



Simmtech

| Bloomberg Code (222800 KS) | Reuters Code (222800.KQ)

16 January 2023

[IT parts/electronics]

Falling substrate prices

HyungWou Park

☎ (82-2) 3772-2184

✉ hyungwou@shinhan.com



BUY
(Maintain)



CP (Jan. 13)
KRW30,400



TP (6 months)
KRW41,000



Upside
34.9%

Shinhan Securities does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Analysts employed by Shinhan Securities or a non-US affiliate thereof, are not registered/qualified as research analysts with FINRA, may not be associated persons of the member and may not be subject to FINRA restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. For analyst certification and important disclosures, refer to the [Compliance & Disclosure Notice at the end of this report](#).

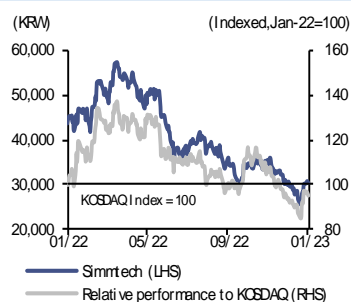
Rating	BUY (Maintain)
TP (6 months)	KRW41,000
Upside	34.9%

KOSPI	2,386.09p
KOSDAQ	711.82p
Market cap	KRW968.4bn/USD849.4mn
Par value	KRW500
Outstanding shares	31.9mn
Free float	20.7mn(65.1%)
52-week high/low	KRW57,400/KRW25,600
60-day avg. trading volume	443,087shrs
60-day avg. turnover	KRW14,411mn
Foreign ownership	8.51%

Major shareholders	
Simmtech Holdings and 8 others	33.27%

Absolute performance	
3M	-11.2%
6M	-19.4%
12M	-32.1%
Relative performance to KOSDAQ	
3M	-18.8%
6M	-13.5%
12M	-6.3%

Share performance



Substrate prices fall following declines in shipments

Simmtech is expected to have seen operating profit of KRW65.3bn (-44% QoQ, -16% YoY) in 4Q22, far short of our previous estimate of KRW90bn and the company's guidance of KRW102.3bn. The earnings shock seems to have been caused by declines in shipments and the USD/KRW exchange rate.

The company may see a sharper dip in earnings in 1Q23, with substrate prices starting to fall in earnest. It faces price-cut pressure from the chipmakers suffering from weak profitability and intensifying competition among the suppliers. Some suppliers have agreed to price cuts for market share gains. The pressure to reduce prices is felt across the supply chain including the second and third vendors.

2023 earnings forecasts lowered again in 2 months

We now forecast full-year operating profit at KRW231.1bn (-39% YoY) on sales of KRW1.5tr (-12% YoY), which is a downward revision from KRW369.2bn estimated two months earlier.

At the year-end, we had projected the market will find bottom sometime in the first half and demand will stage a rebound in mid-2023. However, rising uncertainties have made our forecast revision unavoidable. We believe the market rebound will occur upon easing of inventory correction at chipmakers.

On a positive note, Simmtech has momentum that could partly offset the drop in earnings. First, the company generates a large share of sales from smartphone-making clients who have begun inventory correction relatively earlier than other clients. Second, the supply of SiP (system in package) substrates to a smartphone maker is set to begin after years of preparation.

Retain BUY for a revised-down target price of KRW41,000

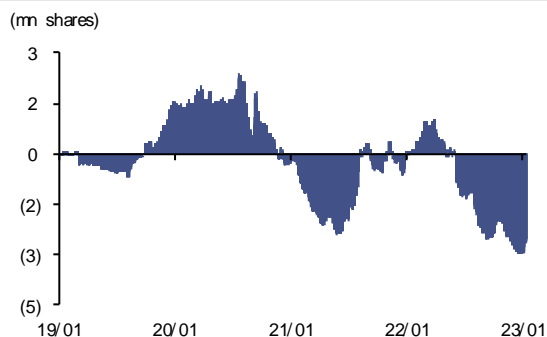
We revise down our target price for Simmtech to KRW41,000, based on 2023F EPS and the average PER low of 7.6x recorded in the turnaround years of 2020-2021.

