COMPANY UPDATE

2025. 12. 16

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Hanjung NCS (107640)

To benefit from ESS growth in the US

- As the only Korean firm mass-producing water-cooled ESS cooling systems, Hanjung NCS's profitability should grow as its ESS sales portion expands.
- Revenue growth is expected to begin in earnest in 2026, when the effects of its expansion into the North American ESS market (along with its key customer) begin to materialize.
- The effects of securing new growth drivers through customer and product diversification are expected to become visible from 2027.

EV/Mobility Team

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WHAT'S THE STORY?

Company Overview: Hanjung NCS was the first Korean firm to successfully commercialize water-cooled ESS cooling systems, and it is the only domestic player to mass-produce and sell such products. Its businesses span the ESS segment (water-cooled cooling systems) and the automotive segment (EV thermal management components, *etc.*). Based on its 1Q-3Q25 figures, out of its total revenue of KRW115.4b (-5.3% y-y), 77% came from the ESS business and 23% from the automotive business. Major products made by the ESS business include water-cooled cooling components (*eg*, liquid cooling modules, chillers, HVAC). The firm is differentiated in that it supplies these core components in modularized form.

(Continued on the next page)

AT A GLANCE

Not Rated

Target price	n/a
Current price	**KRW50,500**
Market Cap	KRW457.78b/USD311.2m
Shares (float)	9,064,946 (64.5%)
52-week high/low	KRW55,200/KRW20,350
Avg daily trading value (60-day)	KRW10.5b/ USD7.2m

ONE-YEAR PERFORMANCE

	1M	6M	12M
Hanjung NCS (%)	-3.1	105.7	130.6
Vs Kosdaq (%pts)	-7.3	68.5	70.4

SAMSUNG vs THE STREET

No of estimates	1
Target price	63,000
Recommendation	4.0

※ Rating: 4 < → BUY, 3 = HOLD, 2 > → SELL

SUMMARY FINANCIAL DATA

	2024	2025E	2026E	2027E
Revenue (KRWb)	177	0	0	0
Operating profit (KRWb)	10	0	0	0
Net Profit (KRWb)	15	0	0	0
EPS (adj) (KRW)	2,627	n/a	n/a	0
EPS (adj) growth (%)	nm	nm	nm	0.0
EBITDA margin (%)	8.3	n/a	n/a	0.0
ROE (%)	36.1	0.0	n/a	0.0
P/E (adj) (x)	n/a	n/a	n/a	0.0
P/B (x)	n/a	n/a	n/a	0.0
EV/EBITDA (x)	1.0	n/a	n/a	0.0
Dividend yield (%)	n/a	n/a	n/a	0.0

Source: Company data, Samsung Securities estimates

A water-cooled cooling system (*ie*, a liquid cooling system) removes heat that is generated when the ESS charges/discharges. Currently, air-cooled systems (*ie*, air cooling systems) are the mainstream solution thanks to their lower price. Nevertheless, compared to air-cooled systems, water-cooled ones are expected to increase their market share alongside growth of medium- to large-scale ESS. Water-cooled systems are superior in terms of thermal management, as they can: 1) more precisely control the structure's temperature; and 2) support multiple charge/discharge cycles per day.

Profitability to rise as business transitions towards ESS: The company is expected to achieve gradual profitability growth thanks to business restructuring centered around ESS. Since changing its primary business from conventional automotive components to ESS in 2021, the ESS portion of its revenue has been steadily increasing (9% in 2021 → 77% ytd). Although the ESS business is still in its infancy, its profitability already exceeds that at the automotive business (by at least 5%pts), and it is expected to drive overall corporate profitability improvement.

Earnings level-up via expansion into North American ESS market with key customer: Samsung SDI is Hanjung NCS's key ESS client, and the two companies have been jointly developing water-cooled cooling systems since 2018. Starting with the launch of Samsung Battery Box (SBB) 1.0 (3.8 MWh; May 2024), they have been rolling out ESS products in ever higher capacities: SBB 1.5 (5.26 MWh) in Dec 2024, SBB 1.7 (6.14 MWh) in Dec 2025.

