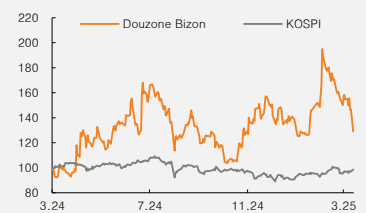


(Maintain)	<b>Buy</b>
Target price	<b>▼ W84,000</b>
Current price (3/17/25)	W58,200
Upside	44.3%

OP (25F, Wbn)	104
Consensus OP (25F, Wbn)	100
EPS growth (25F, %)	23.3
Market EPS growth (25F, %)	16.7
P/E (25F, x)	28.0
Market P/E (25F, x)	9.3
KOSPI	2,610.69

Market cap (Wbn)	1,768
Shares (mn)	30
Free float (%)	69.5
Foreign ownership (%)	12.2
Beta (12M)	0.16
52-week low (W)	41,950
52-week high (W)	88,000

(%)	1M	6M	12M
Absolute	-23.9	2.5	28.8
Relative	-23.9	1.1	31.5



Mirae Asset Securities Co., Ltd.

Soojin Kim

soojin.kim@miraeasset.com

# Douzone Bizon

## Pivoting back to core strengths

### Withdrawal from online-only bank race: An unexpected but prudent move

Ahead of the Mar. 26 application deadline for Korea's fourth online-only bank license, the Douzone Bizon-Shinhan Bank consortium (which had been viewed as the strongest contender) announced that it would not participate. Douzone Bizon likely concluded that expanding into financial services via an online-only bank would carry more risks than rewards and not align well with its broader strategic direction. Indeed, entering the industry as a latecomer would have required massive expenditures (hundreds of billions of won) and exposed the firm to business risks stemming from growing political uncertainty. With the withdrawal, it can better focus on core businesses without eroding profitability. Thus, while the decision may lead to heightened share price volatility in the near term, we view it as a net positive.

### Likely to expand data-driven financial services by leveraging ERP data

Importantly, Douzone Bizon's withdrawal from the online-only bank race does not mean that it is abandoning its attempt to enter the financial services sector. Rather, it will likely take a more measured approach. The company's key competitive advantage lies in its cloud-based enterprise resource planning (ERP) platform, which collects and manages corporate financial data. By leveraging ERP data, the company can integrate services such as loan screening, insurance/card product underwriting, account transfers, and payments into its platform. Indeed, the company plans to expand its ERP features to include financial services by partnering with financial institutions. This approach aligns with the growing global move toward data-driven financial platforms.

### Lower TP to W84,000, but maintain Buy

For 2025, we look for consolidated revenue of W450bn (+12% YoY), operating profit of W104bn (+18% YoY), and OP margin of 23.1% (26.7% on a standalone basis; +3.4%p YoY). While the dissipation of internet-only bank expectations could drive near-term volatility, we believe Douzone Bizon can now better focus on its core businesses without eroding profitability. The firm has established itself as a leading domestic AI player by generating tangible results with OneAI, and the share of cloud revenue is expected to exceed 50% by 2026 on accelerating cloud adoption among Standard and Extended ERP customers. Moreover, the current pullback looks excessive in light of the stock's five-year average forward P/E (33x) and the average P/E in 2019-21 (46x), when the company expanded into the financial services and cloud segments. We lower our target price by 21% from W106,000 to W84,000 (based on 12-month forward P/E of 38x), reflecting profit-taking following the earnings surprise reported in January and deteriorating global software sentiment. However, we maintain our Buy rating continue to recommend the stock as our top pick. We expect 1Q25 earnings to provide momentum for a full-fledged rebound.

(Dec.)	2022	2023	2024	2025F	2026F
Revenue (Wbn)	304	354	402	450	499
OP (Wbn)	46	69	88	104	122
OP margin (%)	15.1	19.5	21.9	23.1	24.4
NP (Wbn)	24	35	60	74	92
EPS (W)	757	1,117	1,917	2,364	2,920
ROE (%)	5.1	8.2	12.4	13.0	14.5
P/E (x)	48.7	25.9	33.2	24.6	19.9
P/B (x)	2.3	1.7	3.2	2.7	2.4
Dividend yield (%)	0.3	0.7	0.7	0.8	0.9

Notes: Under consolidated K-IFRS; NP is attributable to owners of the parent

Source: Company data, Mirae Asset Securities Research estimates

**Table 1. Valuation table**

(Wmn, W)

	Value	Notes
2025F EPS	2,208.6	
Shares outstanding (mn)	31.5	
Target P/E (x)	38x	15% premium to 5Y avg. forward P/E
Target price	84,000	
Current price	58,200	As of Mar. 17
Upside	44.3%	

