

September 18, 2024 08:03 PM GMT

Metals & Mining | Europe

Searching for a floor

China's poor demand backdrop and lack of decisive stimulus have pushed steelmaking raw materials into the cost curve and de-rated equities. While diversified miners are pricing in further price declines, a seasonal restock would bring the sector back into focus.

Key Takeaways

- Amidst China's disappointing steel demand indicators, a seasonal restock is likely upon us.
- Equities, notably the diversifieds, are pricing in further commodity prices declines.
- Rio Tinto PLC over BHP, Hydro over Boliden, KGHM over Antofagasta, Endeavour over Fresnillo.

No convincing inflection, but a seasonal restock... China's demand for *some* industrial commodities fell short of our and consensus estimates, as evidenced by the 10-12% YoY August decline in domestic output of steel and cement. PMIs and economic indicators also continued to disappoint, underpinning our economics team's [below-consensus GDP forecasts](#) for 2024/25. While prospects of a meaningful demand inflection remain limited in the [absence of more decisive stimulus](#), feedback from a recent [trip](#) to China reinforced our view of a modest and seasonal pick-up in activity through year-end. [Next catalysts?](#) October-end Politburo meeting and then the December CEWC, which may offer hints on policy intentions, in our view.

...meets low expectations. Our commodities team set [new forecasts](#); we observe that steelmaking raw materials like iron ore and metallurgical coal are trading into the cost curve, limiting prospects of a sustained price decline from current levels. Mining equities - especially diversified miners - have de-rated substantially and are pricing further price declines, which we see as unsustainable. For instance, Rio Tinto PLC is pricing in a LT IO price of US\$75/t (2024 real), while BHP/RIO/GLEN are trading on a spot 2025 FCFY range of 4-7%. The SXPP has now fallen to >1 STDEV below its historical P/B vs the market. 2025 EBITDA MtM downgrades stand at 9-11% for RIO/BHP and 20% for GLEN. We see prospects for more outperformance of **Rio Tinto PLC (OW)** vs **BHP (raised by our Australia team to OW)**. Order of preference: Rio Tinto PLC, Glencore, BHP.

Hydro over Boliden, KGHM over ANTO, Endeavour over Fresnillo. Among copper equities, we see few idiosyncratic stories with sufficient valuation buffer, apart from **KGHM (OW)** where self-help is gaining traction. We cut [Antofagasta to UW](#) on production risks, a heavy capex cycle and a stretched implied Cu price of \$4.78/lb (~14% above spot), alongside **Boliden (UW)** which remains challenged on operational/project setbacks and unfavourable smelting exposure. We see a more favourable risk-reward among ali producers, notably **Hydro (new Top Pick)** on

MORGAN STANLEY & CO. INTERNATIONAL PLC+

Alain Gabriel, CFA

Equity Analyst

Alain.Gabriel@MorganStanley.com

+44 20 7425-8959

Ioannis Masvoulas, CFA

Equity Analyst

Ioannis.Masvoulas@morganstanley.com

+44 20 7425-0427

Adahna Ekoku

Research Associate

Adahna.Ekoku@morganstanley.com

+44 20 7425-0578

Amy Gower (Amy Sergeant), CFA

Commodities Strategist

Amy.Gower1@morganstanley.com

+44 20 7677-6937

RMB MORGAN STANLEY PROPRIETARY LIMITED+

Brian Morgan

Equity Analyst

Brian.Morgan3@rmbmorganstanley.com

+27 11 282-8969

MORGAN STANLEY & CO. INTERNATIONAL PLC+

Helen Amos

Commodity Strategist

Helen.Amos@morganstanley.com

+44 20 7677-0678

Walid Hasanzadeh

Research Associate

Walid.Hasanzadeh@morganstanley.com

+44 20 7425-1191

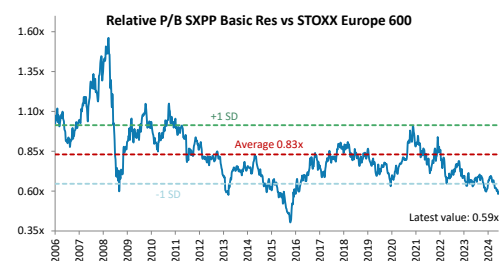
METALS & MINING

Europe

Industry View

Attractive

Exhibit 1 : The relative P/B of European Metals & Mining equities has fallen to its lowest level since the 2015-16 "China Growth Scare"



Source: Morgan Stanley Research, Bloomberg* Companies include Antofagasta, Freeport, Southern Copper, and Lundin Mining

See [Exhibit 17](#) inside for all of our PT changes

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positive MtM due to alumina tightness and [superior returns](#) at ~6%. In precious, we still favour **Endeavour Mining** (OW) over **Fresnillo** (EW) as the shares trade on a 2025 spot FCFY of 17%.