The gap between supply and demand was the largest for package substrates among the IT parts. As a result, package substrates were the last to see order cuts during the slowdown in market demand last year. Supply-demand conditions should tighten faster than any other parts upon an upturn in demand. In addition, package substrates are poised to benefit from technological advancements. We believe Simmtech warrants attention when the bottom becomes visible in the semiconductor industry. The negatives, in other words sluggish earnings and market conditions, have already come to light. The company's PER sits at 5.7x based on our revised 2023 forecasts.

Year to	Sales	OP	Pre-tax	NP	EPS	Growth	BPS	PER	EV/EBITDA	PBR	ROE	Net debt
December	(bn KRW)	(bn KRW)	(bn KRW)	(bn KRW)	(KRW)	(%)	(KRW)	(x)	(x)	(x)	(%)	ratio (%)
2020	1,201.4	89.7	74.9	56.6	1,935	TB	8,840	11.8	5.3	2.6	25.1	49.8
2021	1,365.8	174.3	154.0	117.2	3,616	86.9	11,907	12.6	6.3	3.8	35.1	38.4
2022F	1,732.5	381.4	390.5	290.9	9,132	152.5	20,243	2.9	1.9	1.3	56.8	1.0
2023F	1,529.9	231.1	222.3	170.8	5,363	(41.3)	24,906	5.7	2.7	1.2	23.8	(18.0)
2024F	1,802.3	318.7	314.0	241.3	7,576	41.3	31,783	4.0	1.5	1.0	26.7	(36.4)

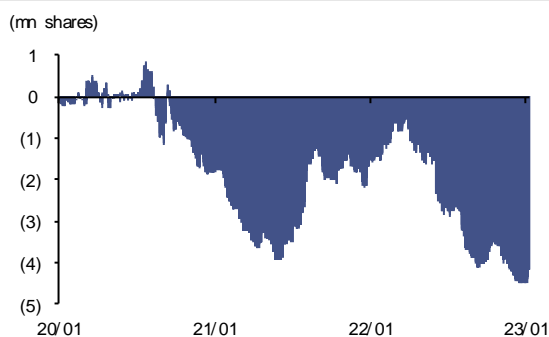
Source: Company data, Shinhan Securities / Note: TB = turn black, TR = turn red, RR = remain red