Source: Mirae Asset Securities Research

**Table 2. EV/sales valuation analysis**

(Wmn, W)

Target EV/sales (x)	5.00	6.00	7.00	8.00	9.00
2025F revenue	450,076				
EV	2,250,382	2,700,458	3,150,535	3,600,611	4,050,687
Net debt (cash)	155,000	155,000	155,000	155,000	155,000
Market value	2,405,382	2,855,458	3,305,535	3,755,611	4,205,687
Shares outstanding (mn)	31.478	31.478	31.478	31.478	31.478
Value/share	76,500	90,800	105,100	119,400	133,700
Current price	58,200	58,200	58,200	58,200	58,200
Upside	31.4%	56.0%	80.6%	105.1%	129.7%

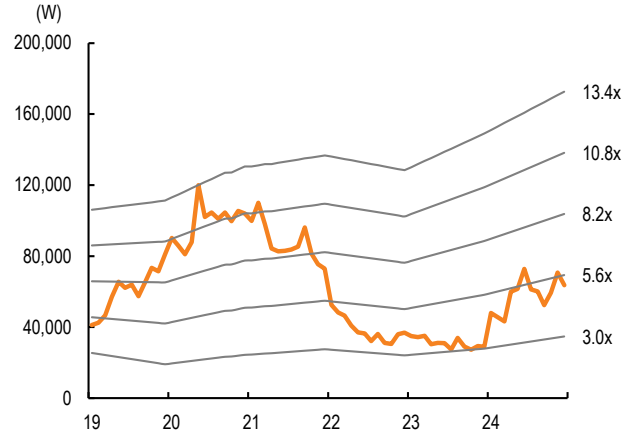
Source: Mirae Asset Securities Research

**Figure 1. P/E trend**



Source: QuantiWise, Mirae Asset Securities Research

**Figure 2. EV/sales band chart**



Source: QuantiWise, Mirae Asset Securities Research

**Table 3. Quarterly earnings and forecasts**

(Wmn)

