077360 KQ · Semiconductor Materials

Duksan Hi-Metal

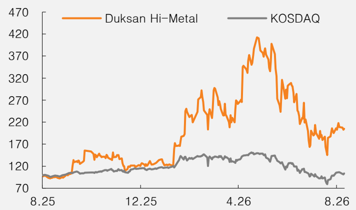
Micro solder balls to drive upside

Equity Research
August 21, 2026

(Initiate)	Buy
Target price	W17,000
Current price (8/20/26)	W9,740
Upside	74.5%

OP (26F, Wbn)	30
Consensus OP (26F, Wbn)	33
EPS growth (26F, %)	TTB
Market EPS growth (26F, %)	280.0
P/E (26F, x)	15.9
Market P/E (26F, x)	6.6
KOSDAQ	840.89
Market cap (Wbn)	443
Shares (mn)	45
Free float (%)	42.2
Foreign ownership (%)	5.0
Beta (12M)	1.23
52-week low (W)	4,375
52-week high (W)	19,590

(%)	1M	6M	12M
Absolute	12.6	-24.5	122.6
Relative	0.4	3.6	105.9



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Initiate coverage with Buy rating and TP of W17,000

We initiate our coverage of Duksan Hi-Metal with a Buy rating and target price of W17,000, based on an SOTP valuation. For the standalone materials business, we apply a 2027F EV/EBITDA of 14x. For Duksan Navcours (defense and navigation systems), we estimate the value of Duksan Hi-Metal's stake based on the subsidiary's expected IPO valuation and apply a 40% discount. For Duksan Aether CT (high-pressure gas vessels), we apply a 2027F EV/EBITDA of 9x.

Despite resilient earnings, the stock has fallen 50% from its 52-week high. For 2026, we forecast consolidated operating profit at W30.4bn, which would mark the highest level since the company's 2014 spin-off. The correction was driven by: 1) a temporary margin squeeze caused by the sharp rise in raw material costs in 1Q26; and 2) concerns over the planned IPO of Duksan Navcours. Both factors appear to be priced in. Going forward, we anticipate further ASP increases and volume growth from new customers.

MSBs: Smaller size commands higher pricing

We expect operating leverage to come from product mix rather than additional capacity. OP margins for micro solder balls (MSBs) are in the high-40% range—more than four times those of conventional solder balls—while cored solder ball (CSB) margins are in the mid-30% range. We forecast OP margin in the standalone materials business to widen from 13.7% in 2026 to 17.4% in 2028, with most of the improvement driven by a shift toward higher-value products rather than volume growth.

For MSBs measuring 60μm and below, Duksan Hi-Metal and one Japanese competitor are effectively the only suppliers. The Japanese firm offers only standard sizes, whereas Duksan Hi-Metal can customize sizes to customer specifications. Taiwanese players have yet to enter the MSB segment, while Chinese competitors remain focused on solder paste. As global FC-BGA capacity expands, no other supplier is currently able to fill Duksan Hi-Metal's role. Its conventional solder ball capacity is fully utilized, while its MSB utilization is in the mid-60% range. Rather than representing a risk, this spare MSB capacity gives the company headroom to expand output.

2Q26 marked an inflection point; 2H26 OP likely to more than double vs. 1H26

The company posted record quarterly results for 2Q26, with consolidated revenue of W90.8bn (+58% YoY) and operating profit of W10.1bn. This was driven by: 1) the effect of April ASP increases; 2) a rising mix of high-margin MSBs, particularly products for HDD applications, which carry the highest margins within the MSB segment; and 3) a surge in conventional solder ball shipments to Chinese chipmakers. For 3Q26, we expect the company to post above-consensus operating profit of W10.9bn (+596% YoY). We forecast 2H26 operating profit at W21bn—2.2 times the 1H26 level of W9.4bn. We expect a further increase in MSB prices, while capacity additions by Chinese memory producers should keep conventional solder ball production at full capacity. Separately, the planned IPO of Duksan Navcours should provide greater visibility into its value.

