SECTOR UPDATE

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Rechargeable Batteries (NEUTRAL)

November: Mixed signals for US EV demand

- Global EV sales rose 24% y-y to 2.2m units in September—up 48% in the US, 32% in Europe, and 17% in China.
- While Korean cell makers project modest growth for North American EV demand, they forecast strong ESS demand growth for the region.
- In November, investors should watch for mixed signals surround US demand for EVs.

EV Battery Monthly Tracker: September

Global EV sales volume jumps 24% y-y in September: Global EV sales climbed 24% y-y to 2.2m units in September, according to EV-Volumes. Regionally, sales rose 32% y-y to 430,000 units in Europe (sustaining prior momentum), 17% y-y to 1.38m units in China (with growth slowing since February), and 48% y-y to 190,000 units in the US (vs up 26% y-y in August), driven by orders placed ahead of the Sep 30 expiry of IRA EV tax credits.

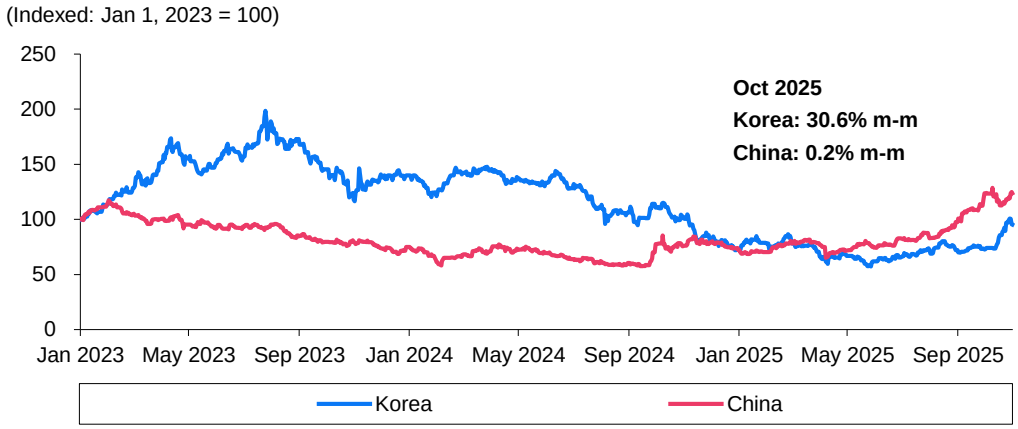
EV battery installations* surge 28% y-y in September: Global EV battery installations grew 28% y-y to 111 GWh in September. Market leader CATL saw installations rise 17% y-y to 35 GWh (31% of the global total), while BYD, the second biggest player, saw an increase of 14% y-y to 19 GWh (17% share; down from 20% in August).

Among Korea's big three battery makers, LG Energy Solution (LGES) saw installations rise 32% y-y to 14.7 GWh, and Samsung SDI's expanded 24% y-y to 2.8 GWh (vs up 9% y-y in September). SK On's installations soared 103% y-y to 5.4 GWh, driven by a 56% y-y jump in shipments to HMC (47% of its total) and a 613% y-y surge in shipments to VW (30% of its total).

*For passenger autos; estimates derived by multiplying BEV + PHEV sales volume by per-auto battery capacity

(Continued on the next page)

Rechargeable battery value chain: Share-price performances



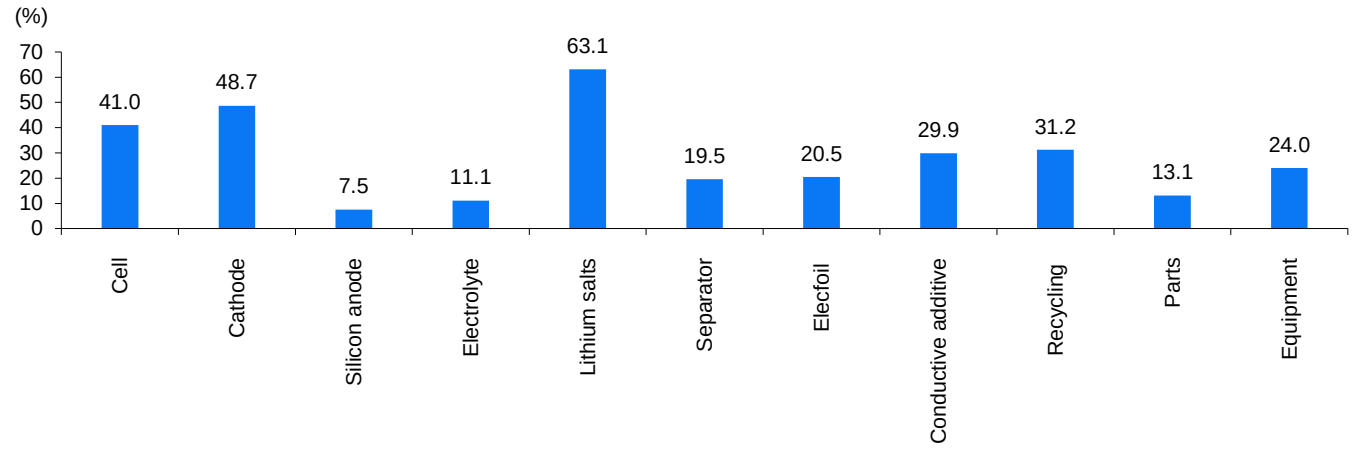
Note: As of end-Oct 2025
Source: Bloomberg, Samsung Securities