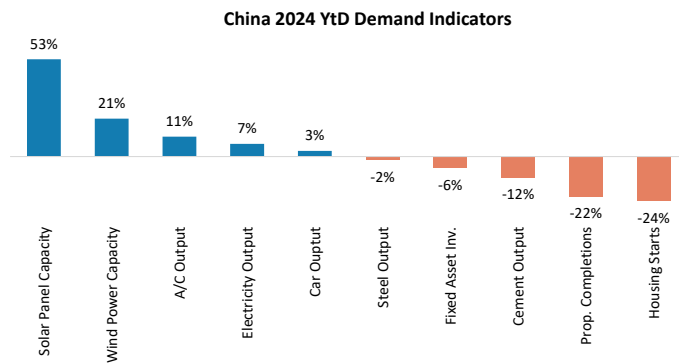
Also see:

[metal&ROCK: The Price Deck - 4Q24: Choose Carefully](#)

[Carbon & Stainless Steel: No turning point, yet](#)

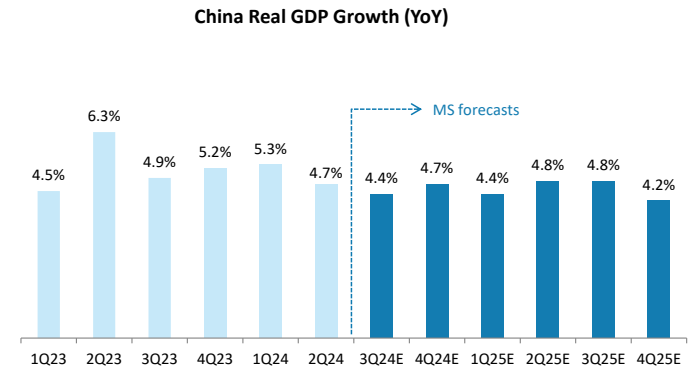
The story in charts

Exhibit 2: Some key China demand indicators have been underperforming YtD, falling short of our and consensus estimates...



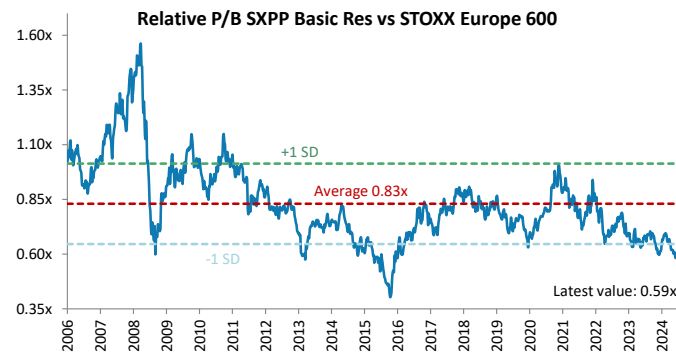
Source: Bloomberg, Morgan Stanley Research

Exhibit 3: ...underpinning our economics team's below-consensus GDP forecasts for 2024/25...



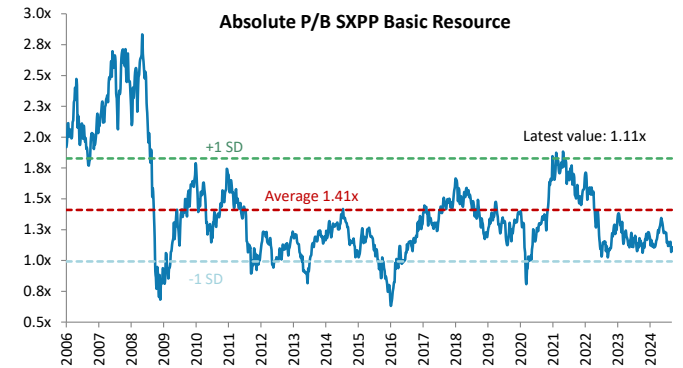
Source: Morgan Stanley Research forecasts (E)

Exhibit 4: Metals & Mining equities have fallen further and now stand at >1 STDEV below their historical relative P/B...