Institutional cumulative net buy since January 2019



Source: QuantiWise, Shinhan Securities

Institutional cumulative net buy since January 2020



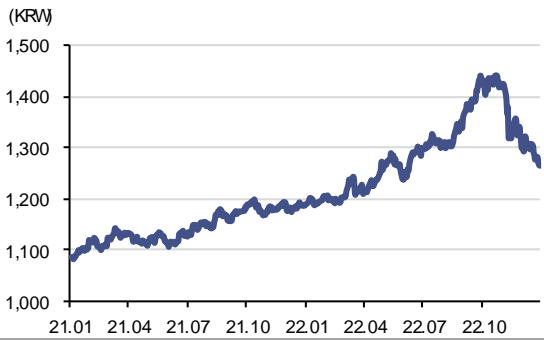
Source: QuantiWise, Shinhan Securities

Earnings trend and outlook

(bn KRW)	1Q22	2Q22	3Q22	4Q22F	1Q23F	2Q23F	3Q23F	4Q23F	2021	2022F	2023F
Sales	417.7	477.4	474.3	363.0	345.8	380.9	414.8	388.5	1,365.9	1,732.5	1,529.9
OP	84.8	114.7	116.6	65.3	48.2	59.2	67.1	56.6	174.3	381.4	231.1
OPM (%)	20.3	24.0	24.6	18.0	13.9	15.5	16.2	14.6	12.8	22.0	15.1
Parent sales	353.3	411.4	412.3	315.5	295.3	327.8	360.9	337.1	1,159.9	1,492.4	1,321.2
Parent OP	75.3	106.5	108.1	61.8	44.7	55.2	62.6	51.6	151.9	351.7	214.1
OPM (%)	21.3	25.9	26.2	19.6	15.1	16.8	17.4	15.3	13.1	23.6	16.2
Subsidiary sales	64.4	66.1	62.1	47.5	50.5	53.0	53.9	51.4	206.0	240.0	208.8
Subsidiary OP	9.5	8.2	8.5	3.5	3.5	4.0	4.5	5.0	22.2	29.7	17.0
OPM (%)	14.8	12.4	13.7	7.4	6.9	7.5	8.4	9.7	10.8	12.4	8.1
Sales by product	417.7	477.4	474.3	363.0	345.8	380.9	414.8	388.5	1,365.9	1,732.4	1,529.9
Module PCB	88.2	103.5	102.5	68.5	67.6	73.5	80.8	72.6	326.9	362.7	294.5
Package substrate	326.6	369.8	367.0	290.7	274.3	303.3	329.8	311.8	1,028.6	1,354.1	1,219.2
Others	2.9	4.2	4.8	3.7	3.9	4.2	4.1	4.0	10.3	15.6	16.2
Sales share by product (%)											
Module PCB	21.1	21.7	21.6	18.9	19.6	19.3	19.5	18.7	23.9	20.9	19.2
Package substrate	78.2	77.5	77.4	80.1	79.3	79.6	79.5	80.3	75.3	78.2	79.7
Others	0.7	0.9	1.0	1.0	1.1	1.1	1.0	1.0	0.8	0.9	1.1
MSAP sales share (%)											
Parent	66.6	64.3	62.7	63.5	66.0	69.7	71.6	71.0	63.6	64.3	69.7
Subsidiary	62.0	59.6	57.5	58.3	60.5	65.2	67.7	66.8	58.1	59.3	65.2
Subsidiary	91.6	93.8	97.5	98.2	98.0	97.9	97.7	98.2	94.8	95.0	98.0
Sales share by application (%)											
Mobile	35.8	33.1	31.3	31.3	32.3	32.4	32.1	30.3	35.8	32.9	31.7
PC	30.6	30.1	28.9	28.4	28.8	29.3	28.6	28.4	29.9	29.6	28.8
Server	18.9	19.1	20.2	19.1	18.2	17.2	16.5	18.9	19.1	19.4	17.7
Graphic card	10.4	10.9	12.1	14.1	14.0	12.3	11.1	13.1	9.7	11.8	12.6
Others	4.3	6.8	7.5	7.1	6.6	8.8	11.8	9.3	5.3	6.4	9.3

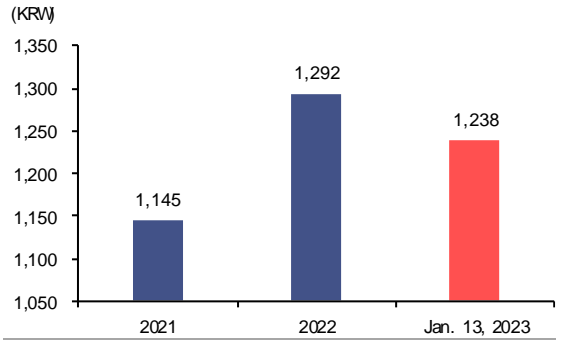
Source: Company data, Shinhan Securities

USD/KRW exchange rate trend in 2021-2022



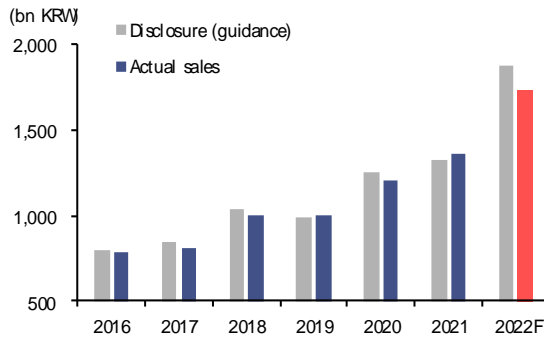
Source: Thomson Reuters, Shinhan Securities

