COMPANY UPDATE

2026. 1. 20

EV/Mobility Team

Hyunryul Cho
Senior Analyst
hyunryul.cho@samsung.com

Wonyoung Kim
Research Associate
wonyoung10.kim@samsung.com

Scan to go to
Research Center report database

Korea Petrochemical (006650)

4Q review: Chief beneficiary of butadiene strength

- Korea Petrochemical reported a 4Q operating profit of KRW25b (down 42% q-q; missing both FnGuide consensus (KRW31.7b) and our estimate (KRW33.2b) by 21% and 25%, respectively). The company, however, maintained profitability for the second consecutive quarter.
- The company, which focuses solely on external sales of butadiene, is the biggest beneficiary of the butadiene price surge among domestic players. The recent two-week price increase alone could boost its earnings by KRW9b q-q in 1Q. We maintain BUY.

AT A GLANCE

BUY

Target price	KRW195,000	28.2%
Current price	**KRW152,100**	
Market cap	KRW988.65b/USD670.86m	
Shares (float)	6,500,000 (53.9%)	
52-week high/low	KRW159,200/KRW76,200	
Avg daily trading value (60-day)	KRW7.5b/ USD5.1m	

ONE-YEAR PERFORMANCE

	1M	6M	12M
Korea Petrochemical (%)	3.1	51.2	82.2
Vs Kospi (%pts)	-15.5	-1.7	-6.3

KEY CHANGES

(KRW)	New	Old	Diff
Recommend.	BUY	BUY	
Target price	195,000	195,000	0.0%
2025E EPS	4,415	4,415	0.0%
2026E EPS	14,414	14,414	0.0%

SAMSUNG vs THE STREET

No of estimates	7
Target price	199,286
Recommendation	3.9

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

WHAT'S THE STORY?

4Q25 review—Misses consensus: Korea Petrochemical reported a 4Q operating profit of KRW25b, down 42% q-q and missing both FnGuide consensus (KRW31.7b) and our estimate (KRW33.2b) by 21% and 25%, respectively. The company, however, maintained profitability for the second consecutive quarter. The shortfall was mainly due to: 1) reduced sales volume from utility maintenance; and 2) one-off costs. Divisional earnings have yet to be disclosed, but we estimate that the petrochemicals division saw an operating profit of KRW1.5b (down 84% q-q; hit by negative inventory effects from falling naphtha prices)—nb, the division, however, managed to stay in the black thanks to strong sales of specialty products (eg PE/PP for battery separators, flame-retardant PP for ESS modules, and PP for capacitors), while most competitors likely posted losses there. Operating profit at the industrial gas business likely came in at KRW1.8b (down 11% q-q and flat q-q). Meanwhile at Hanju Corp (subject to consolidated accounting from May), its utilities services business likely saw an operating profit of KRW18.7b (down 34% q-q) and its salt business likely recorded an operating profit of KRW3b (flat q-q).

(Continued on the next page)

SUMMARY 4Q RESULTS

(KRWb)	4Q25	Chg		Diff (%)	
		(% y-y)	(% q-q)	Samsung	Consensus
Sales	849.5	19.3	-6.6	0.0	-5.6
Operating profit	25.0	nm	-41.7	-0.2	-30.1
Pre-tax profit	13.1	120.1	-71.7	-0.2	-65.5
Net profit	3.1	-84.6	-92.7	0.2	-90.0
Margins (%)					
Operating profit	2.9				
Pre-tax profit	1.5				
Net profit	0.4				

Source: Company data, FnGuide, Samsung Securities estimates

VALUATION SUMMARY

	2024	2025E	2026E
Valuation (x)			
P/E	n/a	32.8	10.6
P/B	0.3	0.5	0.5
EV/EBITDA	4.6	5.1	3.3
Div yield (%)	1.3	0.9	2.8
EPS growth (% y-y)	nm	nm	226.5
ROE (%)	-0.5	1.6	5.0
Per-share data (KRW)			
EPS	-1,312	4,415	14,414
BVPS	292,683	296,330	310,200
DPS	1,000	1,300	4,300

1Q26 preview—To beat consensus: We forecast the company's 1Q operating profit to hit KRW44.1b (up 76% q-q and 12% above FnGuide consensus of KRW39.3b). The recovery should be driven by the reversal of negative inventory effects, the end of utility maintenance-related opportunity losses, and the strength in butadiene prices.

