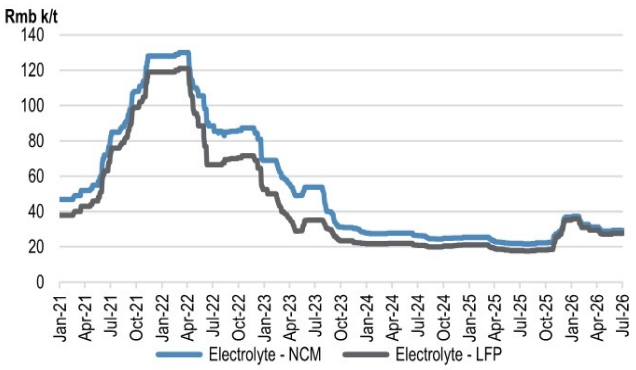
Source: Wind, ICCSino, J.P. Morgan.

Figure 25: Anode prices (Rmb10k/ton)



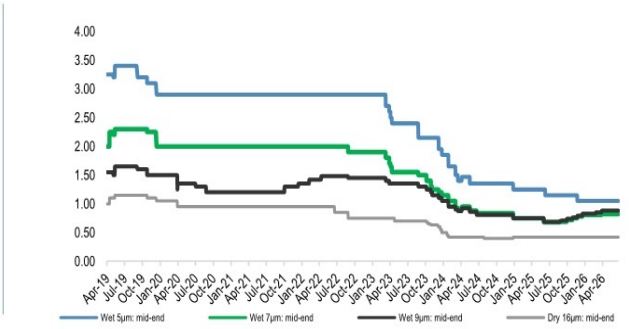
Source: Wind, ICCSino, J.P. Morgan.

Figure 26: Electrolyte prices (Rmb10k/ton)



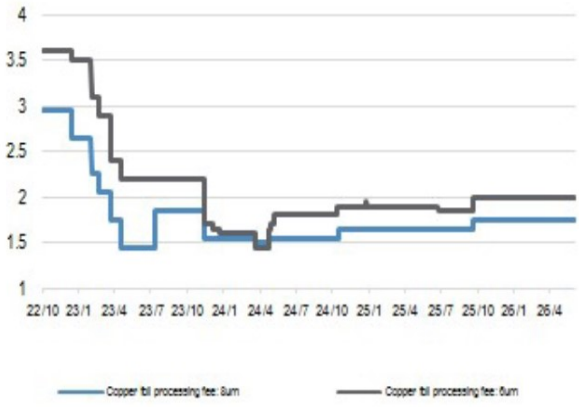
Source: SMM, ICCSino, J.P. Morgan.

Figure 27: Separator prices (Rmb/sqm)



Source: Wind, ICCSino, J.P. Morgan.

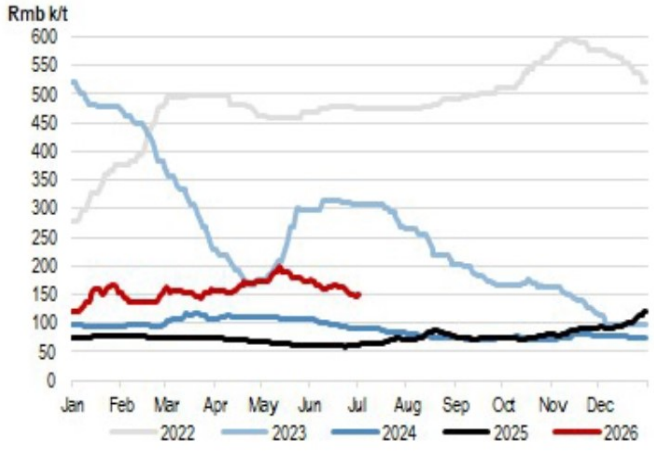
Figure 28: Copper foil processing fee (Rmb10k/ton)



Source: Wind, ICCSino, J.P. Morgan.