October: Share performance and industry conditions

October—Korean stocks far outpace Chinese peers: In October, shares across Korea's rechargeable battery value chain surged 30.6% m-m, far outpacing Chinese peers' 0.2% m-m gain. Korean cell makers jumped 38% m-m (vs Chinese peers down 5% m-m), and Korean material makers rose 24% m-m (vs Chinese up 1.2% m-m). Most Chinese stocks corrected on profit-taking after their September rally—except for a few lithium plays such as Jiangxi Ganfeng (up 13% m-m)—while the Korean value chain, a long-time market laggard, rallied sharply on heavy buying spurred by: 1) expectations of a Korea-US trade deal; and 2) optimism over ESS market growth in the US. Among Korean cell makers, Samsung SDI led with a 58% m-m gain—the largest among peers—on news of aggressive ESS capacity expansion in North America.

Broad-based rally: Every segment in Korea's battery value chain rose more than 10% m-m (except the anode material segment, up 7.5%). Given that the silicon anode segment was the strongest performer in September (up 25% m-m), the October rally indicates rotation into previously underperforming segments amid strong inflows. The electrolyte segment led gains, soaring 63% m-m—boosted by: 1) Foosung (up 51%), on higher $LiPF_6$ prices and supply expansion expectations; and 2) Chunbo (up 75%), on rerating potential as one of the sector's most undervalued names.

orean rechargeable battery value chain: Share performances in October, by segment



Source: QuantiWise

Battery installations in September—Korean players outperform Chinese rivals: Among the global top-10 battery makers, China's tier-2 players posted the strongest y-y growth in battery installations in September, led by CALB's 162% increase. In contrast, tier-1 players delivered more subdued results, with CATL and BYD up 17% and 14% y-y, respectively. CATL's relatively soft performance—despite a 48% y-y jump in shipments to Geely Auto (12% of total)—reflected a 20% y-y decline in shipments to Tesla (9% of total). BYD's modest growth stemmed from its in-house installations (79% of total) rising just 11% y-y, offsetting a 66% y-y jump in shipments to Xiaomi (7% of total).

Performance among Korea's top three battery makers varied by region and client. SK On led the pack, with installations up 103% y-y, driven by a 56% y-y rise in shipments to HMC (47% of total) and a 613% y-y surge in shipments to VW (30% of total). Its strong showing likely reflected concentrated orders tied to changes in client production schedules and sales strategies. LGES's installations climbed 32% y-y, supported by robust shipments to Tesla (38% of total) and GM (23% of total), up 52% and 90% y-y, respectively, though shipments to VW (14% of total) fell 35% y-y.

Samsung SDI's installations grew 24% y-y (vs up 9% in August). Although its shipments to BMW (40% of total) rose 19% y-y (vs down 9% in August), its shipments to VW Group (13% of total) fell 20% y-y—diverging from the broader European market for EVs, which has been accelerating this year.

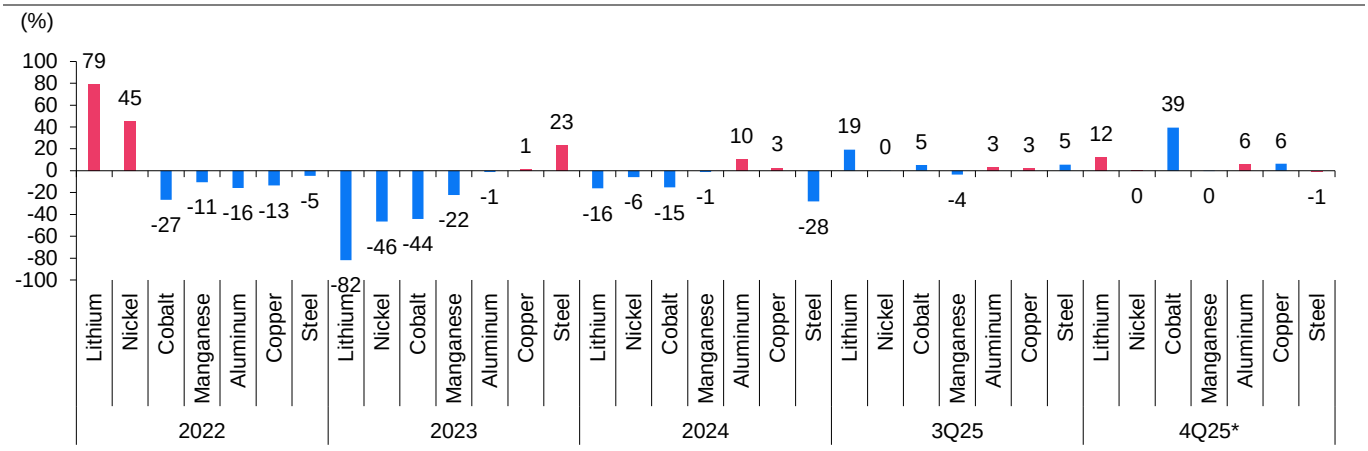
Top-6 battery cell makers: Battery cell installations in September, by client