(Dec.)	2024	2025	2026F	2027F	2028F
Revenue (Wbn)	236	236	352	422	509
OP (Wbn)	19	3	30	49	68
OP margin (%)	8.1	1.3	8.5	11.6	13.4
NP (Wbn)	20	-106	28	29	40
EPS (W)	449	-2,333	612	632	889
ROE (%)	6.8	-40.8	12.6	11.4	14.1
P/E (x)	8.6	-	15.9	15.4	11.0
P/B (x)	0.6	1.3	1.9	1.7	1.4
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0

Notes: Under consolidated K-IFRS; NP is attributable to owners of the parent
Source: Company data, Mirae Asset Securities Research estimates

Valuation and earnings forecasts

SOTP: Three businesses with distinct earnings profiles

We use an EV/EBITDA-based SOTP valuation because Duksan Hi-Metal's consolidated operations span three fundamentally different businesses, each with distinct growth rates, margins, and appropriate valuation multiples.

We value the standalone materials business using a 2027F EV/EBITDA of 14x, in line with the average multiple for domestic semiconductor back-end materials peers. Our target multiple is supported by: 1) an expected operating profit CAGR of over 30% over 2027-28; 2) the company's dominant position in products measuring 100μm or less; and 3) its position as a direct beneficiary of advanced packaging capacity expansion. Rolling the valuation base forward to 2028F would imply further upside.

Table 1. SOTP valuation

(Wbn)	Valuation basis	Multiple/discount	Value
Standalone materials business	2027F EBITDA: W57.8bn	14.0x EV/EBITDA	809
Duksan Navcours (defense/navigation systems)	Expected IPO valuation × 63.2% stake	40% listed subsidiary discount	90
Duksan Aether CT (high-pressure gas vessels)	2027F EBITDA: W6.2bn	9.0x EV/EBITDA	56
Total operating value			955
(-) Net debt			(180)
Implied market cap			775
Shares (mn)			45.4
Fair value/share (W)			17,060
TP (W)			17,000
CP (W)			9,740
Upside (%)			74.5