In order to increase capacity, the number of modules installed per SBB must rise. For example, SBB 1.5 has approximately 28% more modules installed vs SBB 1.0. Accordingly, the installation volume of Hanjung NCS's cooling products per SBB must also increase in tandem. In fact, in 3Q, its sales of products used in the SBB 1.5 surpassed those for the SBB 1.0, driving up its overall sales volume. As its sales mix shifts towards higher-capacity SBB models, volume-driven effects are expected to emerge.

Samsung SDI plans to introduce SBB 2.0 in 4Q26, featuring LFP batteries in an SBB for the first time. And in particular, from SBB 1.7, production should take place in the US. Through the conversion of an EV line (owned by a Stellantis joint venture), Hanjung NCS has secured a production base in the US. Moreover, North American ESS capacity is set to expand significantly over the next 12 months: 7 GWh at end-2025 to 30 GWh at end-2026 (vs the previous end-2026 plan of 20 GWh).

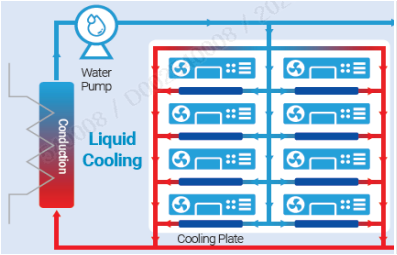
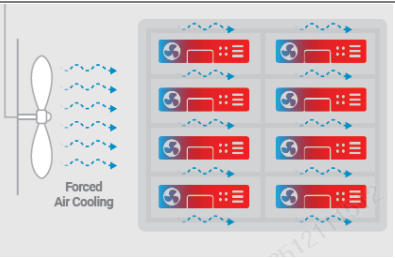
As Samsung SDI's North American expansion accelerates, Hanjung NCS is expected to enhance its customer response capabilities by commencing mass-production in North America from early 2027. The scale of its US production capacity (and associated capex) is scheduled to be finalized in early 2026, and products for SBB 2.0 are expected to be manufactured at the US plant.

Securing new growth drivers through product diversification: Meanwhile, having won LG Energy Solution (LGES) as a new customer in 4Q, customer concentration risk should ease. Now that the firm has completed vendor registration with LGES, Hanjung NCS plans to begin supplying it with EV Cooling Plates (under development) from 2027. Related production is likely to take place at the 4th domestic plant (HJF), where a KRW19b capacity expansion project began in November.

This new vendor registration is meaningful in that Hanjung NCS has secured: 1) a large new domestic customer; and 2) a direct line into the EV industry. As Hanjung NCS is now an official vendor of LGES, new opportunities within the EV industry are expected to emerge. In addition, whereas it is a second-tier vendor in terms of supplying regular automotive components (it supplies products through Hanon Systems and DooWon Climate Systems), its supplying EV Cooling Plates to LGES will mark the start of its direct supply to an end customer, thus should mark the beginning of its full-blown entry into the EV industry. Based on its diversified customer base, the firm should soon see earnings growth in both the ESS and EV domains.

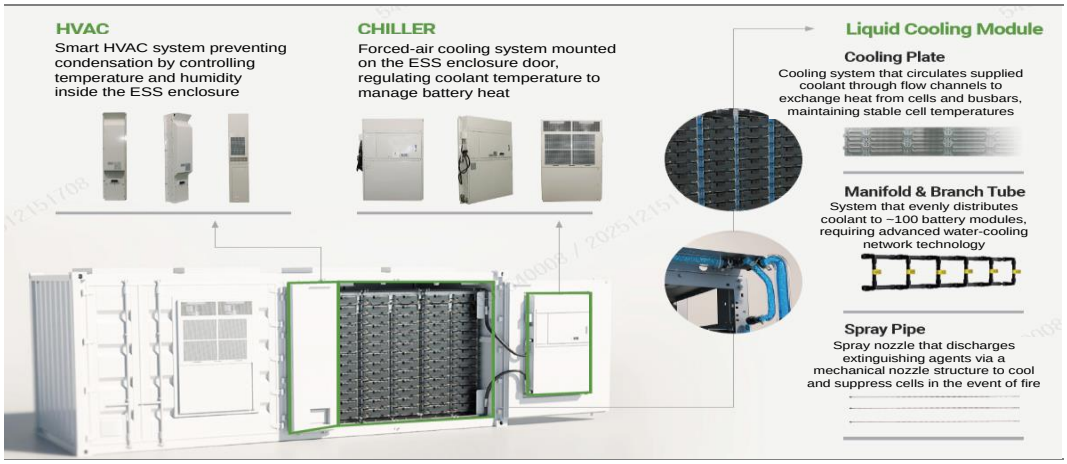
2026-2027 to mark early stage of new growth cycle: Hanjung NCS's shares are up 116% ytd, showing strength throughout the year on the back of a favorable domestic equity market environment and rising expectations for structural ESS demand growth. While a valuation burden exists (following the recent share-price runup), earnings growth—driven by the full-scale expansion by its key customer in the North American ESS market from 2026—is expected to remain intact.