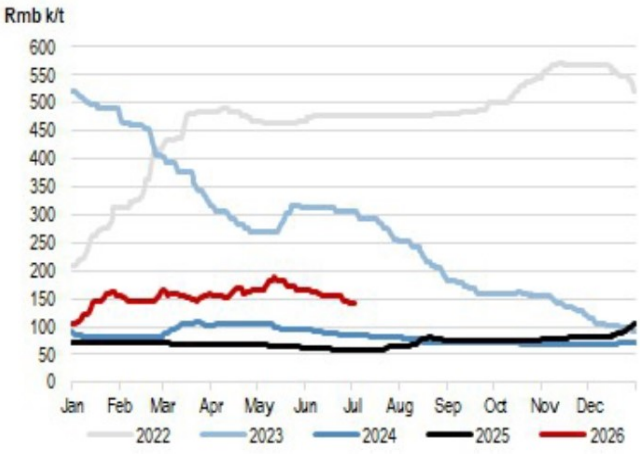
Raw materials

Figure 29: Lithium carbonate price



Source: Bloomberg Finance L.P., J.P. Morgan.

Figure 30: Lithium hydroxide price



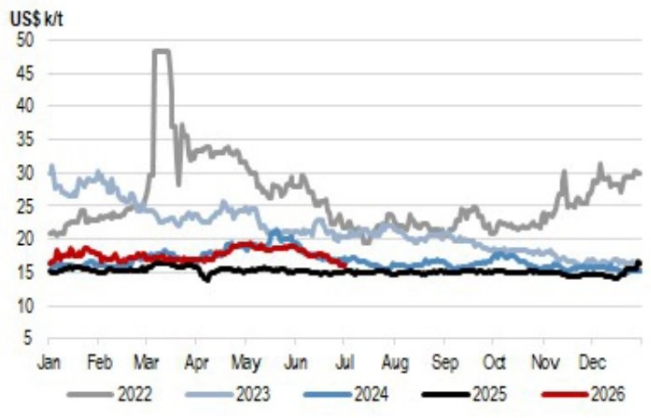
Source: Bloomberg Finance L.P., J.P. Morgan.

Figure 31: Cobalt and precursor prices



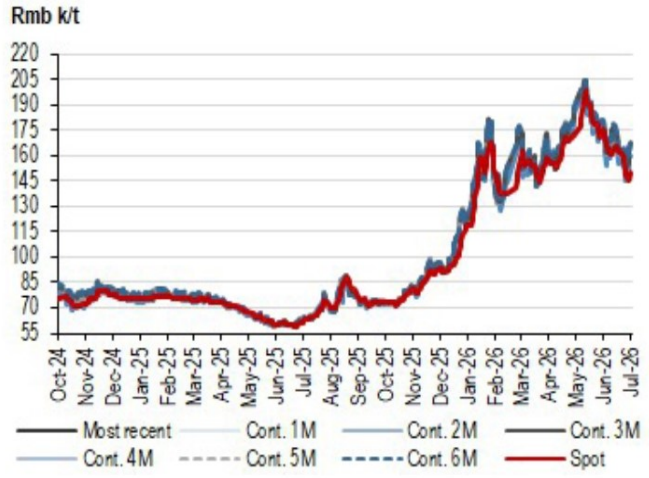
Source: Bloomberg Finance L.P., J.P. Morgan.

Figure 32: LME nickel price



Source: Bloomberg Finance L.P., J.P. Morgan.

Figure 33: Lithium GZ future price (Rmb k/t)



Source: Bloomberg Finance L.P., J.P. Morgan.