(MWh)		Biggest client	2nd-biggest client	3rd-biggest client	Other	Total
LGES	Client	Tesla	GM	VW Group		
	Sales portion (%)	38	23	14	25	100
	Installations	5,535	3,397	2,115	3,654	14,701
	Chg (% y-y)	52	90	-35		32
Samsung SDI	Client	BMW Group	Stellantis	VW Group		
	Sales portion (%)	40	19	13	28	100
	Installations	1,144	553	361	789	2,847
	Chg (% y-y)	19	179	-20		24
SK On	Client	Hyundai Motor	VW Group	Ford		
	Sales portion (%)	47	30	15	8	100
	Installations	2,556	1,607	822	440	5,426
	Chg (% y-y)	56	613	69		103
CATL	Client	Geely Auto Group	VW Group	Tesla		
	Sales portion (%)	12	12	9	67	100
	Installations	4,093	4,049	3,303	23,521	34,967
	Chg (% y-y)	48	82	-28		17
BYD	Client	BYD	Xiaomi	Xiaopeng		
	Sales portion (%)	79	6	5	10	100
	Installations	14,900	1,224	897	1,884	18,905
	Chg (% y-y)	11	66	44		14
Panasonic	Client	Tesla	Toyota	Mazda		
	Sales portion (%)	91	7	1	1	100
	Installations	6,082	470	63	60	6,675
	Chg (% y-y)	52	-41	-9		34

Source: EV Volumes

Metal prices in October—Lithium rebounds; cobalt surges: By end-October, lithium carbonate prices has risen 12% m-m to CNY80/kg, returning to levels last seen in early August following reports (Aug 9) that CATL had failed to secure a mining permit extension. Meanwhile, cobalt prices surged 39% m-m to USD48,160/tonne after the Democratic Republic of Congo, the world's largest cobalt producer, announced plans to revoke export quotas for companies failing to meet their allocated volumes.

Metal price changes



Note: *As of Oct 30
Source: Komis, Samsung Securities

Industry news and November investment strategy

Issue 1. (Midstream) Korean cell makers guide conservatively on EVs, pivot to ESS: On 3Q calls in late October, Korea's top-three cell makers indicated that North American demand for EVs is set to weaken following the expiry of IRA EV tax credits, while European demand should keep rising on strength in volume and entry segments. Softer North American demand is likely to pressure utilization at North American battery plants and reduce AMPC benefits, implying greater q-q earnings volatility in 4Q for producers with higher North American exposure.

At the same time, all three flagged expansion of ESS capacity at their North American facilities and expressed strong confidence in North American ESS market growth. Samsung SDI said it will convert all remaining capacity at its North American JV to ESS production, targeting 30 GWh by end-2026. LGES plans to move beyond pouch-type ESS cells to mass-produce prismatic ESS cells sometime between late 2027 and 2028 (at customer request).

Korean top-3 cell makers: 3Q results and EV market outlook

	Revenue (KRWt)	Operating profit (KRWb)	3Q highlights	4Q & longer-term EV market outlook
LGES	5.7	601.3	• Reflected AMPCs (KRW365.5b) and compensation income • EV sales fell, but ESS and small-battery sales grew	• North American EV demand to continue declining in near term; demand growth to slow in longer-term • 2030 North America EV penetration forecast revised down to percentage in mid-20s
Samsung SDI	3.1	-591.3	• Decline in EV-related sales led to lower utilization and AMPC income • Deferred recognition of EV sales compensation; ESS tariffs also weighed on profitability	• North American EV demand remains sluggish, while European demand expected to expand, centered on entry-level and volume segments
SK On*	1.8	-124.8	• Reflected AMPCs (KRW173.1b) and compensation income • EV sales declined	• EV sales down overall (stronger demand in Europe, unfavorable environment in the US)

Note: *Battery business only
Source: Company data, media, Samsung Securities

Korean Top 3 cell makers: ESS business and operational outlook

	ESS portion of revenue (%)	3Q highlights	North America ESS capacity outlook	North America ESS chemistry	North America ESS form factor
LGES	10%	Sharp increase in US orders for ESS (50 GWh → 120 GWh)	17 GWh (2025) → 30+ GWh (2026E)	LFP (30+ GWh)	Pouch, prismatic
Samsung SDI	35%	Captured 80% share in Korea's 1st centralized ESS tender	7 GWh (2025) → 30 GWh (2026E)	NCA, LFP (23 GWh)	Prismatic
SK On*	0%	Secured 1 GWh order with Flatiron	1 GWh (2026E)	LFP	Pouch

Note: Share of ESS business within total rechargeable battery revenue
Source: Company data, Media, Samsung Securities

North American ESS growth forecasts differ by cell maker: On their 3Q calls, Samsung SDI projected North American ESS market growth from 80 GWh in 2025 to 130 GWh in 2030 (for a CAGR of 10%), while LGES guided from 60 GWh in 2024 to 150 GWh in 2028 (26% CAGR). These appear to be marketing figures—no external sources were cited—with LGES notably more aggressive than SDI.

Installations vs shipments—why third-party forecasts diverge: Market research providers also differ. BNEF projects North American ESS demand rising from 45 GWh in 2025 to 76 GWh in 2030, while SNE Research forecasts 107 GWh to 179 GWh over the same period—a gap of over 2x.

We believe BNEF's numbers are on an installations basis and SNE's on a shipments basis. Although methodologies were not fully disclosed, shipments ultimately convert to installations with a lag.

For example, SNE's 2024 demand estimate (78 GWh) is similar to BNEF's 2030 estimate (76 GWh), implying more than five years for ESS shipments to turn into ESS installations. Given that ESS projects are executed on a project basis and operators have little incentive to delay installations materially after procurement, this gap suggests either that SNE's shipments outlook is aggressive or that BNEF's installations outlook is conservative.