Comparison of ESS cooling systems: Efficiency of liquid cooling proven

	Liquid Cooling System	Air Cooling System
Schematic		
Operating principle	Cooling liquid passes through cells to control heat	Heat controlled by circulating air
Charging cycles per day	Multiple	Once
System cost	ESS Total cost x 3%	ESS Total cost x 1.5%
Temperature deviation	3°C	10°C (system stops above 15°C)
Module temperature	~ 34°C	~ 52°C
Power consumption (per 1 cycle)	165 kWh	270 kWh
Installation scale	Medium-to-large ESS	Small-scale ESS

Source: Company data, Samsung Securities

Hanjung NCS: Key products for liquid-cooled ESS cooling systems



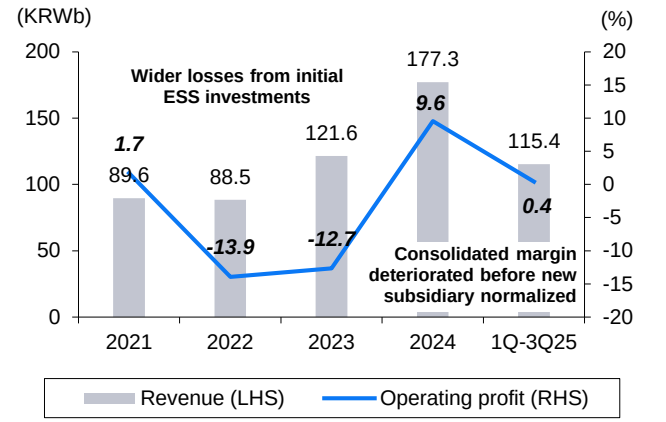
Source: Company data, Samsung Securities

Hanjung NCS: Global subsidiary overview

Region	Entity	Role	Year established
Korea	Plant 1 (HQ)	ESS liquid cooling modules, EV modules production	2012
	Plant 2	EDI, cell electrostatic discharge plates production	1995
	Plant 3 (HDC)	ESS liquid cooling chiller & HVAC production	2022
	Plant 4 (HJF)	Cooling plate stamping production	2022
China	Changshu Trading	Raw material procurement	2023
	Jiangsu Hanjung	ESS liquid cooling chiller & HVAC production	2025
US	Michigan	Customer service (CS)	2013
	Indiana	ESS liquid cooling module production	2025

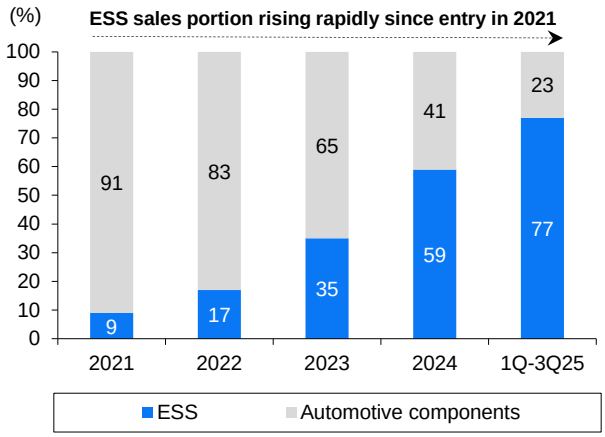
Note: Entities established after entry into the ESS business in 2021 and expected to normalize operations going forward are shaded.
Domestic Plant 3 (HDC) turned profitable starting 3Q25.
Source: Company data, Samsung Securities