	1Q24	2Q24	3Q24	4Q24	1Q25F	2Q25F	3Q25F	4Q25F
<b>Revenue (consolidated)</b>	<b>94,413</b>	<b>99,423</b>	<b>97,036</b>	<b>111,461</b>	<b>106,963</b>	<b>110,490</b>	<b>110,175</b>	<b>122,448</b>
<i>YoY</i>	<i>16.0%</i>	<i>17.0%</i>	<i>14.5%</i>	<i>7.6%</i>	<i>13.3%</i>	<i>11.1%</i>	<i>13.5%</i>	<i>9.9%</i>
<b>Revenue (standalone)</b>	<b>84,677</b>	<b>87,959</b>	<b>87,587</b>	<b>95,794</b>	<b>96,801</b>	<b>100,546</b>	<b>100,479</b>	<b>112,040</b>
<i>YoY</i>	<i>6.7%</i>	<i>5.8%</i>	<i>6.6%</i>	<i>9.5%</i>	<i>14.3%</i>	<i>14.3%</i>	<i>14.7%</i>	<i>17.0%</i>
<b>Cloud vs on-premises (Mirae Asset Securities est.)</b>								
Cloud	32,580	38,814	37,073	38,192	45,680	51,297	52,326	56,640
<i>YoY</i>	<i>47.3%</i>	<i>43.4%</i>	<i>23.3%</i>	<i>17.0%</i>	<i>40.2%</i>	<i>32.2%</i>	<i>41.1%</i>	<i>48.3%</i>
<i>% of total revenue</i>	<i>34.5%</i>	<i>39.0%</i>	<i>38.2%</i>	<i>34.3%</i>	<i>42.7%</i>	<i>46.4%</i>	<i>47.5%</i>	<i>46.3%</i>
Traditional (on-premises)	42,950	39,426	40,903	44,876	41,678	39,603	38,265	38,349
<i>YoY</i>	<i>-9.2%</i>	<i>-12.5%</i>	<i>-0.9%</i>	<i>3.8%</i>	<i>-3.0%</i>	<i>0.5%</i>	<i>-6.4%</i>	<i>-14.5%</i>
<i>% of total revenue</i>	<i>45.5%</i>	<i>39.7%</i>	<i>42.2%</i>	<i>40.3%</i>	<i>39.0%</i>	<i>35.8%</i>	<i>34.7%</i>	<i>31.3%</i>
<b>Revenue by business</b>								
Lite ERP	22,470	23,317	22,605	24,627	23,653	24,861	24,658	26,906
<i>YoY</i>	<i>5.5%</i>	<i>5.1%</i>	<i>-6.3%</i>	<i>3.0%</i>	<i>5.3%</i>	<i>6.6%</i>	<i>9.1%</i>	<i>9.3%</i>
<i>% of total revenue</i>	<i>23.8%</i>	<i>23.5%</i>	<i>23.3%</i>	<i>22.1%</i>	<i>22.1%</i>	<i>22.5%</i>	<i>22.4%</i>	<i>22.0%</i>
Wehago	12,639	13,870	13,418	15,870	16,670	18,463	18,572	20,952
<i>YoY</i>	<i>56.3%</i>	<i>34.4%</i>	<i>-1.5%</i>	<i>23.3%</i>	<i>31.9%</i>	<i>33.1%</i>	<i>38.4%</i>	<i>32.0%</i>
<i>% of Lite ERP</i>	<i>56.2%</i>	<i>59.5%</i>	<i>59.4%</i>	<i>64.4%</i>	<i>70.5%</i>	<i>74.3%</i>	<i>75.3%</i>	<i>77.9%</i>
Standard ERP	27,506	29,956	29,358	32,099	30,726	33,957	33,931	35,605
<i>YoY</i>	<i>3.3%</i>	<i>10.7%</i>	<i>24.2%</i>	<i>11.0%</i>	<i>11.7%</i>	<i>13.4%</i>	<i>15.6%</i>	<i>10.9%</i>
<i>% of total revenue</i>	<i>29.1%</i>	<i>30.1%</i>	<i>30.3%</i>	<i>28.8%</i>	<i>28.7%</i>	<i>30.7%</i>	<i>30.8%</i>	<i>29.1%</i>
Amaranth 10	8,452	13,626	12,621	17,883	17,123	21,115	21,650	23,316
<i>YoY</i>	<i>252.7%</i>	<i>202.1%</i>	<i>160.3%</i>	<i>126.6%</i>	<i>102.6%</i>	<i>55.0%</i>	<i>71.5%</i>	<i>30.4%</i>
<i>% of Standard ERP</i>	<i>30.7%</i>	<i>45.5%</i>	<i>43.0%</i>	<i>55.7%</i>	<i>55.7%</i>	<i>62.2%</i>	<i>63.8%</i>	<i>65.5%</i>
Extended ERP	21,010	20,121	22,516	22,832	22,379	22,786	23,555	24,166
<i>YoY</i>	<i>6.2%</i>	<i>-3.0%</i>	<i>4.4%</i>	<i>10.4%</i>	<i>6.5%</i>	<i>13.2%</i>	<i>4.6%</i>	<i>5.8%</i>
<i>% of total revenue</i>	<i>22.3%</i>	<i>20.2%</i>	<i>23.2%</i>	<i>20.5%</i>	<i>20.9%</i>	<i>20.6%</i>	<i>21.4%</i>	<i>19.7%</i>
<b>Subsidiaries</b>								
Electronic Times (74.38% owned)	6,905	6,974	7,043	13,336	6,912	6,988	7,058	13,363
<i>% of total revenue</i>	<i>7.3%</i>	<i>7.0%</i>	<i>7.3%</i>	<i>12.0%</i>	<i>6.5%</i>	<i>6.3%</i>	<i>6.4%</i>	<i>10.9%</i>
<b>OP (consolidated)</b>	<b>18,115</b>	<b>20,418</b>	<b>20,085</b>	<b>29,447</b>	<b>24,013</b>	<b>24,780</b>	<b>24,548</b>	<b>30,612</b>
<i>OP margin (consolidated)</i>	<i>19.2%</i>	<i>20.5%</i>	<i>20.7%</i>	<i>26.4%</i>	<i>22.4%</i>	<i>22.4%</i>	<i>22.3%</i>	<i>25.0%</i>
<b>OP (parent)</b>	<b>19,083</b>	<b>20,364</b>	<b>24,901</b>	<b>29,404</b>	<b>26,414</b>	<b>27,258</b>	<b>30,684</b>	<b>35,816</b>
<i>OP margin (parent)</i>	<i>22.5%</i>	<i>23.2%</i>	<i>28.4%</i>	<i>30.7%</i>	<i>27.3%</i>	<i>27.1%</i>	<i>30.5%</i>	<i>32.0%</i>
<b>NP (consolidated)</b>	<b>36,578</b>	<b>10,672</b>	<b>14,280</b>	<b>14,280</b>	<b>20,297</b>	<b>16,041</b>	<b>15,950</b>	<b>16,187</b>
<b>EPS (consolidated, W)</b>	<b>1,162.0</b>	<b>339.0</b>	<b>453.7</b>	<b>644.8</b>	<b>509.6</b>	<b>506.7</b>	<b>514.2</b>	<b>678.1</b>