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Valuation comparison

Table 6: Valuation comparison of China battery supply chain

Company	Ticker	Rating	Cover analyst	Price 2-Jul	Mkt cap (US$M)	P/E (x)		P/B (x)		ROE		Price change YTD
						26E	27E	26E	27E	26E	27E	
Upstream - raw material						**13.8**	**12.4**	**2.2**	**1.9**	**19%**	**18%**	**-11%**
Tianqi Lithium	002466 CH	N	Avery Chan	60.0	14,240	15.8	14.1	2.0	1.8	14%	14%	8%
Ganfeng Lithium	002460 CH	N	Avery Chan	64.0	18,163	20.5	18.6	2.5	2.2	13%	13%	2%
CMOC	3993 HK	OW	Avery Chan	15.1	54,607	8.9	8.6	2.6	2.1	33%	27%	-21%
Zhejiang Huayou	603799 CH	NC	-	47.1	13,117	10.1	8.3	1.6	1.3	16%	18%	-31%
Midstream - battery material						**28.1**	**21.3**	**2.9**	**2.7**	**12%**	**13%**	**17%**
Beijing Easpring	300073 CH	NC	-	47.4	3,796	23.5	18.1	1.6	1.5	7%	9%	-18%
Shanghai Putailai	603659 CH	OW	Rebecca Wen	28.2	8,887	18.6	13.0	2.6	2.2	15%	16%	3%
Shanshan	600884 CH	NC	-	13.2	4,375	nm	nm	n/a	n/a	5%	6%	-2%
Shangtai	001301 CH	NC	-	87.8	3,369	19.0	13.4	2.8	2.4	15%	18%	2%
Yunnan Energy	002812 CH	N	Rebecca Wen	65.0	9,402	36.6	20.1	2.3	2.1	6%	10%	15%
Capchem	300037 CH	NC	-	87.8	9,744	32.5	26.8	5.3	4.5	17%	18%	68%
Do-Fluoride	002407 CH	NC	-	54.8	9,608	30.8	26.4	n/a	n/a	20%	19%	62%
Shenzhen Senior	300568 CH	NC	-	20.3	4,220	39.7	22.6	2.6	2.4	6%	10%	33%
Hunan Yuneng	301358 CH	N	Rebecca Wen	75.4	9,363	14.6	12.9	3.6	2.9	23%	22%	17%
Dynanonic	300769 CH	UW	Rebecca Wen	67.1	2,766	29.3	24.5	4.6	4.0	12%	15%	52%
Ningbo Ronbay	688005 CH	UW	Rebecca Wen	28.9	3,044	52.5	34.8	2.4	2.2	6%	8%	-18%
CNGR	300919 CH	OW	Parsley Ong	41.9	6,108	12.4	n/a	1.5	n/a	10%	11%	-10%
Battery equipment						**23.9**	**17.8**	**3.0**	**2.7**	**13%**	**15%**	**-2%**
Wuxi Lead-A	300450 CH	OW	Rebecca Wen	38.5	9,319	22.6	16.4	4.1	3.5	17%	20%	-23%
Wuxi Lead-H	470 HK	OW	Rebecca Wen	31.7	9,319	16.1	11.7	2.7	2.5	17%	20%	27%
Yinghe	300457 CH	NC	-	21.0	1,992	22.2	18.3	2.0	1.8	8%	9%	-25%
Hangke	688006 CH	NC	-	32.8	2,913	34.5	25.1	3.3	3.0	9%	12%	12%
Downstream cell makers						**19.5**	**14.8**	**2.8**	**2.4**	**15%**	**16%**	**-5%**
Gotion	002074 CH	UW	Rebecca Wen	26.7	7,139	23.8	17.5	1.6	1.5	7%	9%	-32%
CATL-A	300750 CH	OW	Rebecca Wen	382.4	267,113	18.3	15.1	4.4	3.7	26%	27%	5%
CATL-H	3750 HK	OW	Rebecca Wen	681.0	267,115	28.2	23.2	6.7	5.7	26%	27%	36%
EVE Energy	300014 CH	N	Rebecca Wen	61.3	19,605	18.4	14.9	2.6	2.3	15%	16%	-7%
CALB	3931 HK	OW	Rebecca Wen	23.0	5,197	13.2	9.3	0.9	0.8	7%	9%	-8%
REPT	666 HK	NC	-	13.1	3,903	21.6	14.4	2.3	1.8	11%	14%	-1%
Sunwoda	300207 CH	NC	-	18.2	4,945	13.0	9.3	1.4	1.3	10%	12%	-30%
NEV OEMs						**19.8**	**8.3**	**1.2**	**1.1**	**6%**	**13%**	**-27%**
Brilliance China	1114 HK	N	Nick Lai	2.0	1,261	3.5	3.1	0.5	0.4	12%	15%	-52%
Great Wall Motor	2333 HK	N	Nick Lai	8.4	16,235	5.9	5.5	0.7	0.6	11%	11%	-45%
Geely Automobile	175 HK	OW	Nick Lai	17.3	23,815	6.1	5.2	1.3	1.1	24%	23%	-3%
GAC	2238 HK	N	Nick Lai	2.2	6,373	-22.1	25.3	0.2	0.2	-1%	1%	-47%
SAIC	600104 CH	N	Nick Lai	9.9	16,721	9.5	8.3	0.4	0.4	4%	4%	-35%
BAIC Motor-H	1958 HK	N	Nick Lai	0.8	818	93.4	3.8	0.1	0.1	0%	2%	-59%
Changan Auto	200625 CH	UW	Nick Lai	3.3	9,392	9.5	8.8	0.4	0.4	4%	5%	-22%
BYD	1211 HK	OW	Nick Lai	78.3	103,629	14.4	11.2	2.1	1.8	16%	18%	-18%
NIO Inc - Adr	NIO US	OW	Nick Lai	5.0	12,453	nm	26.9	nm	nm	-11%	47%	-3%
XPeng Inc - Adr	XPEV US	OW	Nick Lai	13.6	13,029	nm	nm	3.3	3.3	-14%	-3%	-33%
Leapmotor	9863 HK	OW	Nick Lai	34.9	6,014	16.1	9.3	2.4	1.9	17%	23%	-28%
Li Auto - Adr	LI US	UW	Nick Lai	12.2	12,840	-23.9	19.3	1.2	1.2	-5%	6%	-28%
Auto parts						**18.6**	**15.8**	**2.5**	**2.4**	**15%**	**15%**	**-25%**
Minth	425 HK	OW	Rebecca Wen	27.4	4,089	8.9	7.3	1.1	1.0	13%	14%	-14%
Nexteer	1316 HK	N	Rebecca Wen	3.9	1,245	8.6	6.2	0.6	0.5	7%	9%	-39%
Fuyao-H	3606 HK	N	Rebecca Wen	50.2	18,569	11.3	9.5	2.7	2.4	25%	26%	-25%
Fuyao-A	600660 CH	N	Rebecca Wen	49.8	18,568	13.0	10.9	3.1	2.7	25%	26%	-23%
Huayu	600741 CH	N	Rebecca Wen	15.6	7,218	6.5	6.2	0.7	n/a	11%	11%	-22%
Joyson	600699 CH	N	Rebecca Wen	21.9	4,741	19.4	16.0	1.6	1.5	9%	10%	-30%
Tuopu	601689 CH	UW	Rebecca Wen	56.8	14,520	35.4	31.1	3.8	3.5	11%	12%	-26%
Sanhua	002050 CH	OW	Karen Li	44.9	26,348	39.8	34.0	5.3	4.8	14%	14%	-19%
Sanhua-H	2050 HK	OW	Karen Li	27.5	26,348	24.3	20.8	3.3	2.9	n/a	n/a	-28%
Simple average						**20.6**	**15.1**	**2.4**	**2.2**	**13%**	**15%**	**-9%**