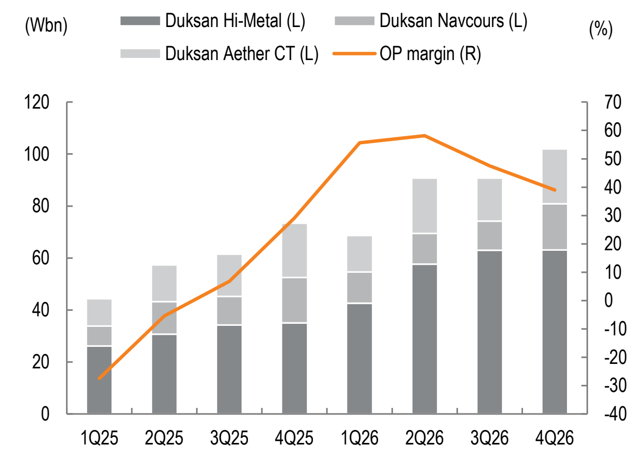
Source: Mirae Asset Securities Research

Table 2. Quarterly and annual earnings

	1Q25	2Q25	3Q25	4Q25	1Q26	2Q26	3Q26F	4Q26F	2025	2026F	2027F
Revenue	44.2	57.4	61.5	73.4	68.7	90.8	90.7	102.0	236.4	352.1	421.6
QoQ	*-22.3*	*30.0*	*7.1*	*19.4*	-6.4	32.1	-0.1	12.5			
YoY	*-27.4*	*-5.4*	*6.8*	*29.1*	55.6	58.1	47.5	39.0	0.2	48.9	19.7
Duksan Hi-Metal	26.2	30.7	34.3	35.1	42.6	57.7	63.0	63.1	126.3	226.4	286.3
QoQ	*1.8*	*17.4*	*11.6*	*2.5*	21.3	35.4	9.1	0.2			
YoY	*-27.4*	*-5.4*	*6.8*	*29.1*	63.0	87.8	83.6	79.5	28.6	79.2	26.5
Duksan Navcours	7.7	12.5	11.0	17.4	12.0	11.8	11.2	17.8	48.5	52.8	57.7
Duksan Aether CT	10.4	14.2	16.2	20.9	14.1	21.3	16.6	21.1	61.7	73.1	77.9
OP	-1.4	2.6	1.6	0.1	-0.7	10.1	10.9	10.1	2.8	30.4	48.5
Duksan Hi-Metal	3.1	-0.4	3.9	9.0	2.8	8.7	10.1	9.5	15.6	31.1	45.8
Duksan Navcours	-0.3	1.8	0.7	1.8	0.2	0.5	0.4	1.2	4.1	2.4	2.8
Duksan Aether CT	-2.9	-1.9	-1.8	-3.6	-1.4	2.1	0.7	1.8	-10.2	3.3	3.7
OP margin	-3.2	4.5	2.6	0.1	-1.0	11.1	12.0	9.9	1.2	8.6	11.5
Duksan Hi-Metal	11.8	-1.4	11.4	25.5	6.7	15.1	16.0	15.0	12.3	13.7	16.0
Duksan Navcours	-4.1	14.5	6.7	10.6	2.0	4.2	3.9	7.0	8.4	4.6	4.8
Duksan Aether CT	-28.5	-13.5	-11.0	-17.1	-9.7	1.0	4.5	8.6	-16.6	4.5	4.7

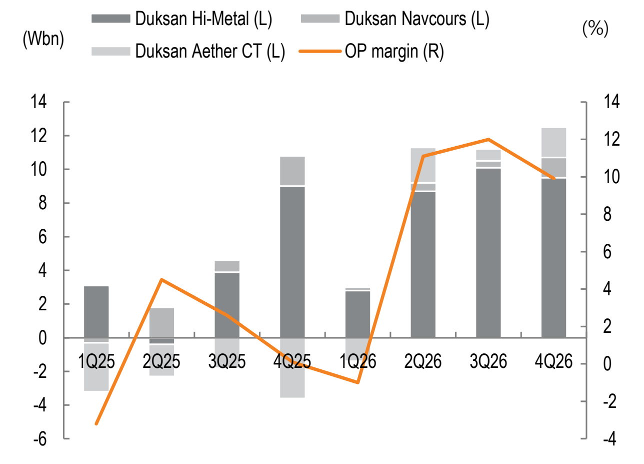
Source: Company data, Mirae Asset Securities Research

Figure 1. Revenue trend



Source: Company data, Mirae Asset Securities Research

Figure 2. OP trend



Source: Company data, Mirae Asset Securities Research

Investment point 1: Soaring MSB demand

Cost structure underpins margin improvement

Raw materials account for most of the production costs of conventional solder balls, whereas processing costs represent a much larger share for MSBs. As ball diameters shrink, controlling particle size distribution, preventing surface oxidation, and maintaining sphericity become significantly more difficult, resulting in lower yields. As a result, selling prices per unit weight can be several times higher. In short, smaller balls command higher prices due to their underlying cost structure.

This also makes MSB margins more resilient to changes in raw material prices. Because processing accounts for a larger share of costs, fluctuations in silver prices have a limited impact on margins. Duksan Hi-Metal's share price has historically tracked silver prices because conventional solder balls dominated its revenue mix. As the MSB mix increases, however, this correlation should weaken. The market generally continues to view the stock as a proxy for silver prices, even though recent silver price movements have had only a limited impact on margins.