Source: Company data, Mirae Asset Securities Research

Table 4. Annual earnings and forecasts

(Wmn)

	2021	2022	2023	2024	2025F
<b>Revenue (consolidated)</b>	<b>318,747</b>	<b>304,303</b>	<b>354,631</b>	<b>402,332</b>	<b>450,076</b>
YoY	-	-4.5%	16.5%	13.5%	11.9%
<b>Revenue (standalone)</b>	<b>313,800</b>	<b>297,680</b>	<b>332,099</b>	<b>356,017</b>	<b>409,867</b>
YoY	-	-5.1%	11.6%	7.2%	15.1%
<b>Cloud vs on-premises (Mirae Asset Securities est.)</b>					
Cloud	84,696	81,959	111,886	146,659	205,943
YoY	-	-3.2%	36.5%	31.1%	40.4%
% of total revenue	26.6%	26.9%	31.6%	36.5%	45.8%
Traditional (on-premises)	187,133	178,431	176,892	168,155	157,895
YoY	-	-4.6%	-0.9%	-4.9%	-6.1%
% of total revenue	58.7%	58.6%	49.9%	41.8%	35.1%
<b>Revenue by business</b>					
Lite ERP	93,347	84,591	91,518	93,019	100,077
YoY	-	-9.4%	8.2%	1.6%	7.6%
% of total revenue	29.3%	27.8%	25.8%	23.1%	22.2%
Wehago	32,125	23,700	44,914	55,797	74,657
YoY	-	-26.2%	89.5%	24.2%	33.8%
% of Lite ERP	34.4%	7.8%	12.7%	13.9%	16.6%
Standard ERP	97,692	103,303	106,250	118,919	134,219
YoY	-	5.7%	2.9%	11.9%	12.9%
% of total revenue	30.6%	33.9%	30.0%	29.6%	29.8%
Amaranth 10	1,916	10,216	19,649	52,582	83,203
YoY	-	433.2%	92.3%	167.6%	58.2%
% of Standard ERP	2.0%	3.4%	5.5%	13.1%	18.5%
Extended ERP	72,273	65,283	82,775	86,479	92,886
YoY	-	-9.7%	26.8%	4.5%	7.4%
% of total revenue	-	21.5%	23.3%	21.5%	20.6%
<b>Subsidiaries</b>					
Electronic Times (74.38% owned)	-	-	-	34,258	34,320
% of total revenue	-	-	-	8.5%	7.6%
<b>OP (consolidated)</b>	<b>71,173</b>	<b>45,534</b>	<b>69,070</b>	<b>88,065</b>	<b>103,953</b>
OP margin (consolidated)	22.3%	15.0%	19.5%	21.9%	23.1%
<b>OP (parent)</b>	<b>70,089</b>	<b>45,165</b>	<b>70,338</b>	<b>93,752</b>	<b>120,173</b>
OP margin (parent)	22.0%	14.8%	19.8%	23.3%	26.7%
<b>NP (consolidated)</b>	<b>54,414</b>	<b>23,076</b>	<b>34,329</b>	<b>75,810</b>	<b>68,475</b>
<b>EPS (consolidated, W)</b>	<b>1,729</b>	<b>733</b>	<b>1,091</b>	<b>2,599</b>	<b>2,209</b>
YoY	-	-57.6%	48.8%	138.4%	-15.0%

Source: Company data, Mirae Asset Securities Research

## Douzone Bizon (012510 KS)

## Income statement (summarized)

(Wbn)	2023	2024	2025F	2026F
<b>Revenue</b>	<b>354</b>	<b>402</b>	<b>450</b>	<b>499</b>
<b>Cost of revenue</b>	<b>201</b>	<b>218</b>	<b>244</b>	<b>271</b>
<b>GP</b>	<b>153</b>	<b>184</b>	<b>206</b>	<b>228</b>
<b>SG&amp;A expenses</b>	<b>84</b>	<b>96</b>	<b>102</b>	<b>106</b>
<b>OP (adj.)</b>	<b>69</b>	<b>88</b>	<b>104</b>	<b>122</b>
<b>OP</b>	<b>69</b>	<b>88</b>	<b>104</b>	<b>122</b>
<b>Non-operating profit</b>	<b>-24</b>	<b>8</b>	<b>-13</b>	<b>-9</b>
Net financial income	-14	-14	-13	-9
Net income from associates	-1	-1	0	0
Pretax profit	45	96	91	113
Income tax	11	18	22	27
Profit from continuing operations	34	78	70	86
Profit from discontinued operations	0	0	0	0
<b>NP</b>	<b>34</b>	<b>78</b>	<b>70</b>	<b>86</b>
Attributable to owners	35	60	74	92
Attributable to minority interests	-1	18	-5	-6
<b>Total comprehensive income</b>	<b>24</b>	<b>79</b>	<b>70</b>	<b>86</b>
Attributable to owners	25	61	74	92
Attributable to minority interests	-1	18	-5	-6
EBITDA	106	125	139	155
FCF	76	67	85	81
EBITDA margin (%)	29.9	31.1	30.9	31.1
OP margin (%)	19.5	21.9	23.1	24.4
Net margin (%)	9.9	14.9	16.4	18.4