Source: Bloomberg Finance L.P., J.P. Morgan estimates. Note: Bloomberg consensus estimates for Not Covered (NC) stocks, J.P. Morgan estimates for all others. "nm" = not meaningful (loss or near breakeven).

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CALB(3931.HK/HK$23.00/OW), CATL - A(300750.SZ/Rmb382.35/OW), CATL - H(3750.HK/HK$681.00/OW)

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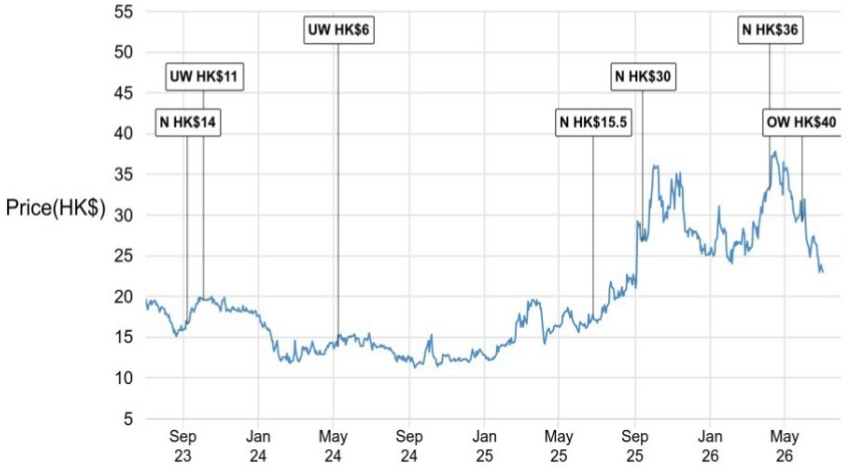
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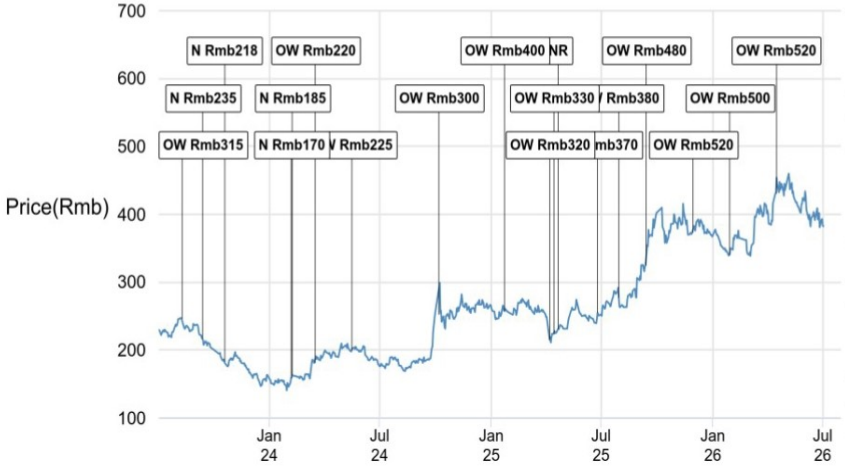
CALB (3931.HK, 3931 HK) Price Chart