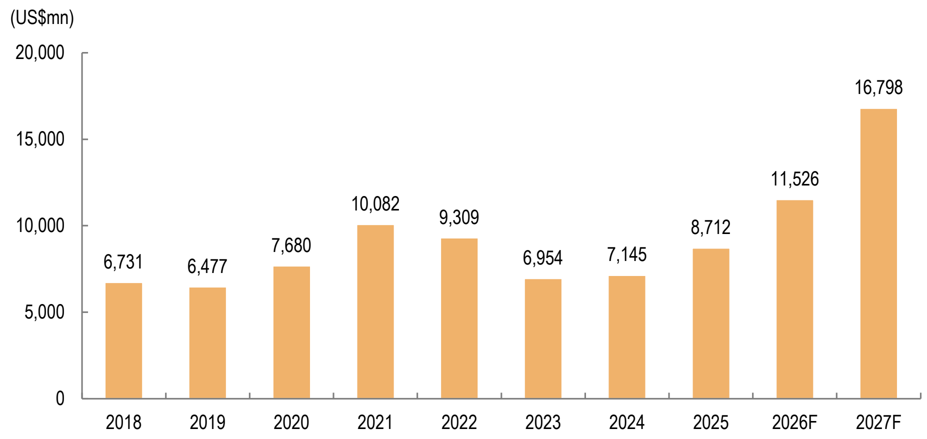
FC-BGA capacity expansion drives demand

The primary driver of MSB demand is FC-BGA capacity expansion. The proliferation of AI accelerators and server CPUs is increasing demand for larger-area, higher-layer-count FC-BGAs, prompting substrate makers in Korea, Taiwan, and Japan to expand capacity simultaneously. FC-BGA packages require solder interconnects both between the chip and package substrate and between the package substrate and mainboard. As substrates become larger and more complex, the number of interconnects and the need for finer pitches both increase, driving MSB demand.

In the ≤60μm MSB segment, customers have few practical alternatives to Duksan Hi-Metal. A Japanese competitor offers similar standard specifications, but Duksan Hi-Metal has a clear advantage in producing customized diameters for individual customers. Taiwanese players have not entered the MSB segment aggressively, while Chinese suppliers remain focused on solder paste, leaving little competitive threat in the solder ball market. Duksan Hi-Metal is effectively the sole supplier to Korea's leading FC-BGA manufacturer, and its share at a major Taiwanese substrate maker continues to rise.

The firm's strong competitive position is evident in pricing. It raised ASPs for some customers in 1Q26, while negotiations with other customers are continuing in 2H26. Its competitive position is underpinned by the lack of viable alternatives, not by low prices.

Figure 3. Global FC-BGA revenue outlook



Source: Mirae Asset Securities Research

HDD applications: A hidden cash cow

HDD applications are the second-largest end market for Duksan Hi-Metal's MSBs (accounting for around 20% of MSB revenue), and margins are higher than for MSBs used in FC-BGAs. Because only a small quantity of MSBs is required for each recording head, MSBs account for a negligible share of customers' costs, giving customers little reason to resist price increases.

We expect the company to continue to benefit from surging demand for high-capacity storage at AI data centers. Competition in nearline HDD capacity is intensifying again, accelerating the shift toward higher-capacity drives. This directly increases the number of recording heads required and raises bonding precision requirements. Duksan Hi-Metal has a long-term exclusive supply arrangement with one global HDD maker and a share of more than 50% at another. As product specifications become more demanding, the company's positioning should become increasingly favorable.

The firm's MSB utilization remains in the mid-60% range. Although the market appears to interpret this as evidence of insufficient demand, we view the remaining capacity as growth headroom. Given MSBs' processing-intensive cost structure, we see scope for significant operating leverage as utilization rises. <Table 3> shows the sensitivity of operating profit to higher utilization, assuming no additional capacity expansion.

Table 3. OP sensitivity by MSB utilization scenario (Wbn, %)

Scenario	MSB utilization	Annual MSB revenue	Incremental OP	Materials OP (2027F)	Materials OP margin
Base	65%	39.0	–	45.8	16.0
Scenario 1	80%	48.0	+6.3	52.1	18.2
Scenario 2	90%	54.0	+10.5	56.3	19.7
Scenario 3	100% (full capacity)	60.0	+14.7	60.5	21.1

Source: Mirae Asset Securities Research

Investment point 2: Rising solder ball demand from China

Conventional solder balls in tight supply

Conventional solder balls are a lower-margin business, but they underpin overall sales volume. Capacity is currently tight; utilization reached the mid-70% range in 2Q26, and given the nature of the production process, around 80% represents effective full capacity. The company completed a 30% capacity expansion in 1Q26, and preparations for an additional 30% expansion are already underway.