Hanjung NCS: Revenue and operating profit trend



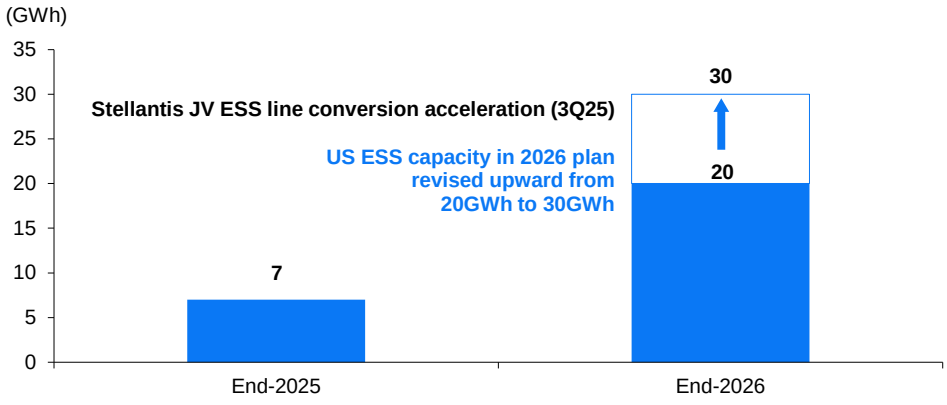
Source: Company data, Samsung Securities

Hanjung NCS: Revenue mix, by business



Source: Company data, Samsung Securities

Samsung SDI: Stellantis JV (SPE) ESS line conversion work being accelerated



Source: Company data, Samsung Securities

Samsung SDI: ESS Battery (SBB) Order Status

Period	Customer	Product	Contract Size	Supply Period	Note
Dec 2025	Large energy-specialized company (US)	SBB2.0	KRW2t+	2027-2029	Produced at US local plant
Jul 2025	1st ESS central contract market bid (Korea)	Turnkey ESS (NCA)	KRW1t	2025-2026	Won 76% of total 536 MW
Jun 2025	Tesvolt (Germany)	SBB1.0 / SBB1.5	Undisclosed	2025~	Track record of supplying ESS batteries since 2017
Mar 2025	NextEra Energy (US)	SBB	KRW0.4374t	2024-2025	Part of a long-term supply project; follow-up disclosure possible
2Q24	Fluence Energy (US)	ESS battery	Undisclosed	2024~?	Not disclosed as <10% of annual revenue