Average USD/KRW exchange rate comparison



Source: Thomson Reuters, Shinhan Securities

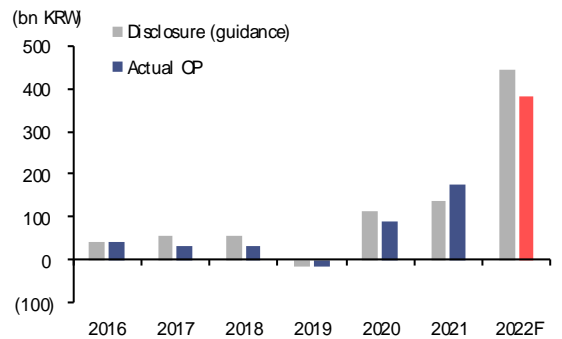
Sales comparison: Actual vs. disclosure (guidance)



Source: DART, QuantiWise, Shinhan Securities

Note: Actual figure for 2022 based on our estimate

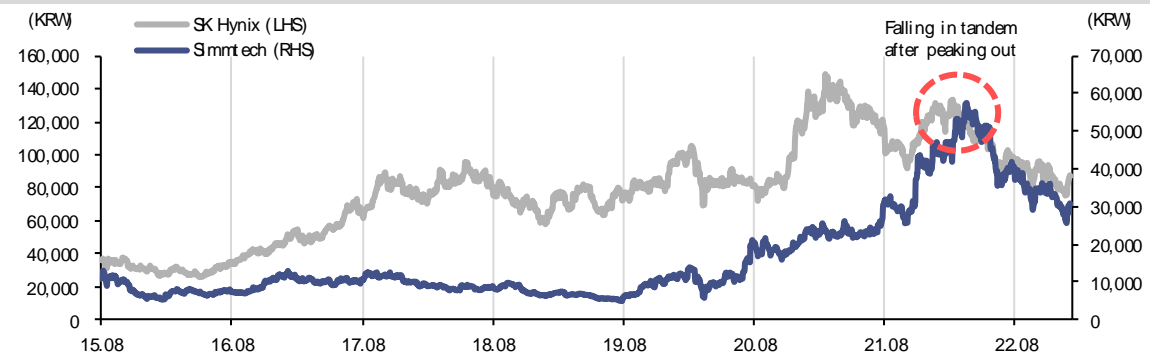
OP comparison: Actual vs. disclosure (guidance)



Source: DART, QuantiWise, Shinhan Securities

Note: Actual figure for 2022 based on our estimate

Share performance vs. SK Hynix



Source: QuantiWise, Shinhan Securities

Statement of financial position

Year to December (bn KRW)	2020	2021	2022F	2023F	2024F
Total assets	779.8	857.4	1,060.6	1,222.2	1,493.3
Current assets	198.8	245.1	328.5	485.8	749.4
Cash and equivalents	17.1	16.7	107.1	249.6	475.4
Accounts receivable	47.4	60.3	55.8	59.7	69.7
Inventories	123.8	144.5	133.8	143.2	167.1
Non-current assets	581.0	612.4	732.1	736.4	743.9
Tangible assets	512.5	501.3	560.0	562.7	565.0
Intangible assets	22.1	23.5	28.4	27.7	27.1
Investment assets	4.5	35.7	33.1	35.4	41.2
Other financial assets	0.0	0.0	0.0	0.0	0.0
Total liabilities	491.5	476.2	413.2	425.9	477.5
Current liabilities	350.1	342.0	296.4	309.9	354.3
Short-term borrowings	37.5	20.6	16.9	12.9	12.9
Accounts payable	70.5	45.6	42.2	45.1	52.7
Current portion of long-term debt	49.6	7.8	2.5	2.5	2.5
Non-current liabilities	141.4	134.2	116.8	116.0	123.2
Bonds	1.4	0.0	0.0	0.0	0.0
Long-term borrowings	41.4	54.4	43.0	37.0	31.0
Other financial liabilities	0.0	0.0	0.0	0.0	0.0
Total shareholders' equity	288.3	381.3	647.4	796.3	1,015.8
Capital stock	17.1	17.1	17.1	17.1	17.1
Capital surplus	118.4	110.6	111.2	111.2	111.2
Other capital	(0.1)	(0.3)	(0.8)	(0.8)	(0.8)
Accumulated other comprehensive income	(2.0)	7.4	17.4	17.4	17.4
Retained earnings	154.5	244.4	500.1	648.6	867.7
Controlling interest equity	287.9	379.3	644.9	793.4	1,012.4
Non-controlling interest equity	0.4	2.0	2.5	2.9	3.4
*Total debt	160.6	165.8	125.9	118.3	118.6
*Net debt (cash)	143.5	146.6	6.4	(143.7)	(369.7)