View—Chief beneficiary of butadiene strength: Butadiene prices have risen 29% over the past two weeks, amid news that some Asian naphtha cracking centers (NCCs) may shut down due to deteriorating profitability. The butadiene-naphtha spread has risen sharply from an average of USD305/tonne in 4Q25 to USD493/tonne in 1Q26 to date. Unlike its competitors, the company does not have downstream butadiene operations (such as ABS, SBR, or NB Latex) and instead sells all of its butadiene production externally, with a production capacity of 14.6m tonnes per year. Assuming an 89% utilization rate based on the spread difference between 4Q25 and 1Q26 to date, the company could see an earnings contribution of KRW9b q-q from butadiene alone. We maintain BUY.

KPIC: Quarterly results

(KRWb)	4Q25P	3Q25	4Q24	Consensus	Samsung	Diff (%)			
						(% q-q)	(% y-y)	Consensus	Samsung
Sales	849.5	909.9	712.1	893.7	871.0	-6.6	19.3	-4.9	-2.5
Operating income	25.0	42.8	-9.3	31.7	33.2	-41.6	Turned pos	-21.0	-24.5
Pre-tax income	13.1	46.3	6.0	30.1	35.1	-71.7	120.5	-56.4	-62.6
Net income	3.1	42.4	20.1	28.0	29.1	-92.7	-84.6	-88.9	-89.4
Attributable to parent	-5.6	29.9	20.1	19.0	18.5	Turned neg	Turned neg	Turned neg	Turned neg
Margins (%)									
Operating income	2.9	4.7	-1.3	3.5	3.8				
Pre-tax income	1.5	5.1	0.8	3.4	4.0				
Net income	0.4	4.7	2.8	3.1	3.3				
Attributable to parent	-0.7	6.0	2.8	2.1	2.1				

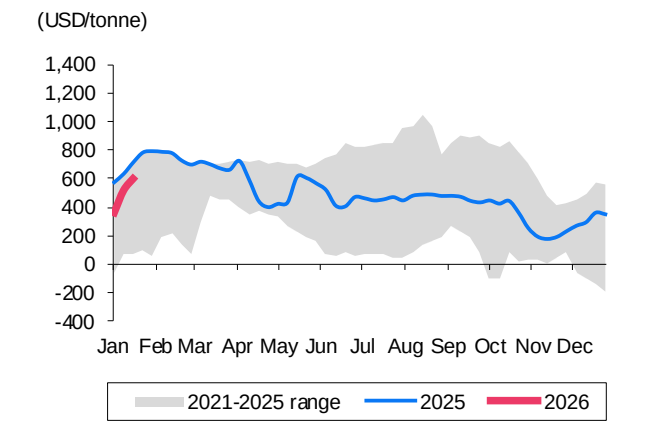
Note: Net income attributable to parent is based on our estimates
Source: Company data, FnGuide, Samsung Securities

KPIC: Quarterly results, by division

(KRWb)	4Q25P	3Q25	4Q24	Chg (% q-q)	Chg (% y-y)
Sales	**849.5**	**909.9**	**712.1**	**-6.6**	**19.3**
Chemicals	645.1	706.9	706.4	-8.7	-8.7
Industrial Gas (Korea Air-Tech)	14.1	16.0	14.2	-11.9	-0.7
Group Energy (Hanju)	174.8	205.6	0.0	-15.0	Remained neg
Salt (Hanju)	15.5	15.5	0.0	0.0	Remained neg
Operating income	**25.0**	**42.8**	**-9.3**	**-41.6**	**Turned pos**
Chemicals	1.5	9.6	-10.7	-84.4	Turned pos
Industrial Gas (Korea Air-Tech)	1.8	2.0	1.3	-11.3	34.7
Group Energy (Hanju)	18.7	28.2		-33.6	
Salt (Hanju)	3.0	3.0		0.0	
Pre-tax income	13.1	46.3	6.0	-71.7	120.5
Net income	**3.1**	**42.4**	**20.1**	**-92.7**	**-84.6**
Attributable to parent	**-5.6**	**29.9**	**20.1**	**Turned neg**	**Turned neg**
Margins (%)					
Operating income	2.9	4.7	-1.3		
Chemicals	0.2	1.4	-1.5		
Industrial Gas (Korea Air-Tech)	12.9	12.8	9.5		
Group Energy (Hanju)	10.7	13.7			
Salt (Hanju)	19.5	19.5			
Pre-tax income	1.5	5.1	0.8		
Net income	0.4	4.7	2.8		
Attributable to parent	-0.7	6.0	2.8		