Regardless of absolute market size, both foresee broadly similar growth trajectories, with CAGRs of roughly 11-13%. By comparison, LGES's guidance for 2024-2028 implies a 26% CAGR—more aggressive than BNEF's roughly 15% over a similar window.

North America: ESS demand forecasts

(GWh)		2024	2025	…	2028	…	2030	2025-2023 CAGR	2024-2028 CAGR
Market research firms	BNEF	35	45		61		76	11%	15%
	SNE Research	78	97		n/a		179	13%	n/a
Cell makers	Samsung SDI	n/a	80		n/a		130	10%	n/a
	LGES	60	n/a		150*		n/a	n/a	26%

Note: *110 GWh previously
Source: BNEF, company data, media, Samsung Securities

Issue 2. (Policy) US cuts 'fentanyl tariff' on China from 20% to 10%: At the US-China summit on Oct 30, the US decided to reduce the 'fentanyl tariff' on Chinese goods from 20% to 10%. As a result, tariffs on Chinese-made EV batteries will fall from 73.4% to 63.4%, and tariffs on Chinese-made ESS batteries will be set at 30.9% in 2025 and 48.4% in 2026. Since Korean cell makers producing batteries in the US face no tariffs, Chinese producers remain at a competitive disadvantage.

Changes in tariffs on Chinese EV and ESS batteries after APEC summit

Tariff	EV batteries	ESS batteries	
	2025	2025	2026
Basic import tariff	3.4%	3.4%	3.4%
Section 301 tariff	25%	7.50%	25%
General tariff on Chinese imports*	10%	10%	10%
Section 232 tariff (effective May 3, 2025)	25%	0% (not applicable)	0% (not applicable)
Reciprocal tariff (effective Apr 3, 2025)	0% (excluded)	10%	10%
Total tariff	**63.4%**	**30.9%**	**48.4%**

Note: Following the US-China summit at APEC on Oct 30, the 'fentanyl tariff' was reduced from 20% to 10%
Source: BNEF, Samsung Securities estimates

However, even when the tariff on Chinese-made EV batteries stood at 73.4%, GM announced plans to use Chinese-made LFP batteries for its next-generation Chevrolet Bolt EV models until end-2027, when Ultium Cells is expected to begin US-based mass-production of LFP batteries. As we noted in the 41st report in our *Dialogue with the market* series (*China cells on the menu*; Aug 18, 2025), this decision likely reflects two factors: 1) Korean cell makers' strong focus on high-nickel ternary batteries, which give Chinese LFP products a cost advantage; and 2) Chinese suppliers such as CATL being able to absorb part of US manufacturers' high fixed costs (*eg*, depreciation) by lowering export prices.

With tariffs on Chinese-made EV batteries now at 63.4%, three possible scenarios emerge for US automakers such as GM (see table below). Under the third scenario—which assumes US manufacturing costs are 20% above the global average—it becomes more economical for US automakers to import Chinese-made LFP batteries rather than source high-nickel ternary batteries from Korean producers operating in the US. Accordingly, the tariff cut does not benefit Korean cell makers.

Tariff burden scenarios for Chinese EV batteries

Cell type	Global avg price* (USD)	Scenario	US domestic cost increase	Supply chain discount	Adjusted price** (USD)	Tariff rate	Post-tariff price (USD)
NMC 811	90	Scenario 1	10%		99	0%	99
LFP	63			4%	60	63.4%	99
NMC 811	90	Scenario 2	0%		90	0%	90
LFP	63			12%	55	63.4%	90
NMC 811	90	Scenario 3	20%		108	0%	108
LFP	63			0%	63	63.4%	103

Note: *Based on BNEF's 4Q24 average battery price survey;
**Adjusted price reflects US domestic cost increase for NMC811 and supply-chain discount assumptions for LFP
Source: BNEF, Samsung Securities estimates.

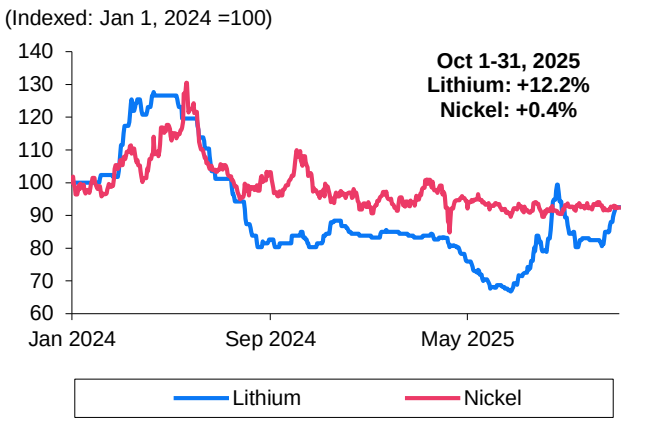
Issue 3. (Upstream) Lithium prices rebound: Lithium prices, which rallied in July and corrected in mid-August, began rising again from a mid-October low of CNY70/kg (vs a June low of CNY58/kg), reaching CNY80/kg by end-October. While the earlier rally and correction reflected Chinese production halts and subsequent restart expectations, the recent rebound stems from two key factors: 1) Beijing's plan to expand ESS investments, driving expectations for higher metal demand; and 2) reports that CATL purchased lithium ore from external suppliers as its Jianxiawo mine remains closed pending license renewal.

First, Under China's new ESS capacity and investment plan [1] (announced in September), the government aims to more than double ESS capacity to 180 GW by 2027 (vs 76.9 GW as of March[2]) to better integrate intermittent solar and wind power into the grid. This has fueled expectations of stronger lithium demand and potential resolution of supply-demand imbalances. Second, CATL's reported procurement from outside suppliers—though unverified—has spurred speculative buying.