## Cash flow statement (summarized)

(Wbn)	2023	2024	2025F	2026F
<b>Operating cash flow</b>	<b>101</b>	<b>98</b>	<b>115</b>	<b>131</b>
NP	34	78	70	86
Non-cash income/expenses	78	56	70	69
Depreciation	26	26	25	23
Amortization	11	11	11	10
Other	41	19	34	36
Chg. in working capital	4	-10	10	13
Chg. in AR & other receivables	2	-5	-5	-6
Chg. in inventory	1	0	0	0
Chg. in AP & other payables	0	0	0	0
Income tax	-2	-13	-22	-27
<b>Cash flow from investing activities</b>	<b>-68</b>	<b>-52</b>	<b>-32</b>	<b>-52</b>
Chg. in PP&E	-25	-30	-30	-50
Chg. in intangible assets	-11	4	0	0
Chg. in financial assets	24	-1	-2	-2
Other	-56	-25	0	0
<b>Cash flow from financing activities</b>	<b>-33</b>	<b>-15</b>	<b>-68</b>	<b>-79</b>
Chg. in financial liabilities	7	14	-50	-60
Chg. in equity	0	248	0	0
Dividends	-7	-11	-18	-19
Other	-33	-266	0	0
<b>Chg. in cash</b>	<b>0</b>	<b>58</b>	<b>15</b>	<b>1</b>
Beginning balance	54	59	116	132
Ending balance	54	116	132	132

Source: Company data, Mirae Asset Securities Research estimates

## Balance sheet (summarized)

(Wbn)	2023	2024	2025F	2026F
<b>Current assets</b>	<b>126</b>	<b>206</b>	<b>229</b>	<b>239</b>
Cash & equivalents	54	116	132	132
AR & other receivables	49	52	58	64
Inventory	1	1	1	2
Other current assets	22	37	38	41
<b>Non-current assets</b>	<b>758</b>	<b>817</b>	<b>812</b>	<b>831</b>
Investments in associates	0	0	0	0
PP&E	373	373	378	405
Intangible assets	104	136	126	116
<b>Total assets</b>	<b>883</b>	<b>1,022</b>	<b>1,041</b>	<b>1,069</b>
<b>Current liabilities</b>	<b>415</b>	<b>188</b>	<b>203</b>	<b>223</b>
AP & other payables	15	16	18	20
Short-term financial liabilities	272	33	33	33
Other current liabilities	128	139	152	170
<b>Non-current liabilities</b>	<b>23</b>	<b>276</b>	<b>228</b>	<b>170</b>
Long-term financial liabilities	7	259	209	149
Other non-current liabilities	16	17	19	21
<b>Total liabilities</b>	<b>438</b>	<b>464</b>	<b>431</b>	<b>392</b>
<b>Equity attributable to owners</b>	<b>427</b>	<b>543</b>	<b>600</b>	<b>673</b>
Capital stock	16	16	16	16
Capital surplus	226	475	475	475
Retained earnings	286	136	193	266
<b>Minority interests</b>	<b>18</b>	<b>15</b>	<b>10</b>	<b>4</b>
<b>Shareholders' equity</b>	<b>445</b>	<b>558</b>	<b>610</b>	<b>677</b>