Date	Rating	Price (HK$)	Price Target (HK$)
08-Sep-23	N	16.62	14
05-Oct-23	UW	19.58	11
09-May-24	UW	13.88	6
26-Jun-25	N	17.68	15.5
14-Sep-25	N	26.76	30
07-Apr-26	N	33.00	36
30-May-26	OW	29.22	40

Source: Bloomberg Finance L.P. and J.P. Morgan; price data adjusted for stock splits and dividends.
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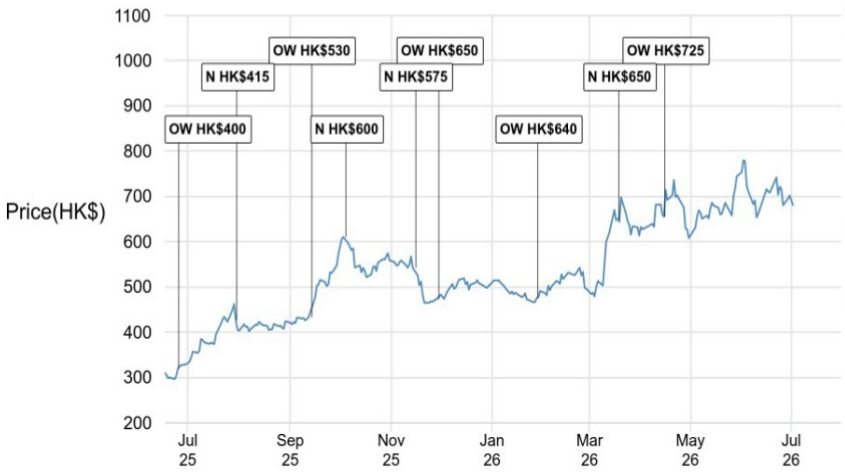
CATL - A (300750.SZ, 300750 CH) Price Chart



Date	Rating	Price (Rmb)	Price Target (Rmb)
11-Aug-23	OW	246.50	315
14-Sep-23	N	216.60	235
20-Oct-23	N	182.70	218
07-Feb-24	N	158.33	170
09-Feb-24	N	162.84	185
17-Mar-24	OW	181.00	220
17-May-24	OW	199.67	225
07-Oct-24	OW	251.89	300
23-Jan-25	OW	258.00	400
08-Apr-25	OW	215.22	320
15-Apr-25	OW	224.00	330
22-Apr-25	NR	231.36	--
26-Jun-25	OW	254.90	370
31-Jul-25	OW	277.09	380
14-Sep-25	OW	325.00	480
30-Nov-25	OW	373.20	520
29-Jan-26	OW	339.99	500
16-Apr-26	OW	431.00	520

Source: Bloomberg Finance L.P. and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage Sep 27, 2018. All share prices are as of market close on the previous business day.

CATL - H (3750.HK, 3750 HK) Price Chart



Date	Rating	Price (HK$)	Price Target (HK$)
26-Jun-25	OW	319.00	400
31-Jul-25	N	426.60	415
14-Sep-25	OW	432.80	530
05-Oct-25	N	610.50	600
16-Nov-25	N	542.00	575
30-Nov-25	OW	472.00	650
29-Jan-26	OW	475.40	640
19-Mar-26	N	650.50	650
16-Apr-26	OW	655.50	725

Source: Bloomberg Finance L.P. and J.P. Morgan; price data adjusted for stock splits and dividends.
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