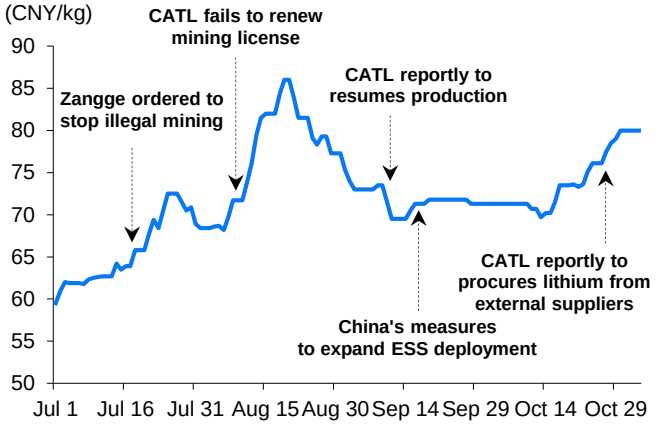
Lithium prices vs nickel prices

Lithium prices since July

[1] Announced by the National Development and Reform Commission (NDRC) and National Energy Administration (NEA) for 2025-2027
[2] Per BNEF



Note: As of Oct 31
Source: Bloomberg



Note: As of Oct 31
Source: Bloomberg

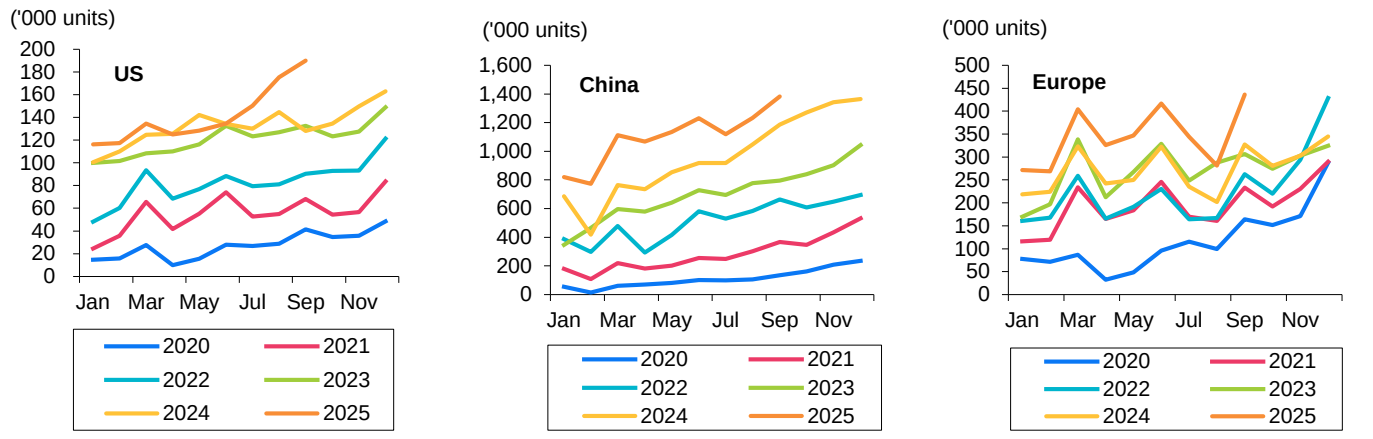
Investment strategy for November—Mixed signals for US EV demand: With the end of IRA EV tax credits, investors should monitor North American automakers' EV sales in October and beyond to gauge battery makers' near-term earnings volatility. They should also consider potential share supply-demand deterioration if profit-taking accelerates following October's rally. That said, given ample market liquidity, sector performances may diverge based on upcoming policy events—such as the US ITC's final anti-dumping (AD) and countervailing duty (CVD) ruling on Chinese anode material imports.

Global EV shipments

('000 vehicles)		2024				2025								
	Propulsion	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Americas*	BEV	136	140	155	165	117	110	123	119	127	137	152	172	185
	FCEV	0	0	0	0	0	0	0	0	0	0	0	0	0
	PHEV	34	41	42	50	37	40	50	49	46	42	48	51	49
Total		**170**	**181**	**197**	**214**	**154**	**150**	**173**	**168**	**172**	**179**	**200**	**223**	**235**
Europe	BEV	238	191	211	242	188	189	275	215	227	288	222	192	295
	FCEV	0	0	0	0	0	0	0	0	0	0	0	0	0
	PHEV	89	89	92	103	84	80	129	111	120	129	122	89	141
Total		**327**	**280**	**303**	**345**	**272**	**269**	**404**	**326**	**347**	**417**	**344**	**281**	**436**
China	BEV	692	715	796	787	455	468	712	666	661	728	673	758	884
	PHEV	494	555	547	577	366	305	401	402	474	504	447	474	498
Total		**1,186**	**1,270**	**1,343**	**1,363**	**821**	**772**	**1,113**	**1,068**	**1,135**	**1,231**	**1,120**	**1,232**	**1,382**
US	BEV	106	108	122	132	92	90	98	93	99	107	120	142	158
	FCEV	0	0	0	0	0	0	0	0	0	0	0	0	0
	PHEV	22	27	28	31	24	27	36	32	30	27	30	34	32
Total		**128**	**135**	**150**	**163**	**116**	**118**	**134**	**125**	**128**	**135**	**150**	**175**	**190**
Asia**	BEV	749	780	873	857	513	539	801	738	754	827	758	855	993
	FCEV	0	0	0	0	0	0	0	0	0	0	1	1	1
	PHEV	506	567	560	589	379	320	418	416	487	521	460	486	511
Total		**1,254**	**1,347**	**1,434**	**1,447**	**893**	**859**	**1,219**	**1,154**	**1,241**	**1,348**	**1,220**	**1,342**	**1,505**
Americas*	BEV	11	6	7	10	12	7	11	8	10	11	11	12	17
	PHEV	3	2	2	3	5	4	5	4	6	4	5	5	5
Total		14	9	9	13	17	11	16	13	16	15	16	17	23
Grand total		**1,765**	**1,817**	**1,943**	**2,019**	**1,336**	**1,289**	**1,813**	**1,660**	**1,776**	**1,959**	**1,780**	**1,864**	**2,198**