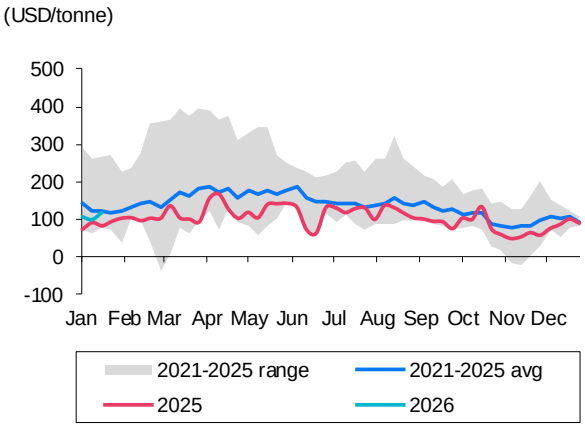
Note: Segmental results are not yet disclosed and are therefore based on our estimates.
Source: Company data, Samsung Securities estimates

Butadiene-naphtha spread



Source: S&P Global Platts, ICIS, Samsung Securities

KPIC: Mixed spread



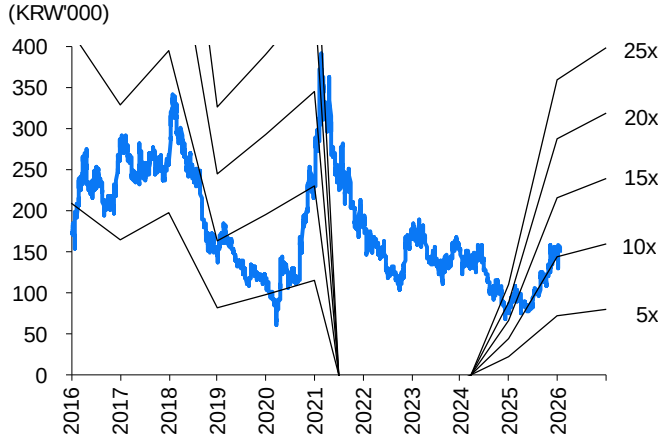
Source: S&P Global Platts, ICIS, Samsung Securities

KPIC: Earnings Estimate from Butadiene Sales

(USD/ton)	Butadiene-naphtha spread	KRW/USD Exchange Rate	Annual Capacity ('000 tonnes)	Operating Rate*	Estimated Production ('000 tonnes)	Butadiene Profit (KRWb)
1Q24	525	1,329	146	81%	30	20.7
2Q24	730	1,371	146	84%	31	30.7
3Q24	844	1,358	146	81%	30	33.8
4Q24	618	1,400	146	83%	30	26.3
1Q25	713	1,453	146	83%	30	31.4
2Q25	508	1,401	146	89%	33	23.2
3Q25	464	1,387	146	89%	32	20.8
4Q25	305	1,452	146	89%	32	14.3
1QTD26	493	1,459	146	89%	32	23.3

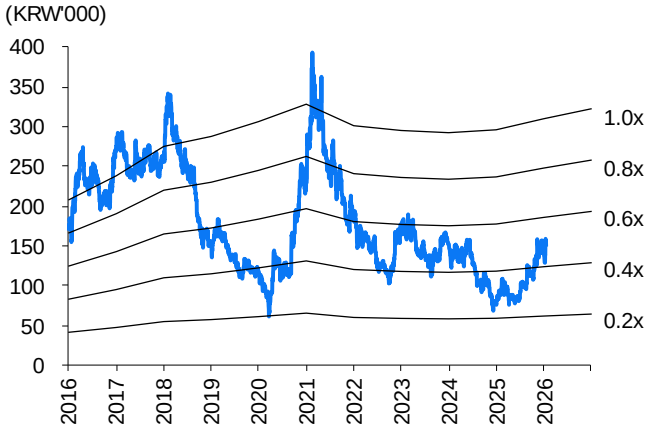
Note: * The operating rate is based on the combined C2+C3 utilization rate from quarterly reports.
The operating rates for 4Q25 and 1QTD26 are assumed to be the same as the 3Q25 operating rate.
Source: Company data, Samsung Securities estimates