Source: Morgan Stanley Research, Bloomberg

Exhibit 5: ...even in absolute terms, the sector has de-rated substantially towards the bottom end of its historical range

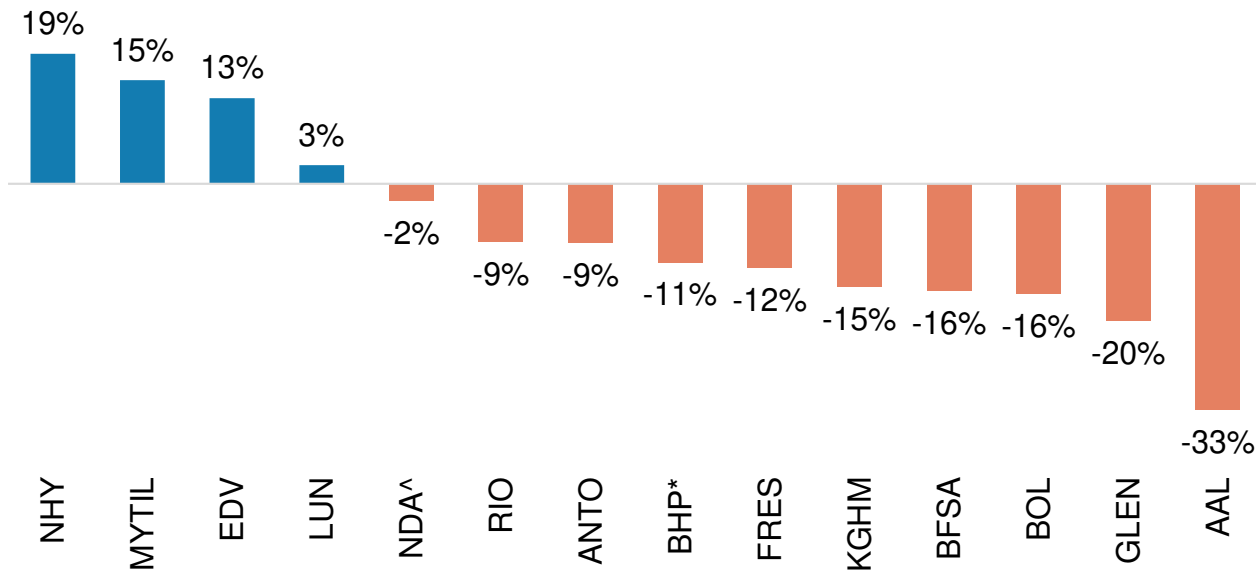


Source: Morgan Stanley Research, Bloomberg

Exhibit 6:

An overview of mark-to-market upgrades/(downgrades) to 2025 consensus EBITDA forecasts