Note: Passenger cars;
*Includes US;
**Includes China
Source: EV Volumes, Samsung Securities

EV sales volumes



Note: Passenger cars, BEV+PHEV
Source: EV Volumes, Samsung Securities

EV sales volumes: World's top-10 EV makers

Rank	Company	2024				2025								
('000 vehicles)		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	BYD	416	475	446	447	268	270	380	367	362	431	340	362	422
2	Tesla	192	121	173	202	93	94	150	82	116	185	122	161	214
3	Geely Auto Group	104	124	136	128	128	107	130	134	147	133	137	155	168
4	VW Group	97	100	102	103	90	85	129	112	119	121	118	99	130
5	GM	110	124	142	144	66	65	102	107	93	94	101	118	128
6	Changan Automobile Group	54	84	105	75	59	48	80	69	88	91	77	83	85
7	Chery Automobile	62	64	71	91	61	47	61	63	75	75	75	76	84
8	Hyundai Motor	47	45	48	42	39	44	59	51	52	51	60	59	68
9	Leap Motor	33	36	40	41	24	23	36	43	43	47	51	54	64
10	BMW Group	49	51	57	63	50	51	63	52	53	58	55	45	54

Note: Passenger cars, BEV+PHEV+FCEV

Source: EV Volumes, Samsung Securities

Battery installments: World's top-10 battery makers

(MWh)	Company	2024				2025								
Rank		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	CATL	29,982	27,019	30,367	31,641	20,386	19,192	29,055	24,784	28,142	29,944	26,720	28,975	34,967
2	BYD	16,567	17,456	17,228	17,971	12,335	14,247	17,690	17,699	17,704	21,012	16,829	17,118	18,905
3	LG Energy Solution	11,139	9,335	11,785	13,358	8,075	8,045	12,693	9,576	11,191	13,202	11,800	10,958	14,701
4	CALB	3,614	4,112	4,608	5,024	3,122	2,440	4,225	4,567	5,348	5,762	6,042	7,410	9,463
5	Panasonic	4,971	5,499	5,566	5,588	4,601	5,626	4,015	4,142	4,446	5,700	5,227	5,699	6,675
6	SK On	2,679	2,719	3,081	3,470	2,572	2,657	3,436	2,703	2,813	2,980	3,824	4,715	5,426
7	Samsung SDI	2,289	2,320	2,505	2,818	1,963	2,210	2,933	2,546	2,534	2,571	2,372	2,418	2,847
8	Gotion	1,636	2,054	2,432	2,400	1,641	2,136	1,963	2,086	2,071	2,169	2,264	2,579	2,796
9	SVOLT	1,942	1,960	2,179	2,124	2,102	1,789	2,154	2,025	2,379	2,288	2,553	2,427	2,668
10	Sunwoda	2,150	2,244	2,142	2,202	981	918	1,784	2,006	1,986	1,851	2,032	2,297	2,431

Source: EV Volumes, Samsung Securities

Capacity: Battery cell and material makers

('000 tonnes)	Company	2022	2023	2024	2025E	2026E
Cell* (GWh)	Samsung SDI	87	101	112	152	206
	LG Energy Solution	200	275	298	352	423
	SK Innovation	88	88	118	135	209
	CATL*	388	525	685	755	901
	Panasonic	46	54	64	94	94
Cathode	LG Chem	90	120	140	150	170
	Ecopro BM	125	190	226	280	379
	L&F	100	160	210	210	260
	Posco Future M	40	155	185	315	315
	Cosmo AM&T	20	20	30	60	90
Anode	Posco Future M	82	82	92	132	132
Copper foil	Lotte Energy Materials	60	60	70	70	80
	Solus Advanced Materials	15	15	38	58	63
	SKC	52	96	96	121	121