Source: Press release, Samsung Securities

Hanjung NCS: Results

(KRWb)	1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	2020	2021	2022	2023	2024	2025
KRW/USD (average)	1,329	1,371	1,358	1,400	1,453	1,401	1,387	1,180	1,145	1,292	1,306	1,365	1,408
Sales	**30.6**	**43.6**	**47.6**	**55.4**	**33.1**	**36.4**	**45.9**	**71.2**	**89.6**	**88.5**	**121.6**	**177.3**	**167.8**
Growth (% q-q)	-8.2	42.5	9.1	16.4	-40.2	10.0	25.9						
Growth (% y-y)	2.2	48.6	65.1	66.0	8.1	-16.5	-3.6	-13.8	25.9	-1.2	37.3	45.8	-5.3
ESS	14.8	21.1	32.2	39.0	21.8	28.3	39.1	2.5	8.9	17.2	49.6	107.1	140.2
EV module	9.5	13.5	11.5	13.7	9.4	7.4	6.6	34.9	43.7	41.7	41.4	48.1	32.8
ICE components	6.4	9.1	3.9	2.7	1.8	0.7	0.2	33.8	36.9	29.6	30.6	22.0	3.1
EBITDA	**1.0**	**3.6**	**2.9**	**7.3**	**0.8**	**1.9**	**2.9**	**0.8**	**6.3**	**-9.3**	**-7.9**	**14.7**	**11.1**
Growth (% q-q)	Turned pos	278.8	-21.4	154.2	-88.7	129.7	54.8						
Growth (% y-y)	Turned pos	Turned pos	Turned pos	Turned pos	-14.3	-48.0	2.4	-88.0	702.8	Turned neg	Remained neg	Turned pos	-24.3
Operating profit	**-0.3**	**2.4**	**1.6**	**5.9**	**-0.6**	**0.4**	**1.5**	**-3.7**	**1.7**	**-13.9**	**-12.7**	**9.6**	**3.4**
Growth (% q-q)	Remained neg	Turned pos	-33.2	271.1	Turned neg	Turned pos	284.1						
Growth (% y-y)	Remained neg	Turned pos	Turned pos	Turned pos	Remained neg	-83.3	-3.7	Turned neg	Turned pos	Turned neg	Remained neg	Turned pos	-64.7
Pre-tax profit	-1.4	1.1	0.9	5.1	-1.1	-0.3	2.2	-5.7	-1.8	-20.4	-16.2	5.8	6.8
Growth (% q-q)	Remained neg	Turned pos	-11.6	444.3	Turned neg	Remained neg	Turned pos						
Growth (% y-y)	Remained neg	Turned pos	Turned pos	Turned pos	Remained neg	Turned neg	128.6	Turned neg	Remained neg	Remained neg	Remained neg	Remained neg	17.3
Net profit	**-1.4**	**1.1**	**0.9**	**14.7**	**-1.0**	**0.2**	**1.4**	**-4.3**	**-1.9**	**-20.3**	**-18.6**	**15.4**	**15.6**
Growth (% q-q)	Remained neg	Turned pos	-11.6	1,459.1	Turned neg	Turned pos	592.2						
Growth (% y-y)	Remained neg	Turned pos	Turned pos	Turned pos	Remained neg	-81.0	49.1	Turned neg	Remained neg	Remained neg	Remained neg	Turned pos	1.6
Attributable to parent	**-0.8**	**1.8**	**1.4**	**14.8**	**-0.6**	**0.1**	**0.6**	**-4.3**	**-1.9**	**-20.2**	**-16.4**	**17.3**	**0.2**
Margins (%)													
EBITDA	3.1	8.3	6.0	13.1	2.5	5.2	6.4	1.1	7.1	-10.5	-6.5	8.3	6.6
Operating profit	-0.9	5.4	3.3	10.6	-1.9	1.1	3.3	-5.1	1.9	-15.7	-10.4	5.4	2.0
Pre-tax profit	-4.5	2.5	2.0	9.3	-3.2	-1.0	4.7	-8.0	-2.0	-23.0	-13.3	3.3	4.0
Net profit	-4.5	2.4	2.0	26.6	-2.9	0.6	3.1	-6.0	-2.1	-22.9	-15.3	8.7	9.3

Note: 2025 figures are based on applying the 1Q–3Q25 growth rate to the 2024 results.
Source: Company data, Samsung Securities

Income statement

Year-end Dec 31	2023	2024	2025E	2026E	2027E
Sales	**122**	**177**	**0**	**0**	**0**
Cost of goods sold	119	150	0	0	0
Gross profit	**3**	**27**	**0**	**0**	**0**
Gross margin (%)	2.2	15.2	n/a	n/a	0.0
SG&A expenses	15	17	0	0	0
Operating profit	**(13)**	**10**	**0**	**0**	**0**
Operating margin (%)	(10.4)	5.4	n/a	n/a	0.0
Non-operating Gains(Losses)	**(3)**	**(4)**	**0**	**0**	**0**
Financial Profit	0	1	0	0	0
Financial Costs	4	5	0	0	0
Gains(Losses) in Equity Method	0	0	0	0	0
Other	1	(0)	0	0	0
Pre-tax profit	**(16)**	**6**	**0**	**0**	**0**
Taxes	2	(10)	0	0	0
Effective tax rate (%)	(15.4)	(165.0)	n/a	n/a	0.0
Profit from continuing operations	(19)	15	0	0	0
Profit from discontinued operations	0	0	0	0	0
Net profit	**(19)**	**15**	**0**	**0**	**0**
Net margin (%)	(15.3)	8.7	n/a	n/a	0.0
Net profit (Controlling Interests)	(16)	17	0	0	0
Net profit (Non-controlling Interests)	(2)	(2)	0	0	0
EBITDA	(8)	15	0	0	0
EBITDA margin (%)	(6.5)	8.3	n/a	n/a	0.0
EPS(parent) (KRW)	n/a	2,627	n/a	n/a	0
EPS(consolidated) (KRW)	n/a	2,331	n/a	n/a	0
Adjusted EPS (KRW)*	n/a	2,627	n/a	n/a	0