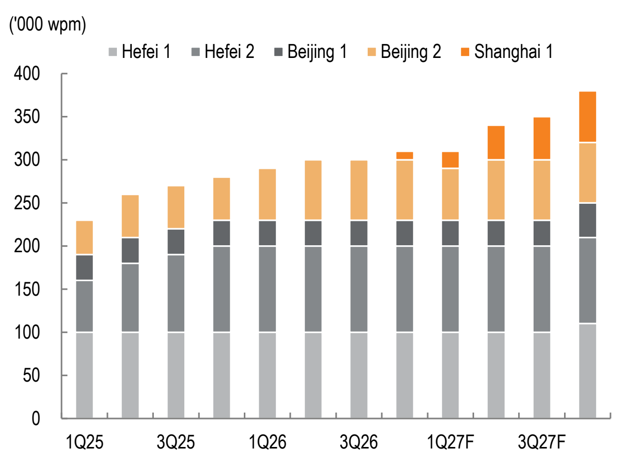
Demand is being driven by Chinese memory makers. In 2Q26, utilization rates at Chinese chipmakers rose sharply, and Duksan Hi-Metal's revenue from Chinese customers doubled QoQ. Growing Chinese demand supports both prices and volume, while the increasing share of overseas customers improves profitability.

There are few viable alternative suppliers. Local Chinese suppliers mainly produce larger solder balls, but their capabilities in fine-pitch products remain limited. Meanwhile, geopolitical factors make it difficult for Japanese and Taiwanese suppliers to access China's memory supply chain. Duksan Hi-Metal consequently holds a commanding share among Chinese memory customers, and its China-related revenue should grow structurally as the country's memory production capacity expands.

A key market concern centers on the company's raw material price pass-through mechanism. Silver prices fell sharply in June and July, and the roughly two-month lag between raw material costs and selling prices means the decline should be reflected in 3Q26 revenue. This has contributed to the recent share price correction.

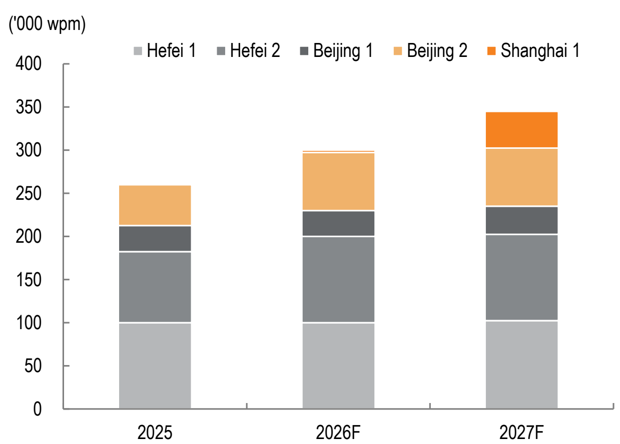
However, we expect the impact to be limited for three reasons. First, the pass-through mechanism applies to only a portion of conventional solder ball revenue, with prices for the remainder negotiated quarterly. On a company-wide basis, sales subject to the mechanism account for less than half of revenue. Second, raw material price declines are not passed through fully to selling prices, limiting the actual ASP impact. Third, the mechanism affects the top line but does not erode margins, as costs and ASPs fall together. This differs from 1Q26, when raw material prices rose sharply and only costs increased during the lag before selling prices were adjusted.

Figure 4. CXMT: Quarterly capacity trend



Source: Mirae Asset Securities Research

Figure 5. CXMT: Annual capacity by fab



Source: TrendForce, Mirae Asset Securities Research

Higher-spec solder balls to drive margin expansion

CSBs are higher-spec versions of conventional solder balls. They consist of a solder-coated copper core, which helps maintain a uniform standoff height while improving electrical and thermal performance. As chip specifications advance, interconnect materials are becoming increasingly important, driving a shift from silver/tin-based solder balls to copper/tin-based CSBs to improve signal transmission.