## Key valuation metrics/ratios

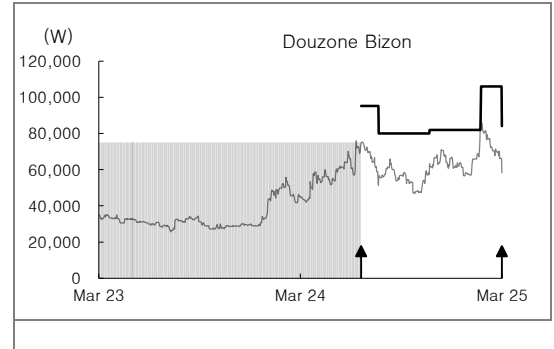
	2023	2024	2025F	2026F
P/E (x)	25.9	33.2	24.6	19.9
P/CF (x)	8.1	14.9	13.2	11.8
P/B (x)	1.7	3.2	2.7	2.4
EV/EBITDA (x)	10.5	16.8	13.4	11.6
EPS (W)	1,117	1,917	2,364	2,920
CFPS (W)	3,578	4,284	4,424	4,924
BPS (W)	16,765	19,913	21,705	24,029
DPS (W)	217	477	480	500
Dividend payout ratio (%)	17.7	17.1	19.3	16.3
Dividend yield (%)	0.7	0.7	0.8	0.9
Revenue growth (%)	16.2	13.8	11.9	10.8
EBITDA growth (%)	37.6	18.6	11.0	11.3
OP growth (%)	51.7	27.5	18.0	17.6
EPS growth (%)	47.6	71.6	23.3	23.5
AR turnover (x)	8.3	8.2	8.5	8.5
Inventory turnover (x)	226.2	334.1	343.0	343.8
AP turnover (x)	85.2	86.1	88.3	88.7
ROA (%)	4.0	8.2	6.7	8.1
ROE (%)	8.2	12.4	13.0	14.5
ROIC (%)	13.2	16.7	18.3	21.7
Debt-to-equity ratio (%)	98.3	83.2	70.7	58.0
Current ratio (%)	30.2	109.2	112.3	107.2
Net debt-to-equity ratio (%)	48.5	27.7	14.5	3.9
Interest coverage ratio (x)	4.8	5.9	7.5	11.8

# Appendix 1

## Important disclosures and disclaimers

### Two-year rating and TP history

Company	Date	Rating	TP (W)
Douzone Bizon (012510)	03/17/25	Buy	84,000
	02/07/25	Buy	106,000
	11/06/24	Buy	82,000
	08/06/24	Buy	80,000
	07/05/24	Buy	95,200



### Stock ratings

Buy	Expected 12-month performance: +20% or greater
Trading Buy	Expected 12-month performance: +10% to +20%
Hold	Expected 12-month performance: -10% to +10%
Sell	Expected 12-month performance: -10% or worse

### Sector ratings

Overweight	Expected to outperform the market over 12 months
Neutral	Expected to perform in line with the market over 12 months
Underweight	Expected to underperform the market over 12 months

Rating and TP history: Share price (—), TP (—), Not Rated (■), Buy (▲), Trading Buy (■), Hold (●), Sell (◆)

\* Our investment rating is a guide to the expected return of the stock over the next 12 months.

\* Outside of the official ratings of Mirae Asset Securities Co., Ltd., analysts may call trading opportunities should technical or short-term material developments arise.

\* The TP was determined by the research analyst through valuation methods discussed in this report, in part based on estimates of future earnings.

\* TP achievement may be impeded by risks related to the subject securities and companies, as well as general market and economic conditions.

### Ratings distribution and investment banking services

	Buy	Trading Buy	Hold	Sell
Ratings distribution	84.62%	7.14%	8.24%	0%
Investment banking services	85.71%	0%	14.29%	0%

\* Based on recommendations in the last 12-months (as of December 31, 2024)

### Disclosures

As of the publication date, Mirae Asset Securities Co., Ltd. and/or its affiliates do not have any special interest with the subject company and do not own 1% or more of the subject company's shares outstanding.

### Analyst certification

The research analysts who prepared this report (the "Analysts") 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. Each Analyst responsible for the preparation of this report certifies that (i) all views expressed in this report accurately reflect the personal views of the Analyst about any and all of the issuers and securities named in this report and (ii) no part of the compensation of the Analyst was, is, or will be directly or indirectly related to the specific recommendations or views contained in this report. Mirae Asset Securities Co., Ltd. ("Mirae Asset Securities") policy prohibits its Analysts and members of their households from owning securities of any company in the Analyst's area of coverage, and the Analysts do not serve as an officer, director, or advisory board member of the subject companies. Except as otherwise specified herein, the Analysts have not received any compensation or any other benefits from the subject companies in the past 12 months and have not been promised the same in connection with this report. Like all employees of Mirae Asset Securities, the Analysts receive compensation that is determined by overall firm profitability, which includes revenues from, among other business units, the institutional equities, investment banking, proprietary trading, and private client divisions. At the time of publication of this report, the Analysts do not know or have reason to know of any actual, material conflict of interest of the Analyst or Mirae Asset Securities except as otherwise stated herein.