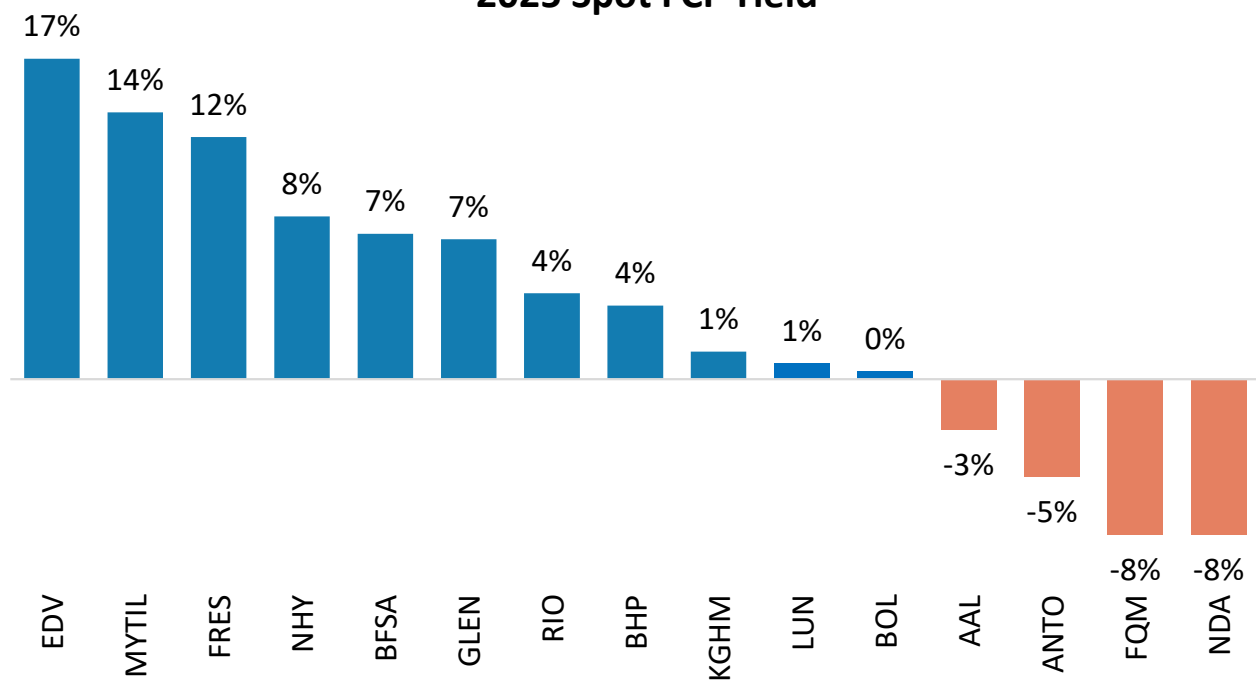
Upside to 2025 cons. EBITDA on Spot



Source: Visible Alpha, Morgan Stanley Research estimates. *BHP is June ending, ^ NDA is September ending, Both company details have been calendarised. First Quantum is excluded as we assume a restart of Cobre Panama in 2H25

Exhibit 7: An overview of spot 2025 FCF yield

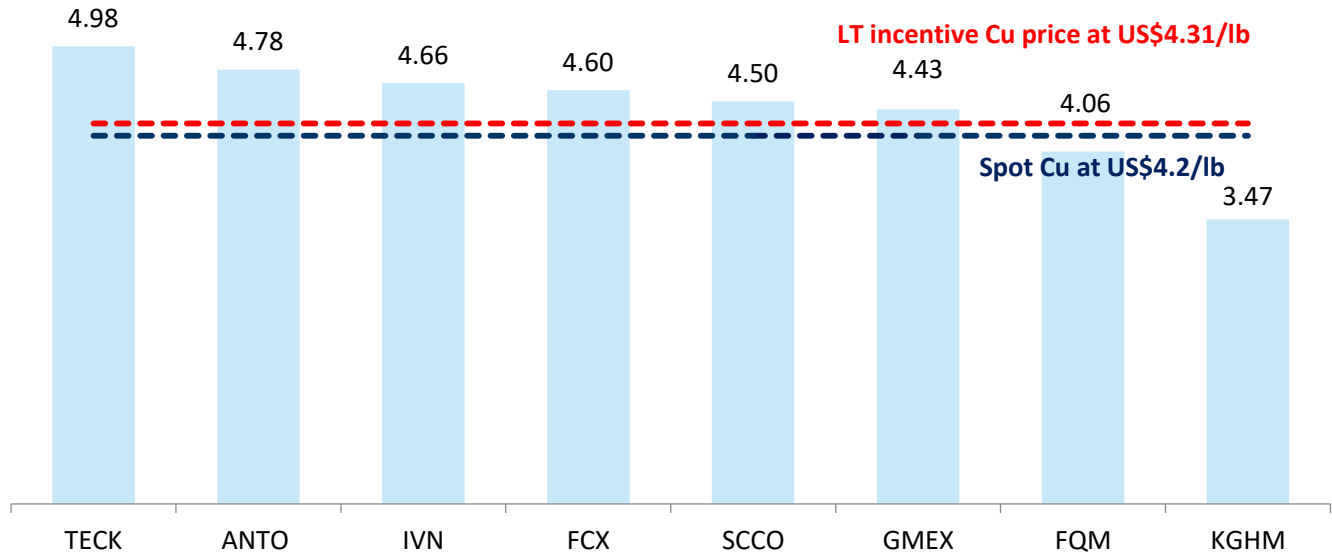
2025 Spot FCF Yield



Source: Morgan Stanley Research estimates.