The key benefit is higher margins. CSB margins are more than three times those of conventional solder balls, and substantial margin improvement should remain achievable even after ASPs stabilize as production scales up. This transition has already begun. CSBs have been adopted in mobile APs, and development is underway for use in a next-generation flagship product. Duksan Hi-Metal completed vendor registration with a global logic semiconductor company in 1Q26, and we see potential for broader CSB adoption in AI accelerators and inference chips. Demand has also emerged in high-performance memory.

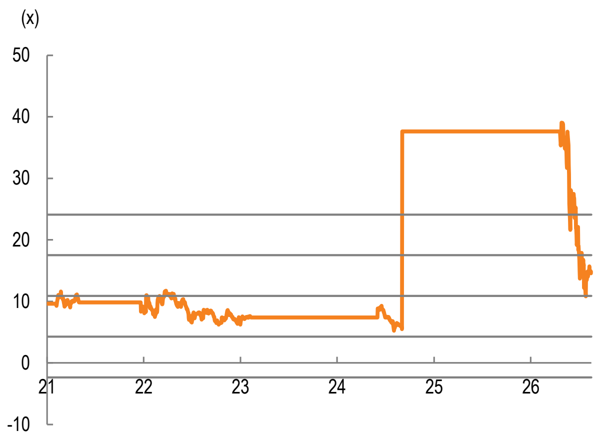
Memory adoption is a key variable. A shift from conventional solder balls to CSBs in a domestic memory customer's mainstream products would mark an inflection point for margins. Given the large volumes involved, such a transition would drive a step-up in the materials business's margin profile. CSB utilization is currently 50%, leaving sufficient scope to accommodate additional demand without expanding capacity.

Table 4. Materials OP by CSB conversion scenario (Wbn, %)

Scenario	Conversion rate	Converted revenue (2028F)	Incremental OP	Materials OP (2028F)
Base	0%	–	–	63.0
Scenario 1	10%	19.9	+2.4	65.4
Scenario 2	20%	39.8	+4.8	67.8
Scenario 3	30%	59.7	+7.2	70.2

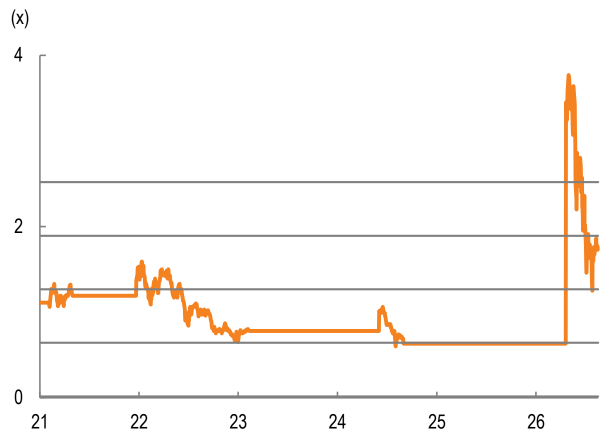
Notes: Assumes 2028F conventional solder ball revenue of W199bn and applies a 12%p margin differential upon conversion (from a high-single-digit margin for conventional solder balls to 20% for CSBs under mass production)
Source: Mirae Asset Securities Research