KPIC: 12M forward P/E band



Source: Samsung Securities estimates

KPIC: 12M forward P/B band



Source: Samsung Securities estimates

KPIC: Results and forecasts

(KRWb)	1Q25	2Q25	3Q25	4Q25P	1Q26E	2Q26E	3Q26E	4Q26E	2024	2025	2026E	2027E
KRW/USD (average)	1,453	1,401	1,387	1,449	1,430	1,390	1,350	1,315	1,365	1,422	1,371	1,315
Sales	**742**	**847**	**910**	**849**	**877**	**856**	**840**	**827**	**2,800**	**3,348**	**3,400**	**3,355**
Growth (% q-q)	4.1	14.2	7.5	-6.6	3.2	-2.3	-1.9	-1.6				
Growth (% y-y)	11.8	14.2	33.3	19.3	18.2	1.1	-7.7	-2.7	12.0	19.6	1.5	-1.3
Chemicals	736	712	707	645	677	656	640	627	2,779	2,800	2,601	2,546
Industrial Gas (Korea Air-Tech)	15	15	16	14	17	18	17	17	52	60	69	80
Group Energy (Hanju)		133	206	175	201	201	201	201		513	804	804
Salt (Hanju)		11	15	15	15	15	15	15		42	62	62
EBITDA	**34**	**44**	**80**	**60**	**87**	**83**	**82**	**74**	**120**	**217**	**327**	**336**
Growth (% q-q)	-3.1	30.0	81.9	-25.4	46.0	-4.6	-0.6	-9.8				
Growth (% y-y)	14.7	12.1	379.5	71.0	157.5	88.9	3.3	24.8	0.9	80.8	50.5	2.7
Operating income	**-10**	**-5**	**43**	**25**	**44**	**41**	**41**	**34**	**-60**	**53**	**161**	**172**
Growth (% q-q)	Remained neg	Remained neg	Turned pos	-41.6	76.1	-6.9	0.8	-18.0				
Growth (% y-y)	Remained neg	Remained neg	Turned pos	Turned pos	To turn pos	To turn pos	-3.4	35.5	Remained neg	Turned pos	200.5	6.9
Chemicals	-12	-22	10	1	12	8	9	1	-65	-22	29	40
Growth (% q-q)	Remained neg	Remained neg	Turned pos	-41.6	76.1	-6.9	0.8	-18.0				
Growth (% y-y)	Remained neg	Remained neg	Turned pos	Turned pos	To turn pos	To turn pos	-3.4	35.5	Remained neg	Turned pos	200.5	6.9
Industrial Gas (Korea Air-Tech)	2	2	2	2	2	2	2	2	5	8	9	11
Growth (% q-q)	Remained neg	Remained neg	Turned pos	-41.6	76.1	-6.9	0.8	-18.0				
Growth (% y-y)	Remained neg	Remained neg	Turned pos	Turned pos	To turn pos	To turn pos	-3.4	35.5	Remained neg	Turned pos	200.5	6.9
Group Energy (Hanju)		13	28	19	28	28	28	28		60	110	109
Growth (% q-q)			Turned pos	-41.6	76.1	-6.9	0.8	-18.0				
Growth (% y-y)						TO TURN POS	-3.4	35.5		Turned pos	200.5	6.9
Salt (Hanju)		3	3	3	3	3	3	3		9	13	12
Growth (% q-q)			Turned pos	-41.6	76.1	-6.9	0.8	-18.0				
Growth (% y-y)						TO TURN POS	-3.4	35.5		Turned pos	200.5	6.9
Pre-tax income	3	10	46	13	46	43	44	37	-33	72	170	182
Growth (% q-q)	Turned pos	179.5	387.5	-71.7	-36.2	-6.1	0.3	-14.6				
Growth (% y-y)	Turned pos	Turned pos	Turned pos	120.5	1,258.1	356.4	-6.1	183.4	Remained neg	Turned pos	652.7	To turn pos
Net income	**3**	**8**	**42**	**3**	**39**	**36**	**36**	**31**	**-9**	**56**	**143**	**152**
Growth (% q-q)	Turned pos	164.8	438.3	-92.7	-31.3	-6.1	0.3	-14.6				
Growth (% y-y)	Turned pos	Turned pos	Turned pos	-84.6	1,202.3	361.9	-13.9	906.7	Remained neg	Turned pos	153.5	6.6
Attributable to parent	3	1	30	-6	26	24	24	19	-9	29	94	104
Margins (%)												
EBITDA	4.6	5.2	8.8	7.0	9.9	9.7	9.8	9.0	4.3	6.5	9.6	10.0
Operating income	-1.3	-0.5	4.7	2.9	5.0	4.8	4.9	4.1	-2.1	1.6	4.7	5.1
Chemicals	-1.6	-3.1	1.4	0.2	1.7	1.2	1.3	0.1	-2.3	-0.8	1.1	1.6
Industrial Gas (Korea Air-Tech)	12.8	12.3	12.8	12.9	12.8	12.8	12.8	13.6	9.9	12.7	13.0	13.3
Group Energy (Hanju)		9.5	13.7	10.7	13.7	13.7	13.7	13.7		11.6	13.7	13.5
Salt (Hanju)		23.4	19.5	19.5	20.3	20.3	20.3	20.3		20.5	20.3	20.1
Pre-tax income	0.5	1.1	5.1	1.5	5.3	5.1	5.2	4.5	-1.2	2.2	5.0	5.4
Net income	0.4	0.9	4.7	0.4	4.4	4.2	4.3	3.8	-0.3	1.7	4.2	4.5