Statement of cash flow

Year to December (bn KRW)	2020	2021	2022F	2023F	2024F
Cash flow from operations	215.5	114.6	316.9	251.5	334.1
Net profit	56.5	118.3	291.4	171.2	241.8
Depreciation expense	73.9	77.9	73.1	77.3	77.7
Amortization expense	1.7	0.9	0.8	0.7	0.7
FX translation loss (gain)	(0.1)	2.3	(1.0)	0.0	0.0
Asset disposal loss (gain)	(0.9)	1.3	(3.1)	0.0	0.0
Equity method loss (gain)	0.0	0.0	0.0	0.0	0.0
Change in working capital	50.5	(119.0)	(92.4)	2.3	14.0
(Payment of income tax)	(6.0)	(23.6)	(63.0)	(51.1)	(72.2)
Others	39.9	56.5	111.1	51.1	72.1
Cash flow from investments	(82.9)	(80.5)	(166.6)	(82.5)	(86.3)
Increase in tangible assets	(86.0)	(76.6)	(128.7)	(80.0)	(80.0)
Decrease in tangible assets	3.9	32.4	1.8	0.0	0.0
Change in intangible assets	(0.0)	(0.7)	(1.0)	0.0	0.0
Change in investment assets	0.0	0.0	(9.7)	(2.3)	(5.9)
Others	(0.8)	(35.6)	(29.0)	(0.2)	(0.4)
Free cash flow	87.5	90.3	229.5	176.3	244.5
Cash flow from financing	(124.9)	(34.6)	(60.6)	(26.6)	(22.0)
Change in borrowings	(185.5)	(0.7)	(41.1)	(7.5)	0.3
Change in treasury stock	0.0	0.0	0.0	0.0	0.0
Dividends	(3.7)	(10.4)	(15.9)	(19.1)	(22.3)
Others	64.3	(23.5)	(3.6)	0.0	0.0
Other cash flow	0.0	0.0	0.0	0.0	0.0
Change in consolidated scope	0.0	0.0	0.0	0.0	0.0
Change in FX rates	(0.4)	0.1	0.7	0.0	0.0
Change in total cash	7.4	(0.4)	90.4	142.4	225.8
Beginning cash	9.7	17.1	16.7	107.1	249.5
Ending cash	17.1	16.7	107.1	249.5	475.4