Note: *Includes JV capacity

Source: IR, Media, Samsung Securities estimates, BNEF, CITIC

Global rechargeable battery value chain: Valuations

	Segment	Company	Mkt cap	Performance (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		OPM (%)		EPS growth (%)	
			(KRWb)	1m	6m	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E
Korea	Cells	LG Energy Solution*	111,618	19.5	48.8	n/a	138.3	5.5	5.2	27.0	19.8	-1.8	2.4	7.0	11.2	nm	nm
		Samsung SDI*	26,553	59.3	89.5	n/a	69.5	1.3	1.2	60.8	14.8	-3.0	1.9	-11.9	1.9	nm	nm
		SK Innovation*	22,078	24.5	39.8	n/a	517.9	0.9	0.9	21.1	13.2	-5.5	0.0	0.1	2.4	nm	nm
	Cathodes	LG Chem*	28,131	43.6	89.8	n/a	24.9	0.9	0.9	9.4	7.2	0.0	3.0	4.2	7.1	nm	nm
		L&F	4,543	69.5	91.0	n/a	180.0	9.3	8.7	n/a	34.6	-49.0	3.6	-10.4	3.1	nm	nm
		Ecopro BM*	16,030	40.9	56.8	651.2	375.1	9.7	9.4	71.2	57.8	1.4	2.4	3.5	3.6	nm	73.6
		Cosmo AM&T	1,804	39.3	43.0	315.3	58.4	3.6	3.4	n/a	n/a	1.1	6.0	2.3	6.4	-67.6	440.3
	Cathodes/ anodes	Posco Future M*	19,835	52.2	84.2	443.1	266.0	5.4	5.2	70.8	53.9	1.1	2.0	2.6	3.5	nm	66.6
	Silicon anodes	Daejoo Electronic	1,178	15.6	-7.5	60.4	39.4	4.6	4.1	33.2	23.0	8.1	10.9	10.3	13.6	-49.1	53.4
		Hansol Chemical	2,698	9.2	106.6	17.3	15.3	2.4	2.1	12.7	10.8	14.8	14.8	19.4	20.7	25.5	13.1
		Dongjin Semichem	2,193	-3.1	42.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Electrolytes	Soulbrain	2,197	-1.7	58.7	19.0	13.3	2.0	1.8	9.4	6.0	11.0	13.8	15.5	19.7	-2.6	42.5
		Dongwha Enterprise	506	13.5	18.9	n/a	n/a	0.6	0.6	22.7	12.3	-1.3	-1.7	-0.4	2.2	nm	nm
		Enchem	1,926	27.1	13.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
	Lithium salt	Foosung	986	51.7	109.8	n/a	53.1	3.2	3.0	19.8	16.8	-4.1	5.9	5.3	6.2	nm	nm
		Chunbo*	737	65.2	106.2	n/a	n/a	2.0	2.1	35.1	25.5	-0.9	0.1	4.9	3.9	nm	nm
	Separators	SKIET*	2,548	16.0	37.2	n/a	n/a	1.1	1.1	n/a	38.8	-5.0	-2.3	-60.7	-17.1	nm	nm
		WCP	272	23.9	-14.5	n/a	n/a	0.3	0.3	n/a	16.0	-11.4	-6.4	-71.0	-4.0	nm	nm
	Elecfoil	Lotte Energy Materials*	1,375	17.4	15.9	n/a	n/a	0.9	0.9	n/a	19.5	-7.9	-0.8	-15.4	-0.8	nm	nm
		Solus Advanced Materials	653	20.8	10.2	n/a	111.4	1.3	1.3	176.1	20.0	-10.3	1.1	-11.3	1.0	nm	nm
		SKC*	4,919	25.9	27.9	n/a	n/a	4.5	4.9	797.8	42.1	-20.5	-10.3	-9.5	0.0	nm	nm
	Conductive additives	Advanced NanoProducts	823	45.9	24.4	123.9	59.3	3.3	3.1	43.3	24.4	2.6	5.3	5.4	11.8	nm	109.0
		Jeio	282	19.2	-4.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
	Recycling	Sungeel Hitech	526	20.6	28.7	n/a	108.3	3.7	4.0	n/a	24.4	-33.9	8.8	-23.0	2.8	nm	nm
		Sebitchem	193	42.7	117.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
	Parts	Sang-A Frontech	297	11.3	22.0	60.4	36.9	1.5	1.5	18.1	13.9	2.5	4.1	3.5	6.0	-22.3	63.8
		Shinheung SEC*	211	12.7	27.3	n/a	21.9	0.7	0.7	9.7	7.4	-1.4	3.0	0.5	4.1	nm	nm
		Sangsin EDP	170	11.4	69.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Equipment	SFA*	892	5.3	23.9	9.9	6.6	0.8	0.7	5.5	4.0	9.5	12.9	8.0	10.3	nm	50.9
		Hana Technology	241	12.3	50.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
		People & Technology	1,042	24.5	8.3	12.2	9.3	n/a	n/a	n/a	n/a	14.0	14.0	14.9	12.7	-42.2	30.5
		Wonik PNE	182	35.9	79.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
	Other	Ecopro	12,424	93.2	82.3	n/a	129.7	7.9	7.5	74.2	41.6	-1.0	5.9	2.2	4.6	nm	nm
		Posco Holdings*	25,130	13.9	21.7	22.6	12.7	0.4	0.4	6.6	5.7	2.0	3.4	3.4	4.7	-4.9	78.3
China	Cells	CATL	358,701	-3.3	67.9	25.2	20.1	5.7	4.9	15.9	12.3	23.7	25.0	18.6	19.1	37.7	25.5
		BYD	177,478	-8.0	-21.1	20.7	15.0	3.6	3.1	7.4	5.7	18.8	19.9	5.0	5.6	1.9	38.1
		Gotion High Tech	16,437	-2.5	120.3	37.4	36.0	2.9	2.7	20.0	16.6	7.7	7.6	5.7	5.2	90.0	3.7
		EVE Energy	34,041	-8.6	102.5	36.4	22.5	4.2	3.7	22.6	14.9	11.6	16.6	7.9	9.8	21.2	61.6
	Lithium	Tianqi Lithium	17,214	12.3	85.4	108.3	42.1	2.1	2.0	19.1	12.4	1.8	4.4	37.5	42.7	nm	157.4
		Jiangxi Ganfeng	26,451	13.4	130.5	381.3	76.5	3.2	3.1	54.5	32.0	1.1	3.7	4.0	9.3	nm	397.8
	Cobalt	Nanjing Hanrui	3,076	-11.5	56.7	43.9	41.7	2.6	2.5	n/a	n/a	6.0	6.0	7.2	5.9	78.6	5.3
		Zhejiang Huayou	24,583	-1.7	91.3	19.8	16.6	2.8	2.4	12.1	10.1	14.2	15.1	11.2	12.0	38.9	19.0
		China Molybdenum	71,649	8.5	141.4	20.2	17.0	4.4	3.7	8.8	7.3	23.0	23.4	15.5	17.8	42.1	18.5
	Cathodes/ anodes	Shenzhen Dynanonic	2,576	-0.8	64.0	n/a	55.6	2.5	2.4	67.6	16.3	-10.3	3.5	-6.6	3.6	nm	nm
		Beijing Easpring	7,533	4.2	82.7	48.2	36.2	2.6	2.5	27.0	19.7	5.5	6.8	7.7	8.3	62.6	33.0
		Ningbo Shanshan	6,187	-13.5	96.1	41.7	29.6	1.4	1.3	16.9	15.2	3.1	4.4	5.1	5.6	nm	40.9
	Electrolytes	Guangzhou Tinci	15,269	4.5	128.1	79.3	51.5	5.7	5.3	34.7	25.5	6.6	10.1	7.2	9.5	112.5	53.8
		Shenzhen Capchem	7,943	-0.5	67.1	33.3	25.2	3.8	3.4	20.8	16.0	11.2	13.6	14.0	14.9	33.6	32.3
	Separators	Cangzhou	1,537	14.8	35.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		Mingzhu Plastic	3,843	-2.3	56.9	57.0	30.3	1.9	1.8	20.5	13.8	3.3	5.9	9.7	15.0	-2.1	88.0