Balance sheet

Year-end Dec 31	2023	2024	2025E	2026E	2027E
Current assets	**42**	**75**	**0**	**0**	**0**
Cash & equivalents	9	30	0	0	0
Accounts receivable	17	14	0	0	0
Inventories	11	14	0	0	0
Other current assets	5	17	0	0	0
Fixed assets	**80**	**92**	**0**	**0**	**0**
Investment assets	1	1	0	0	0
Tangible assets	79	84	0	0	0
Intangible assets	1	1	0	0	0
Other long-term assets	0	6	0	0	0
Total assets	**123**	**167**	**0**	**0**	**0**
Current liabilities	**65**	**50**	**0**	**0**	**0**
Accounts payable	23	18	0	0	0
Short-term debt	23	15	0	0	0
Other current liabilities	19	17	0	0	0
Long-term liabilities	**44**	**37**	**0**	**0**	**0**
Bond & long-term debt	28	22	0	0	0
Other long-term liabilities	17	14	0	0	0
Total liabilities	**109**	**86**	**0**	**0**	**0**
Owners of parent equity	**13**	**82**	**0**	**0**	**0**
Capital stock	4	5	0	0	0
Capital surplus	28	79	0	0	0
Retained earnings	(31)	(14)	0	0	0
Other	13	12	0	0	0
Non-controlling interests equity	**0**	**(2)**	**0**	**0**	**0**
Total equity	**13**	**80**	**0**	**0**	**0**
Net debt	64	17	0	0	0

Cash flow statement

Year-end Dec 31	2023	2024	2025E	2026E	2027E
Cash flow from operations	**5**	**6**	**0**	**0**	**0**
Net profit	(19)	15	0	0	0
Non-Cash Profit and Expense	11	(3)	0	0	0
Depreciation	5	5	0	0	0
Amortization	0	0	0	0	0
Others	7	(8)	0	0	0
Changes in A/L from Operating Activities	15	(4)	0	0	0
Cash flow from investments	**(14)**	**(20)**	**0**	**0**	**0**
Change in Tangible Assets	(16)	(10)	0	0	0
Change in Financial Assets	0	(10)	11	0	0
Other	2	0	(11)	0	0
Cash flow from financing	**7**	**35**	**0**	**0**	**0**
Change in debt	8	(15)	(58)	0	0
Change in equity	n/a	n/a	n/a	n/a	0
Dividends	0	0	0	0	0
Other	n/a	n/a	n/a	n/a	0
Change in cash	(2)	21	0	0	0
Cash at beginning of year	11	9	0	0	0
Cash at end of year	9	30	0	0	0
Gross cash flow	**(7)**	**13**	**0**	**0**	**0**
Free cash flow	**(12)**	**(4)**	**0**	**0**	**0**

Financial ratios

Year-end Dec 31	2023	2024	2025E	2026E	2027E
Growth (%)					
Sales	37.3	45.8	(100.0)	nm	0.0
Operating profit	nm	nm	(100.0)	nm	0.0
Net profit	nm	nm	(100.0)	nm	0.0
Adjusted EPS**	nm	nm	nm	nm	0.0
Per share data (KRW)					
EPS(parent)	n/a	2,627	n/a	n/a	n/a
EPS(consolidated)	n/a	2,331	n/a	n/a	n/a
Adjusted EPS **	n/a	2,627	n/a	n/a	n/a
BPS	2,044	12,500	n/a	n/a	0
DPS (common)	n/a	n/a	n/a	n/a	0
Valuations (x)					
P/E***	n/a	n/a	n/a	n/a	0.0
P/B***	n/a	n/a	n/a	n/a	0.0
EV/EBITDA	n/a	1.0	n/a	n/a	0.0
Ratios					
ROE (%)	(83.2)	36.1	0.0	n/a	0.0
ROA (%)	(15.5)	10.6	0.0	n/a	0.0
ROIC (%)	(18.2)	29.7	n/a	n/a	0.0
Payout ratio (%)	n/a	n/a	n/a	n/a	0.0
Dividend yield (Common, %)	n/a	n/a	n/a	n/a	0.0
Net debt to equity (%)	471.6	20.7	n/a	n/a	0.0
Interest coverage (x)	(3.0)	2.1	n/a	n/a	0.0