Source: Company data, Shinhan Securities

Statement of comprehensive income

Year to December (bn KRW)	2020	2021	2022F	2023F	2024F
Sales	1,201.4	1,365.8	1,732.5	1,529.9	1,802.3
Growth (%)	20.1	13.7	26.8	(11.7)	17.8
COGS	1,005.0	1,081.7	1,212.0	1,094.2	1,306.5
Gross profit	196.4	284.1	520.4	435.7	495.9
GPM (%)	16.3	20.8	30.0	28.5	27.5
SG&A	106.7	109.8	139.0	204.6	177.2
Operating profit	89.7	174.3	381.4	231.1	318.7
Operating profit (%)	TB	94.2	118.8	(39.4)	37.9
OPM (%)	7.5	12.8	22.0	15.1	17.7
Non-operating profit	(14.9)	(20.3)	9.1	(8.8)	(4.6)
Financial profit	(15.1)	(17.5)	10.9	(0.8)	3.4
Other non-operating profit	0.3	(2.8)	(1.9)	(8.0)	(8.0)
Equity method gain (loss)	0.0	0.0	0.0	0.0	0.0
Pre-tax profit	74.9	154.0	390.5	222.3	314.0
Income tax	18.4	35.7	99.0	51.1	72.2
Continuing operations	56.5	118.3	291.4	171.2	241.8
Discontinued operations	0.0	0.0	0.0	0.0	0.0
Net profit	56.5	118.3	291.4	171.2	241.8
Growth (%)	TB	109.4	146.4	(41.3)	41.3
NPM (%)	4.7	8.7	16.8	11.2	13.4
Controlling interest	56.6	117.2	290.9	170.8	241.3
Non-controlling interest	(0.1)	1.1	0.5	0.3	0.5
Comprehensive income	60.0	125.5	301.1	171.2	241.8
Controlling interest	60.6	124.0	300.6	170.9	241.4
Non-controlling interest	(0.6)	1.5	0.5	0.3	0.4
EBITDA	165.4	253.2	455.3	309.1	397.0
Growth (%)	193.7	53.0	79.8	(32.1)	28.4
EBITDA margin (%)	13.8	18.5	26.3	20.2	22.0

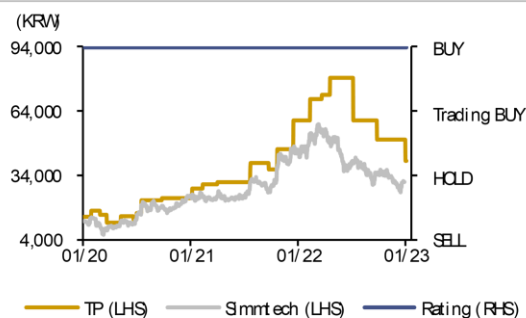
Key ratios

Year to December	2020	2021	2022F	2023F	2024F
EPS (KRW)	1,932	3,650	9,149	5,374	7,591
EPS of controlling interest (KRW)	1,935	3,616	9,132	5,363	7,576
BPS (KRW)	8,853	11,969	20,323	24,997	31,889
BPS of controlling interest (KRW)	8,840	11,907	20,243	24,906	31,783
DPS (KRW)	320	500	600	700	700
PER (x)	11.8	12.5	2.9	5.7	4.0
PER of controlling interest (x)	11.8	12.6	2.9	5.7	4.0
PBR (x)	2.6	3.8	1.3	1.2	1.0
PBR of controlling interest (x)	2.6	3.8	1.3	1.2	1.0
EV/EBITDA (x)	5.3	6.3	1.9	2.7	1.5
Dividend payout ratio (%)	18.4	13.6	6.6	13.0	9.2
Dividend yield (%)	1.4	1.1	2.3	2.3	2.3
Profitability					
EBITDA margin (%)	13.8	18.5	26.3	20.2	22.0
OPM (%)	7.5	12.8	22.0	15.1	17.7
NPM (%)	4.7	8.7	16.8	11.2	13.4
ROA (%)	7.0	14.5	30.4	15.0	17.8
ROE (%)	25.1	35.1	56.8	23.8	26.7
ROIC (%)	14.0	25.4	52.4	30.4	41.9
Stability					
Debt to equity ratio (%)	170.5	124.9	63.8	53.5	47.0
Net debt ratio (%)	49.8	38.4	1.0	(18.0)	(36.4)
Cash ratio (%)	4.9	4.9	36.1	80.5	134.2
Interest coverage ratio (x)	8.3	18.3	49.8	45.9	65.0
Activity (%)					
Working capital turnover (times)	(33.9)	(49.3)	(376.3)	(333.9)	(351.1)
Inventory turnover (days)	41.2	35.8	29.3	33.0	31.4
Receivable turnover (days)	19.2	14.4	12.2	13.8	13.1