	Segment	Company	Mkt cap	Performance (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		OPM (%)		EPS growth (%)	
			(KRWb)	1m	6m	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E
Japan	Cells	Panasonic	40,778	6.0	6.6	13.2	13.5	0.9	0.8	6.1	7.1	6.8	5.9	4.7	4.5	-22.4	-8.6
		GS Yuasa	4,006	22.3	74.4	15.6	12.4	1.2	1.1	7.3	6.5	8.1	10.0	8.1	8.8	-18.8	17.9
	Cathode	Sumitomo Metal Mining	13,639	3.5	63.0	32.8	17.5	0.8	0.7	21.7	15.7	2.5	4.5	2.2	4.2	-23.4	82.5
		Tanaka Chemical	126	5.5	-6.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Anode	Tokai Carbon	2,147	0.2	11.9	15.8	11.5	0.7	0.7	n/a	n/a	4.8	5.6	8.4	10.1	nm	37.6
		Nippon Carbon	474	1.5	4.5	8.1	14.1	n/a	n/a	n/a	n/a	n/a	n/a	13.0	14.7	51.8	-42.4
		Showa Denko	10,315	9.2	126.1	36.4	15.7	1.7	1.5	11.3	8.5	4.7	10.6	4.0	7.8	-57.3	131.0
	Electrolytes	Stella Chemifa	491	0.4	9.2	14.1	15.6	n/a	n/a	n/a	n/a	7.7	6.8	12.5	13.0	101.0	-12.0
	Separators	Sumitomo Chemical	6,947	-4.5	26.9	24.1	17.8	0.8	0.8	6.4	7.0	2.7	5.1	6.8	5.5	nm	32.1
		Ashai Kasei	14,918	1.8	17.1	14.0	12.1	0.9	0.8	6.7	6.0	6.2	6.9	6.7	7.3	194.1	7.9
		W-Scope	129	10.5	0.4	n/a	n/a	0.3	n/a	2.3	n/a	-0.1	n/a	11.1	n/a	nm	nm
		Toray Industries	14,258	-1.7	3.4	16.4	17.0	0.8	0.8	8.7	8.3	5.1	5.0	5.3	5.4	355.6	-8.8
		Nippon Kodoshi	269	24.4	55.1	16.1	12.0	1.2	1.1	n/a	n/a	7.6	n/a	15.6	18.9	29.1	28.9
	Elecfoil	Furukawa	7,181	23.9	148.9	27.0	20.3	2.2	2.1	13.1	11.0	8.8	10.8	3.6	4.5	386.8	23.8
US	EVs	Tesla	2,162,860	4.7	59.0	274.9	203.5	19.0	17.4	116.1	98.9	7.0	8.0	4.9	6.4	-22.4	35.1
	Lithium	Albemarle	16,466	12.1	62.9	n/a	294.1	1.2	1.2	16.3	14.3	-1.2	1.0	1.9	2.9	nm	nm
		SQM	19,139	9.8	44.0	23.0	15.3	2.5	2.2	11.2	8.5	11.2	15.6	24.6	27.9	n/a	50.8
		FMC	2,699	-51.7	-59.8	4.9	5.2	0.4	0.4	6.1	6.2	8.9	8.1	17.0	16.7	17.9	-5.3
Other	Cathodes	Umicore S.A	6,694	7.5	101.7	13.6	12.4	1.9	1.8	7.0	6.8	13.9	13.2	15.4	8.2	nm	9.6

Note: *Our coverage; as of Oct 31 close
Source: Bloomberg

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