Source: Company data, Samsung Securities estimates

Income statement

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Sales	**2,500**	**2,800**	**3,348**	**3,400**	**3,355**
Cost of goods sold	2,512	2,809	3,232	3,176	3,121
Gross profit	**-12**	**-9**	**116**	**223**	**234**
Gross margin (%)	-0.5	-0.3	3.5	6.6	7.0
SG&A expenses	51	51	63	63	62
Operating profit	**-62**	**-60**	**53**	**161**	**172**
Operating margin (%)	-2.5	-2.1	1.6	4.7	5.1
Non-operating gains (losses)	**12**	**27**	**19**	**10**	**10**
Financial profit	17	24	14	18	18
Financial costs	20	21	15	15	15
Equity-method gains (losses)	13	23	19	6	6
Other	3	1	1	1	1
Pre-tax profit	**-50**	**-33**	**72**	**170**	**182**
Taxes	-21	-24	16	28	29
Effective tax rate (%)	41.8	74.1	22.2	16.2	16.2
Profit from continuing operations	-29	-9	56	143	152
Profit from discontinued operations	0	0	0	0	0
Net profit	**-29**	**-9**	**56**	**143**	**152**
Net margin (%)	-1.2	-0.3	1.7	4.2	4.5
Net profit (controlling interests)	-29	-9	29	94	104
Net profit (non-controlling interests)	0	0	28	49	48
EBITDA	119	120	217	327	336
EBITDA margin (%)	4.8	4.3	6.5	9.6	10.0
EPS (parent-based) (KRW)	-4,468	-1,312	4,415	14,414	15,965
EPS (consolidated) (KRW)	-4,468	-1,312	8,660	21,949	23,393
Adjusted EPS (KRW)*	-4,468	-1,312	4,415	14,414	15,965

Balance sheet

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Current assets	**502**	**628**	**615**	**749**	**865**
Cash & equivalents	34	109	16	141	265
Accounts receivable	214	215	236	240	237
Inventories	211	240	287	291	288
Other current assets	43	64	76	77	76
Fixed assets	**1,694**	**1,592**	**1,698**	**1,703**	**1,709**
Investment assets	244	267	320	325	320
Tangible assets	1,393	1,261	1,316	1,315	1,326
Intangible assets	9	9	8	8	8
Other long-term assets	48	54	54	54	54
Total assets	**2,196**	**2,220**	**2,313**	**2,452**	**2,574**
Current liabilities	**288**	**307**	**347**	**351**	**348**
Accounts payable	131	153	182	185	183
Short-term debt	92	61	111	111	111
Other current liabilities	66	93	54	54	54
Long-term liabilities	**83**	**105**	**108**	**109**	**108**
Bonds & long-term debt	32	85	85	85	85
Other long-term liabilities	52	20	23	24	23
Total liabilities	**372**	**412**	**456**	**460**	**456**
Owners of parent equity	**1,825**	**1,808**	**1,830**	**1,916**	**1,993**
Capital stock	41	41	41	41	41
Capital surplus	264	264	264	264	264
Retained earnings	1,525	1,505	1,527	1,613	1,690
Other	-5	-3	-3	-3	-3
Non-controlling interests' equity	**0**	**0**	**28**	**77**	**125**
Total equity	**1,825**	**1,808**	**1,858**	**1,992**	**2,118**
Net debt	113	50	138	12	-111