Source: Company data, Shinhan Securities

Target price & rating history

Simmtech (222800 KS)



Date	Rating	Target price (KRW)	Target price gap (%)	
			Average	Max/Min
2019.11.15	BUY	14,747	(25.0)	(9.0)
2020.02.10	BUY	17,601	(31.5)	(21.4)
2020.03.11	BUY	15,698	(50.0)	(39.9)
2020.04.03	BUY	12,000	(19.5)	(2.1)
2020.05.21	BUY	15,000	(23.6)	(17.0)
2020.07.03	BUY	13,500	(12.3)	(5.9)
2020.07.14	BUY	16,500	(5.5)	(1.2)
2020.07.30	BUY	22,500	(15.3)	(4.0)
2020.10.08	BUY	23,500	(16.1)	2.3
2021.01.19	BUY	28,000	(15.6)	(8.9)
2021.02.24	BUY	30,000	(24.7)	(20.7)
2021.04.15	BUY	31,000	(24.2)	(13.7)
2021.08.05	BUY	37,500	-	-
2021.08.06	BUY	40,000	(25.2)	(18.3)
2021.10.07	BUY	37,000	(21.7)	(15.0)
2021.11.05	BUY	46,500	(11.0)	(1.2)
2021.12.30	BUY	60,000	(24.4)	(17.1)
2022.02.25	BUY	70,000	(23.9)	(18.0)
2022.04.06	BUY	72,000	(26.9)	(23.5)
2022.05.04	BUY	80,000	(46.0)	(35.8)
2022.07.22	BUY	60,000	(39.5)	(30.3)
2022.10.11	BUY	51,000	(37.0)	(29.1)
2023.01.16	BUY	41,000	-	-

Note: Calculation of target price gap based on past 6 months

Rating Distribution - Shinhan Securities Universe (as of 12 January 2023)

BUY (BUY)	95.80%	Trading BUY (HOLD)	2.45%	HOLD (HOLD)	1.75%	SELL (SELL)	0.00%
-----------	--------	--------------------	-------	-------------	-------	-------------	-------

Rating Distribution - Shinhan Securities Investment Banking Clients (as of 12 January 2023)

BUY (BUY)	100.00%	Trading BUY (HOLD)	0.00%	HOLD (HOLD)	0.00%	SELL (SELL)	0.00%
-----------	---------	--------------------	-------	-------------	-------	-------------	-------

Shinhan Securities Ratings (as of 1 April 2017)

Stock

- ◆ BUY: Expected 6-month gain of 10% or more
- ◆ Trading BUY: Expected 6-month gain of 10% to loss of 10%
- ◆ HOLD: Expected 6-month loss of 10% to 20%
- ◆ SELL: Expected 6-month loss of 20% or more

Sector

- ◆ OVERWEIGHT: Based on market cap, largest share of sector stocks under coverage is rated BUY
- ◆ NEUTRAL: Based on market cap, largest share of sector stocks under coverage is rated Trading BUY or HOLD
- ◆ UNDERWEIGHT: Based on market cap, largest share of sector stocks under coverage is rated SELL

Compliance & Disclosure Notice

Analyst Certification

- The research analysts who prepared this report are registered with the Korea Financial Investment Association and are subject to Korean securities regulations. They are neither registered as research analysts in any other jurisdiction nor subject to the laws or regulations thereof. The following analysts hereby certify that their views about the companies and securities discussed in this report are accurately expressed and that they have received and will receive indirect compensation in exchange for expressing specific recommendations or views in this report as part of their employment compensation provided by Shinhan Securities Co., Ltd.: HyungWou Park