### Disclaimers

This report was prepared by Mirae Asset Securities, a broker-dealer registered in the Republic of Korea and a member of the Korea Exchange. Information and opinions contained herein have been compiled in good faith and from sources believed to be reliable, but such information has not been independently verified and Mirae Asset Securities makes no guarantee, representation or warranty, express or implied, as to the fairness, accuracy, completeness, or correctness of the information and opinions contained herein or of any translation into English from the Korean language. In case of an English translation of a report prepared in the Korean language, the original Korean language report may have been made available to investors in advance of this report. The intended recipients of this report are sophisticated institutional investors who have substantial knowledge of the local business environment, its common practices, laws, and accounting principles, and no person whose receipt or use of this report would violate any laws or regulations or subject Mirae Asset Securities or any of its affiliates to registration or licensing requirements in any jurisdiction shall receive or make any use hereof.

This report is for general information purposes only and is not and shall not be construed as an offer or a solicitation of an offer to effect transactions in any securities or other financial instruments. The report does not constitute investment advice to any person, and such person shall not be treated as a client of Mirae Asset Securities by virtue of receiving this report. This report does not take into account the particular investment objectives, financial situations, or needs of individual clients. The report is not to be relied upon in substitution for the exercise of independent judgment. Information and opinions contained herein are as of the date hereof and are subject to change without notice. The price and value of the investments referred to in this report and the income from them may depreciate or appreciate, and investors may incur losses on investments. Past performance is not a guide to future performance. Future returns are not guaranteed, and a loss of original capital may occur. Mirae Asset Securities, its affiliates, and their directors, officers, employees, and agents do not accept any liability for any loss arising out of the use hereof.

Mirae Asset Securities may have issued other reports that are inconsistent with, and reach different conclusions from, the opinions presented in this report. The reports may reflect different assumptions, views, and analytical methods of the analysts who prepared them. Mirae Asset Securities may make investment decisions that are inconsistent with the opinions and views expressed in this research report. Mirae Asset Securities, its affiliates, and their directors, officers, employees, and agents may have long or short positions in any of the subject securities at any time and may make a purchase or sale, or offer to make a purchase or sale, of any such securities or other financial instruments from time to time in the open market or otherwise, in each case either as principals or agents. Mirae Asset Securities and its affiliates may have had, or may be expecting to enter into, business relationships with the subject companies to provide investment banking, market-making, or other financial services as are permitted under applicable laws and regulations.

No part of this document may be copied or reproduced in any manner or form or redistributed or published, in whole or in part, without the prior written consent of Mirae Asset Securities. For further information regarding company-specific information as it pertains to the representations and disclosures in this Appendix 1, please contact [compliance@miraeeasset.us.com](mailto:compliance@miraeeasset.us.com) or +1 (212) 407-1000.

#### **Distribution**

**United Kingdom:** This report is being distributed by Mirae Asset Securities (UK) Ltd. in the United Kingdom only to (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"), and (ii) high net worth companies and other persons to whom it may lawfully be communicated, falling within Article 49(2)(A) to (E) of the Order (all such persons together being referred to as "Relevant Persons"). This report is directed only at Relevant Persons. Any person who is not a Relevant Person should not act or rely on this report or any of its contents.

**United States:** Mirae Asset Securities is not a registered broker-dealer in the United States and, therefore, is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. This report is distributed in the U.S. by Mirae Asset Securities (USA) Inc., a member of FINRA/SIPC, to "major U.S. institutional investors" in reliance on the exemption from registration provided by Rule 15a-6(b)(4) under the U.S. Securities Exchange Act of 1934, as amended. All U.S. persons that receive this document by their acceptance hereof represent and warrant that they are a major U.S. institutional investor and have not received this report under any express or implied understanding that they will direct commission income to Mirae Asset Securities or its affiliates. Any U.S. recipient of this document wishing to effect a transaction in any securities discussed herein should contact and place orders with Mirae Asset Securities (USA) Inc. Mirae Asset Securities (USA) Inc. accepts responsibility for the contents of this report in the U.S., subject to the terms hereof, to the extent that it is delivered to a U.S. person other than a major U.S. institutional investor. Under no circumstances should any recipient of this research report effect any transaction to buy or sell securities or related financial instruments through Mirae Asset Securities. The securities described in this report may not have been registered under the U.S. Securities Act of 1933, as amended, and, in such case, may not be offered or sold in the U.S. or to U.S. persons absent registration or an applicable exemption from the registration requirements.