Cash flow statement

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Cash flow from operations	**86**	**133**	**158**	**285**	**301**
Net profit	-29	-9	56	143	152
Non-cash profit and expenses	126	144	148	174	168
Depreciation	181	180	164	166	164
Amortization	0	0	0	0	0
Other	-55	-36	-16	7	4
Changes in A/L from operating activities	-13	-3	-31	-5	4
Cash flow from investments	**-159**	**-91**	**-215**	**-154**	**-160**
Change in tangible assets	-113	-59	-218	-166	-174
Change in financial assets	-6	-32	-10	-1	1
Other	-40	0	13	13	13
Cash flow from financing	**68**	**32**	**-5**	**-8**	**-27**
Change in debt	67	42	2	0	0
Change in equity	0	0	0	0	0
Dividends	-6	-6	-6	-8	-27
Other	8	-4	0	0	0
Change in cash	-5	75	-93	125	124
Cash at beginning of year	39	34	109	16	141
Cash at end of year	34	109	16	141	265
Gross cash flow	**97**	**136**	**205**	**316**	**321**
Free cash flow	**-27**	**74**	**-60**	**119**	**126**

Financial ratios

Year-end Dec 31	2023	2024	2025E	2026E	2027E
Growth (%)					
Sales	12.5	12.0	19.6	1.5	-1.3
Operating profit	nm	nm	nm	200.5	6.9
Net profit	nm	nm	nm	153.5	6.6
Adjusted EPS**	nm	nm	nm	226.5	10.8
Per-share data (KRW)					
EPS (parent-based)	-4,468	-1,312	4,415	14,414	15,965
EPS (consolidated)	-4,468	-1,312	8,660	21,949	23,393
Adjusted EPS**	-4,468	-1,312	4,415	14,414	15,965
BVPS	295,460	292,683	296,330	310,200	322,702
DPS (common)	1,000	1,000	1,300	4,300	4,800
Valuations (x)					
P/E***	n/a	n/a	32.8	10.6	9.5
P/B***	0.5	0.3	0.5	0.5	0.5
EV/EBITDA	9.3	4.6	5.1	3.3	3.0
Ratios (%)					
ROE	-1.6	-0.5	1.6	5.0	5.3
ROA	-1.3	-0.4	2.5	6.0	6.1
ROIC	-2.1	-0.9	2.6	8.1	8.6
Payout ratio	-21.3	-72.4	28.0	28.3	28.6
Dividend yield (common)	0.7	1.3	0.9	2.8	3.2
Net debt to equity	6.2	2.8	7.4	0.6	-5.2
Interest coverage (x)	-10.9	-8.3	6.6	19.7	21.0

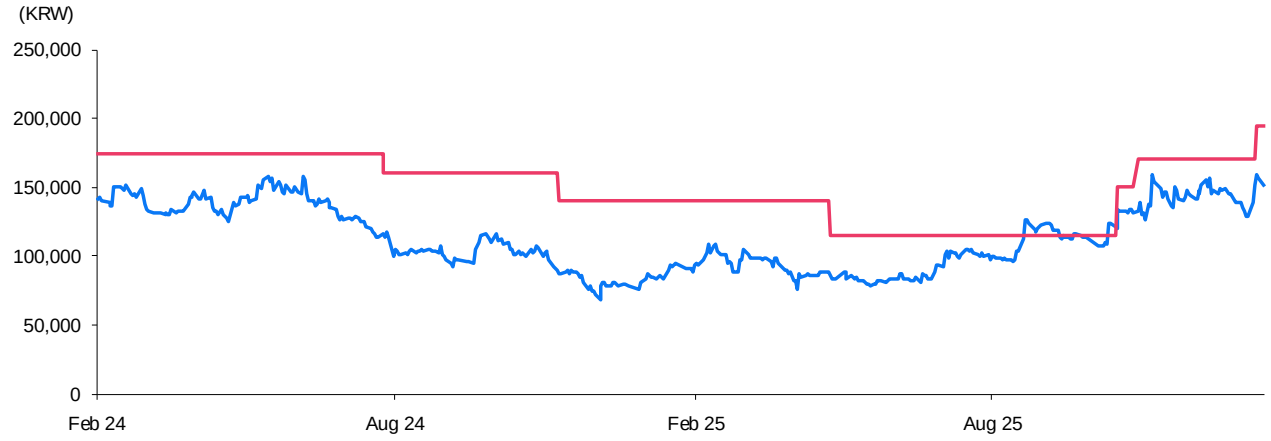
Note: *Excluding one-off items;
**Fully diluted, excluding one-off items;
***From companies subject to equity-method valuation