Figure 6. Duksan Hi-Metal: P/E ±2 SD



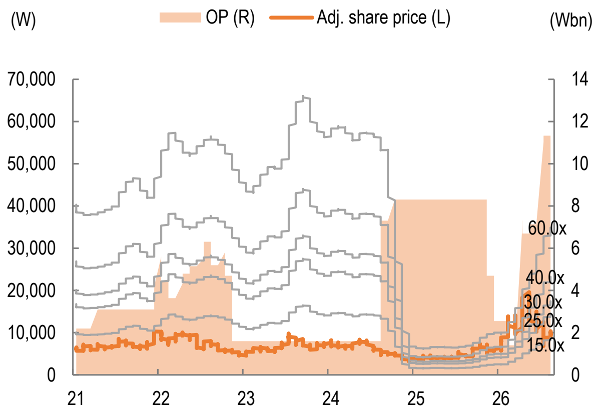
Source: Mirae Asset Securities Research

Figure 7. Duksan Hi-Metal: P/B ±2 SD



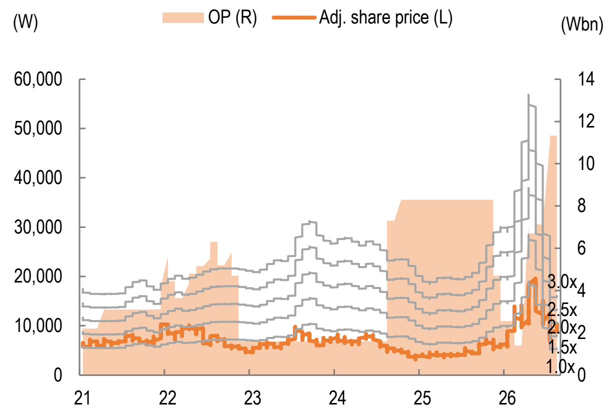
Source: Mirae Asset Securities Research

Figure 8. Duksan Hi-Metal: P/E band chart



Source: Mirae Asset Securities Research

Figure 9. Duksan Hi-Metal: P/B band chart



Source: Mirae Asset Securities Research

Duksan Hi-Metal (077360 KQ)

Income statement (summarized)

(Wbn)	2025	2026F	2027F	2028F
Revenue	**236**	**352**	**422**	**509**
Cost of revenue	**192**	**277**	**325**	**384**
GP	**44**	**75**	**97**	**125**
SG&A expenses	**41**	**45**	**48**	**57**
OP (adj.)	**3**	**30**	**49**	**68**
OP	**3**	**30**	**49**	**68**
Non-operating profit	**-123**	**3**	**-14**	**-19**
Net financial income	-11	-12	-15	-17
Net income from associates	21	9	0	0
Pretax profit	-120	33	35	49
Income tax	-4	5	6	9
Profit from continuing operations	-116	28	29	40
Profit from discontinued operations	0	0	0	0
NP	**-116**	**28**	**29**	**40**
Attributable to owners	-106	28	29	40
Attributable to minority interests	-10	0	0	0
Total comprehensive income	**-118**	**31**	**29**	**40**
Attributable to owners	-108	30	28	40
Attributable to minority interests	-10	0	0	1
EBITDA	20	48	65	83
FCF	-10	-17	17	55
EBITDA margin (%)	8.5	13.6	15.4	16.3
OP margin (%)	1.3	8.5	11.6	13.4
Net margin (%)	-44.9	8.0	6.9	7.9

Balance sheet (summarized)

(Wbn)	2025	2026F	2027F	2028F
Current assets	**179**	**165**	**208**	**300**
Cash & equivalents	67	10	22	84
AR & other receivables	45	63	76	83
Inventory	51	71	85	103
Other current assets	16	21	25	30
Non-current assets	**480**	**585**	**651**	**686**
Investments in associates	211	294	353	388
PP&E	110	139	149	149
Intangible assets	129	122	116	111
Total assets	**659**	**750**	**860**	**986**
Current liabilities	**194**	**246**	**320**	**399**
AP & other payables	21	29	35	42
Short-term financial liabilities	154	191	247	297
Other current liabilities	19	26	38	60
Non-current liabilities	**126**	**136**	**142**	**149**
Long-term financial liabilities	104	105	105	105
Other non-current liabilities	22	31	37	44
Total liabilities	**320**	**381**	**462**	**548**
Equity attributable to owners	**207**	**237**	**266**	**306**
Capital stock	9	9	9	9
Capital surplus	116	116	116	116
Retained earnings	169	197	225	266
Minority interests	**132**	**132**	**132**	**132**
Shareholders' equity	**339**	**369**	**398**	**438**

Cash flow statement (summarized)