**Hong Kong:** This report is distributed in Hong Kong by Mirae Asset Securities (HK) Limited, which is regulated by the Hong Kong Securities and Futures Commission. The contents of this report have not been reviewed by any regulatory authority in Hong Kong. This report is for distribution only to professional investors within the meaning of Part I of Schedule 1 to the Securities and Futures Ordinance of Hong Kong (Cap. 571, Laws of Hong Kong) and any rules made thereunder and may not be redistributed in whole or in part in Hong Kong to any person.

**India:** This report is being distributed by Mirae Asset Capital Markets (India) Private Limited ("MACM") in India to the customers based in India and is personal information only for those authorised recipient(s). MACM is inter alia a Securities and Exchange Board of India ("SEBI") registered Research Analyst in India and is not registered outside India. MACM and Mirae Asset, Korea are group entities. MACM makes no guarantee, representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information and opinions contained herein. The user assumes the entire risk of any use made of this information. This report has been provided for assistance only and is not intended to be and must not alone be taken as the basis for an investment decision. Recipient must read the entire Appendix 1 to the report carefully for Important Disclosures & Disclaimers.

**All other jurisdictions:** Customers in all other countries who wish to effect a transaction in any securities referenced in this report should contact Mirae Asset Securities 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 Mirae Asset Securities and its affiliates to any registration or licensing requirement within such jurisdiction.

## Mirae Asset Securities International Network

---

### Mirae Asset Securities Co., Ltd. (Seoul)

One-Asia Equity Sales Team  
Mirae Asset Center 1 Building  
26 Eulji-ro 5-gil, Jung-gu, Seoul 04539  
Korea

Tel: 82-2-3774-2124

---

### Mirae Asset Securities (USA) Inc.

810 Seventh Avenue, 37th Floor  
New York, NY 10019  
USA

Tel: 1-212-407-1000

---

### Mirae Asset Securities (Singapore) Pte. Ltd.

6 Battery Road, #11-01  
Singapore 049909  
Republic of Singapore

Tel: 65-6671-9845

---

### Mirae Asset Investment Advisory (Beijing) Co., Ltd

2401B, 24th Floor, East Tower, Twin Towers  
B12 Jianguomenwai Avenue, Chaoyang District  
Beijing 100022  
China

Tel: 86-10-6567-9699

---

### Ho Chi Minh Representative Office

7F, Saigon Royal Building  
91 Pasteur St.  
District 1, Ben Nghe Ward, Ho Chi Minh City  
Vietnam

Tel: 84-8-3910-7715

---

### Mirae Asset Securities (HK) Ltd.

Units 8501, 8507-8508, 85/F  
International Commerce Centre  
1 Austin Road West  
Kowloon  
Hong Kong

Tel: 852-2845-6332

---

### Mirae Asset Wealth Management (Brazil) CCTVM

Rua Funchal, 418, 18th Floor, E-Tower Building  
Vila Olimpia  
Sao Paulo - SP  
04551-060  
Brazil

Tel: 55-11-2789-2100

---

### Mirae Asset Securities (Vietnam) LLC

7F, Saigon Royal Building  
91 Pasteur St.  
District 1, Ben Nghe Ward, Ho Chi Minh City  
Vietnam

Tel: 84-8-3911-0633 (ext.110)

---

### Beijing Representative Office

2401A, 24th Floor, East Tower, Twin Towers  
B12 Jianguomenwai Avenue, Chaoyang District  
Beijing 100022  
China

Tel: 86-10-6567-9699 (ext. 3300)

---

### Mirae Asset Capital Markets (India) Pvt Ltd

1st Floor, Tower 4, Equinox Business Park,  
LBS Marg, Off BKC, Kurla (West), Mumbai - 400 070  
India

Tel: 91-22-62661300 / 48821300

---

### Mirae Asset Securities (UK) Ltd.

41st Floor, Tower 42  
25 Old Broad Street,  
London EC2N 1HQ  
United Kingdom

Tel: 44-20-7982-8000

---

### PT. Mirae Asset Sekuritas Indonesia

District 8, Treasury Tower Building Lt. 50  
Sudirman Central Business District  
Jl. Jend. Sudirman, Kav. 52-54  
Jakarta Selatan 12190  
Indonesia

Tel: 62-21-5088-7000

---

### Mirae Asset Securities Mongolia UTsK LLC

#406, Blue Sky Tower, Peace Avenue 17  
1 Khoroov, Sukhbaatar District  
Ulaanbaatar 14240  
Mongolia

Tel: 976-7011-0806

---

### Shanghai Representative Office

38T31, 38F, Shanghai World Financial Center  
100 Century Avenue, Pudong New Area  
Shanghai 200120  
China

Tel: 86-21-5013-6392

---