Source: Company data, Samsung Securities estimates

Compliance notice

- As of 1/19 2026, the covering analyst(s) did not own any shares, or debt instruments convertible into shares, of any company covered in this report.
- As of 1/19 2026, 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.
- This report has been prepared without any undue external influence or interference, and accurately reflects the views of the analyst(s) covering the company or companies herein.
- All material presented in this report, unless specifically indicated otherwise, is under copyright to Samsung Securities.
- Neither the material nor its content (including copies) may be altered in any form, or by any means transmitted, copied, or distributed to another party, without prior express written permission from Samsung Securities.
- This memorandum is based upon information available to the public. While we have taken all reasonable care to ensure its reliability, we do not guarantee its accuracy or completeness. This memorandum is not intended to be an offer, or a solicitation of any offer, to buy or sell the securities mentioned herein. Samsung Securities shall not be liable whatsoever for any loss, direct or consequential, arising from the use of this memorandum or its contents. Statements made regarding affiliates of Samsung Securities are also based upon publicly available information and do not necessarily represent the views of management at such affiliates.
- This material has not been distributed to institutional investors or other third parties prior to its publication.

Target price changes in past two years



Rating changes over past two years (adjusted share prices)

Date	2023/10/30	2024/7/30	11/14	2025/4/29	10/21	11/3	2026/1/15
Recommendation	BUY	BUY	BUY	BUY	BUY	BUY	BUY
Target price (KRW)	175000	160000	140000	115000	150000	170000	195000
Gap* (average)	-18.32	-35.28	-36.33	-13.38	-11.42	-15.68	
(max or min)**	-4.40	-26.75	-22.14	9.65	-10.33	-6.65	

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 2025.12.31

BUY(85.8%)·HOLD(14.2%)·SELL(0%)

Global Disclosures & Disclaimers

General

This research report is for information purposes only. It is not and should not be construed as an offer or solicitation of an offer to purchase or sell any securities or other financial instruments or to participate in any trading strategy. This report does not provide individually tailored investment advice. This report does not take into account individual client circumstances, objectives, or needs and is not intended as recommendations of particular securities, financial instruments or strategies to any particular client. The securities and other financial instruments discussed in this report may not be suitable for all investors. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein and investors should seek the advice of a financial adviser.

This report may not be altered, reproduced, distributed, transmitted or published in whole or in part for any purpose. References to "Samsung Securities" are references to any company in the Samsung Securities, Co., Ltd. group of companies.

Samsung Securities and/or other affiliated companies, its and their directors, officers, representatives, or employees may have long or short positions in any of the securities or other financial instruments mentioned in this report or of issuers described herein and may purchase and/or sell, or offer to purchase and/or sell, at any time, such securities or other financial instruments in the open market or otherwise, as either a principal or agent. Any pricing of securities or other financial instrument contained herein is as of the close of market for such day, unless otherwise stated. Opinions and estimates contained herein constitute our judgment as of the date of this report and are subject to change without notice.

The information provided in this report is provided "AS IS". Although the information contained herein has been obtained from sources believed to be reliable, no representation or warranty, either expressed or implied, is provided by Samsung Securities in relation to the accuracy, completeness or reliability of such information or that such information was provided for any particular purpose and Samsung Securities expressly disclaims any warranties of merchantability or fitness for a particular purpose. Furthermore, this report is not intended to be a complete statement or summary of the securities, markets or developments referred to herein.

Samsung Securities does not undertake that investors will obtain any profits, nor will it share with investors any investment profits. Samsung Securities, its affiliates, or any of its and their affiliates, directors, officers, employees or agents disclaim any and all responsibility or liability whatsoever for any loss (direct or consequential) or damage arising out of the use of all or any part of this report or its contents or otherwise arising in connection therewith. Information and opinions contained herein are subject to change without notice. Past performance is not indicative of future results. Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. For investment advice, trade execution or other enquiries, clients should contact their local sales representative. Any opinions expressed in this report are subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of Samsung Securities. Any analysis contained herein is based on numerous assumptions. Different assumptions may result in materially different results. Samsung Securities is under no obligation to update or keep current the information contained herein. Samsung Securities relies on information barriers to control the flow of information contained in one or more areas or groups within Samsung Securities into other areas or groups of Samsung Securities. Any prices stated in this report are for information purposes only and do not represent valuations for individual securities or other financial instruments. Samsung Securities makes no representation that any transaction can or could have been effected at those prices and any prices contained herein may not reflect Samsung Securities' internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions by Samsung Securities or any other source may yield substantially different results. Additional information is available upon request.