(Wbn)	2025	2026F	2027F	2028F
Operating cash flow	**5**	**20**	**37**	**65**
NP	-116	28	29	40
Non-cash income/expenses	147	21	35	43
Depreciation	9	10	10	10
Amortization	8	7	6	5
Other	130	4	19	28
Chg. in working capital	-12	-16	-4	8
Chg. in AR & other receivables	3	-13	-13	-8
Chg. in inventory	-8	-20	-14	-18
Chg. in AP & other payables	2	-3	2	3
Income tax	-5	-4	-6	-9
Cash flow from investing activities	**20**	**-44**	**-23**	**-17**
Chg. in PP&E	-15	-37	-20	-10
Chg. in intangible assets	0	0	0	0
Chg. in financial assets	49	-7	-6	-6
Other	-14	0	3	-1
Cash flow from financing activities	**-27**	**35**	**56**	**50**
Chg. in financial liabilities	-29	37	56	50
Chg. in equity	1	0	0	0
Dividends	-2	-1	0	0
Other	3	-1	0	0
Chg. in cash	**-3**	**-57**	**12**	**62**
Beginning balance	69	67	10	22
Ending balance	67	10	22	84

Source: Company data, Mirae Asset Securities Research estimates

Key valuation metrics/ratios

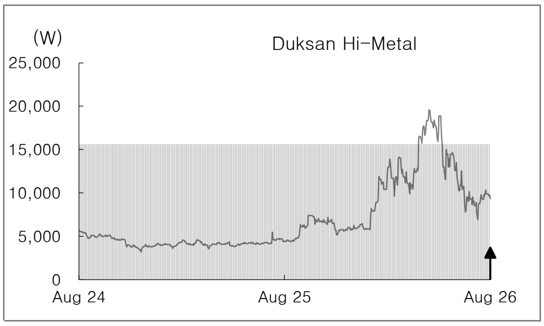
	2025	2026F	2027F	2028F
P/E (x)	-	15.9	15.4	11.0
P/CF (x)	8.8	9.0	7.0	5.3
P/B (x)	1.3	1.9	1.7	1.4
EV/EBITDA (x)	29.9	17.9	13.7	10.6
EPS (W)	-2,333	612	632	889
CFPS (W)	695	1,082	1,398	1,826
BPS (W)	4,544	5,213	5,846	6,735
DPS (W)	0	0	0	0
Dividend payout ratio (%)	0.0	0.0	0.0	0.0
Dividend yield (%)	0.0	0.0	0.0	0.0
Revenue growth (%)	0.2	49.0	19.7	20.7
EBITDA growth (%)	-42.8	140.1	36.6	27.6
OP growth (%)	-84.9	980.2	59.6	39.2
EPS growth (%)	TTR	TTB	3.3	40.6
AR turnover (x)	5.0	6.5	6.1	6.4
Inventory turnover (x)	4.7	5.7	5.4	5.4
AP turnover (x)	22.3	26.1	24.0	23.6
ROA (%)	-15.7	3.9	3.5	4.4
ROE (%)	-40.8	12.6	11.4	14.1
ROIC (%)	0.7	10.5	12.0	16.4
Debt-to-equity ratio (%)	94.5	103.4	116.2	125.2
Current ratio (%)	92.1	67.2	65.0	75.2
Net debt-to-equity ratio (%)	54.5	74.8	80.0	69.6
Interest coverage ratio (x)	0.2	2.2	3.1	3.7

Appendix 1

Important disclosures and disclaimers

Two-year rating and TP history

Company	Date	Rating	TP (W)
Duksan Hi-Metal (077360)	08/21/26	Buy	17,000



Stock ratings		Sector ratings	
Buy	Expected 12-month return: +20% or greater	Overweight	Expected to outperform the market over 12 months
Hold	Expected 12-month return: Greater than -10% and less than +10%	Neutral	Expected to perform in line with the market over 12 months
Sell	Expected 12-month return: -10% or less	Underweight	Expected to underperform the market over 12 months

As of May 12, 2025, the Trading Buy rating category has been removed from our investment rating system.
Stocks expected to deliver a 12-month return between +10% and less than +20% may be rated either Buy or Hold at the discretion of the research analyst.

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.
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	Buy	Trading Buy	Hold	Sell
Ratings distribution	83.02%	0%	16.35%	0.63%
Investment banking services	86.67%	0%	13.33%	0%

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