Important Disclosures & Disclaimers

- As of the date of publication, Shinhan Securities Co., Ltd. does not beneficially own 1% or more of any class of common equity securities of the following companies mentioned in this report: Simmtech
- Shinhan Securities Co., Ltd. or one of its affiliates has not managed or co-managed a public offering of securities for the companies mentioned in this report in the past 12 months.
- During the last 12 months, the companies mentioned in this report were not an investment banking client of Shinhan Securities Co., Ltd. and/or one or more of its affiliates.
- Shinhan Securities Co., Ltd. or one of its affiliates has not received compensation for investment banking services from such companies in the past 12 months.
- Shinhan Securities Co., Ltd. or one of its affiliates does not expect to receive or intends to seek compensation for investment banking services from such companies or one of their affiliates in the next three months.
- Shinhan Securities Co., Ltd. or one of its affiliates, and/or their respective officers, directors or employees may have interests, or long or short positions, and may at any time make purchases or sales as a principal or agent of the securities of the companies mentioned in this report.
- As of the date of publication, research analysts responsible for this report and members of their households do not have any financial interest in the debt or equity securities of the companies mentioned in this report.
- Research analysts responsible for this report receive compensation based upon, among other factors, the overall profitability of Shinhan Securities Co., Ltd., including profits derived from investment banking. The analysts responsible for this report may also receive compensation based upon, among other factors, the overall profitability of sales and trading businesses relating to the class of securities or financial instruments for which such analysts are responsible.
- All opinions and estimates regarding the companies and their securities are accurate representations of the research analysts' judgments, and may differ from actual results.
- This report was prepared by Shinhan Securities Co., Ltd., a broker-dealer registered in the Republic of Korea and a member of the Korea Exchange. This report is intended to provide information to assist investment decisions only, and should not be used or construed as an offer or a solicitation of an offer to buy or sell any securities. The information herein has been obtained from sources deemed reliable, but such information has not been independently verified and no guarantee, representation or warranty, expressed or implied, is made as to its accuracy, completeness or correctness. Shinhan Securities Co., Ltd. makes a best effort but does not guarantee the accuracy, completeness or correctness of information and opinions translated into English from original Korean language materials. Shinhan Securities Co., Ltd. accepts no liability whatsoever for any direct, indirect and/or consequential loss arising from any use of this material or its contents. Stock selection and final investment decisions should be made at the investor's own and sole discretion.
- This report is distributed to our customers only, and any unauthorized use, duplication, or redistribution of this report is strictly prohibited.
- Investing in any Korean securities or related financial instruments discussed in this research report may present certain risks. The securities of Korean issuers may not be registered with, or be subject to the regulations of, the US Securities and Exchange Commission. Information on Korean securities or related financial instruments may be limited. Foreign companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect within the US. The value of any investment or income from any securities or related financial instruments discussed in this research report denominated in currencies other than the Korean won is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related financial instruments.

Distribution

- United States: This report is distributed in the US by Shinhan Securities America, Inc., a member of FINRA/SIPC, and is only intended for major US institutional investors as defined in Rule 15a-6(a)(2) of the US Securities Exchange Act of 1934. All US persons that receive this document by their acceptance thereof represent and warrant that they are major US institutional investors and have not received this report under any express or implied understanding that they will direct commission income to Shinhan Securities America, Inc. or its affiliates. Pursuant to Rule 15a-6(a)(3), any US recipient of this document wishing to effect a transaction in any securities discussed herein should contact and place orders with Shinhan Securities America, Inc., which accepts responsibility for the contents of this report in the US. The securities described herein may not have been registered under the US Securities Act of 1933, as amended, and, in such case, may not be offered or sold in the US or to US persons unless they have been registered or are in compliance with an exemption from registration requirements.
- All Other Jurisdictions: Customers in all other countries who wish to effect a transaction in any securities referenced in this report should contact Shinhan Securities Co., Ltd. or its affiliates only if distribution to or use by such customer of this report would not violate applicable laws and regulations and not subject Shinhan Securities Co., Ltd. and its affiliates to any registration or licensing requirement within such jurisdiction.

- Shinhan Securities Co., Ltd. policies regarding conflicts of interest are available at: <http://file.shinhaninvest.com/filedoc/clause/conflictofinterest.pdf>