For reports to be distributed to US:

Securities research is prepared, issued and exclusively distributed by Samsung Securities Co., Ltd., an organization licensed with the Financial Supervisory Service of South Korea. This research may be distributed in the United States only to major institutional investors as defined in Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended, and may not be circulated to any other person otherwise. All transactions by U.S. investors involving securities discussed in this report must be effected through Samsung Securities (America) Inc., a broker-dealer registered with the U.S. Securities & Exchange Commission and a member of the Financial Industry Regulatory Authority/SIPC, and not through any non-U.S. affiliate thereof. The analysts listed [on the front of this report] are employees of Samsung Securities Co., Ltd., or a non-U.S. affiliate thereof, and are not registered/qualified as research analysts under applicable U.S. rules and regulations and may not be subject to U.S. restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

For reports to be distributed to UK:

This report is not an invitation nor is it intended to be an inducement to engage in investment activity for the purpose of section 21 of the Financial Services and Markets Act 2000 of the United Kingdom ("FSMA"). To the extent that this report does constitute such an invitation or inducement, it is directed only at (i) persons who are investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2001 (as amended) of the United Kingdom (the "Financial Promotion Order"); (ii) persons who fall within Articles 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order; and (iii) any other persons to whom this report can, for the purposes of section 21 of FSMA, otherwise lawfully be made (all such persons together being referred to as "relevant persons").

Any investment or investment activity to which this report relates is available only to relevant persons and will be engaged in only with relevant persons. Persons who are not relevant persons must not act or rely on this report.

For reports to be distributed to Korea:

This report is for private circulation only, not for sale, and is issued and distributed only to persons permitted under the laws and regulations of Korea.

For reports to be distributed to Singapore:

This report is provided pursuant to the financial advisory licensing exemption under Regulation 27(1)(e) of the Financial Advisers Regulation of Singapore and accordingly may only be provided to persons in Singapore who are "institutional investors" as defined in Section 4A of the Securities and Futures Act, Chapter 289 of Singapore. This report is intended only for the person to whom Samsung Securities has provided this report and such person may not send, forward or transmit in any way this report or any copy of this report to any other person.

Analyst certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of such analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research report. The analyst(s) principally responsible for the preparation of this research report receives compensation based on determination by research management and senior management (not including investment banking), based on the overall revenues, including investment banking revenues of Samsung Securities Co., Ltd. and its related entities and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.

Copyright © 2010 Samsung Securities Co., Ltd.. All rights reserved. This report or any portion hereof may not be reprinted, sold or redistributed without the prior written consent of Samsung Securities America Inc

Samsung Securities

SAMSUNG SECURITIES

Samsung Electronics Bldg., 11, 74-gil,
Seochodae-ro, Seocho-gu, Seoul, Korea 06620
Tel: 02 2020 8000 / www.samsungpop.com

Family Center: 1588 2323

Voice Of Customer: 080 911 0900

**For more information,
please call our sales representatives:**

LONDON

Samsung Securities Europe Limited
1st Floor, 30 Gresham Street, London EC2V 7PG UK
Tel. 44-207-776-4311
Fax. 44-203-837-9219

NEW YORK

Samsung Securities America Limited
1330 Avenue of the Americas. 10th Floor. New York,
NY 10019
Tel: 1-212-972-2454
Fax: 1-212-972-2704

HONG KONG

Samsung Securities (Asia) Limited
Suite 4511, Two International Finance Center,
8 Finance Street, Central, Hong Kong
Tel: 852-3411-3608
Fax: 852-2114-0290

BEIJING

Samsung Securities Beijing Representative Office
Rm. 910, The Exchange Building No 118 JianGuo Lu, Chao
Yang District, Beijing, China
Tel: 86-10-6522-1855 (extension 7891)
Fax: 86-10-6522-1855 (extension 7889)

TOKYO

Samsung Securities Tokyo Representative Office
#106-8532 19F, Roppongi T-Cube 3-1-1,
Roppongi Minato-ku Tokyo, Japan
Tel: 81-3-6333-2952
Fax: 81-3-6333-2953

Member of
Dow Jones
Sustainability Indices
Powered by the S&P Global CSA