Note: *Excluding one-off items
**Fully diluted, excluding one-off items
***From companies subject to equity-method valuation

Source: Company data, Samsung Securities estimates

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- As of 12/15 2025, Samsung Securities' holdings of shares and debt instruments convertible into shares of each company covered in this report would not, if such debt instruments were converted, exceed 1% of each company's outstanding shares.
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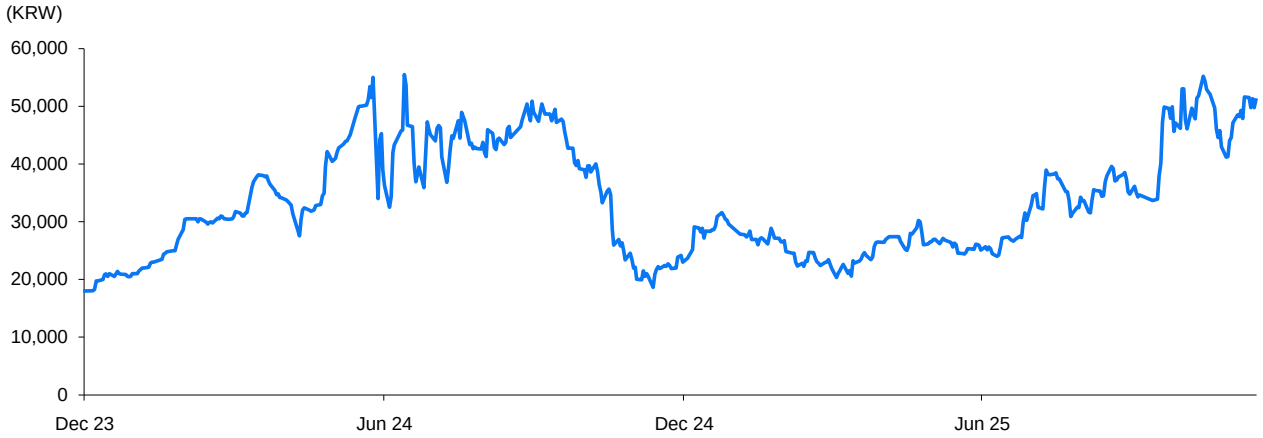
Target price changes in past two years



Rating changes over past two years (adjusted share prices)

Date	2025/12/16
Recommendation	Not Rated
Target price (KRW)	n/a
Gap* (average)	
(max or min)**	

Note: * [(average, maximum, or minimum share price over duration of target price minus target price) / target price] x 100%
** Maximum/minimum share price if new target is higher/lower than market close on the business day prior to target price change

Samsung Securities uses the following investment ratings*

Company

BUY	Expected to increase in value by 15% or more within 12 months and is highly attractive within sector
HOLD	Expected to increase/decrease in value by less than 15% within 12 months
SELL	Expected to decrease in value by 15% or more within 12 months

Industry

OVERWEIGHT	Expected to outperform market by 5% or more within 12 months
NEUTRAL	Expected to outperform/underperform market by less than 5% within 12 months
UNDERWEIGHT	Expected to underperform market by 5% or more within 12 months

* Note: Effective Jul 27, 2023, BUY, HOLD, and SELL criteria are based on expectations of share-price moves of 15% or more within 12 months

Percentage of ratings in 12 months prior to 2025.09.30

BUY (83.5%)·HOLD (16.5%)·SELL (0%)

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