Exhibit 8: Copper's strong narrative may continue near term, supportive of strong returns prospects

Implied Copper Price (US\$/lb)



Source: Morgan Stanley Research estimates

Industry summary

Exhibit 9: Mining Industry Report Card

Industry View	Status	Key debate	Summary
Global Macro Outlook	Mixed	Many Uncertainties	Morgan Stanley's base case remains for a soft landing into year-end, but flag that concerns over recession linger given recent weaker employment data. Our US economists expect the first Fed rate cut at the September meeting and our strategists continue to expect continued moderate growth and disinflation around the world.
China's Macro Outlook	Mixed	Deflationary pressures accumulating	Our China economists have cut their real GDP forecast to 4.6% and 4.2% for 2024 and 2025. Underperformance stems more from domestic consumption rather than investment, with exports remaining strong. Our China property team remains cautious, seeing a weak sales outlook, and think more non-market-based policies are needed to restore resident confidence.
Commodity Deck	Positive Risk-Reward Skew	Choose carefully	Copper top pick, followed by iron ore >> met coal >> platinum >> gold.
Spot Price Risk	Mixed		Potential downside risk to consensus EBITDA on iron ore and copper, upside risk on alumina, aluminium, gold.
Industry View	Positive Risk-Reward Skew	China demand in focus	While prospects of a meaningful China demand inflection remain limited, we expect a modest and seasonal pick-up in activity through year-end. Mining equities - especially diversified miners - have de-rated substantially and are pricing further price declines, which we see as unsustainable.
Most Preferred	RIO, EDV, MYTIL and KGHM		Favourite picks: Rio Tinto PLC, Norsk Hydro, KGHM, Endeavour Mining
Least Preferred	ANTO, BOL, Salzgitter, Erdemir		Antofagasta: lofty valuation meets production risks and capex hump. Boliden: persistent operational challenges and smelter headwinds. Stretched valuations for Salzgitter and Erdemir among carbon steel producers render their risk-reward profile unappealing.
Estimate Changes	2024e EBITDA decreases by 11%		In aggregate, the EBITDA decreases for the sector are driven by lower copper, iron ore and aluminium forecasts for 2024.

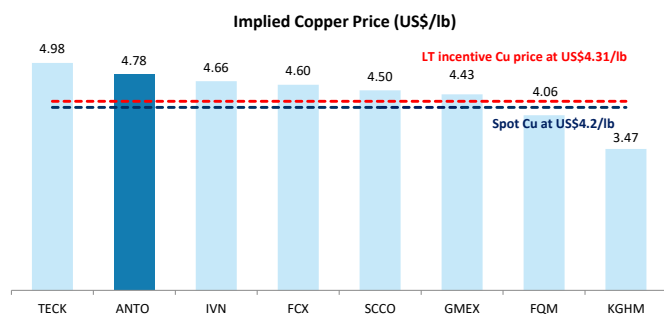
Source: Morgan Stanley Research estimates

Antofagasta - Production risks meet lofty valuation

Lofty valuation...

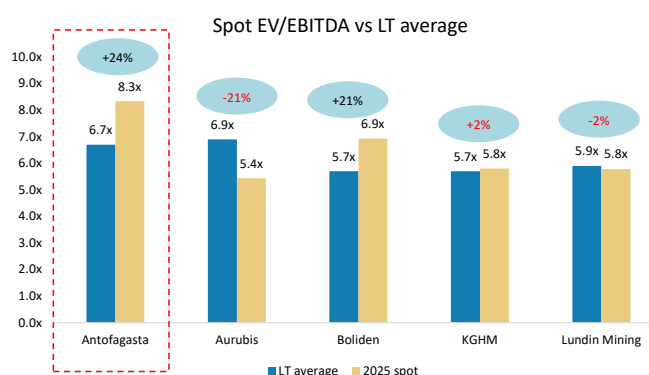
As copper pulled back in recent months, ANTO is down 26% from its Q2 peak alongside the broader equity space. Yet, the stock is still up YTD, comfortably outperforming the EuroStoxx Basic Resources index by 19% on a TSR basis, despite an underwhelming operating performance in 1H24. As such, the stock is now pricing \$4.78/lb copper into perpetuity, a 14% premium to spot and 11% premium to our commodities team's long-term incentive price forecast which now stands at \$4.31/lb (real 2024 terms). Furthermore, Antofagasta shares are trading at 2025 spot EV/EBITDA of 8.3x (consolidated basis), at a 24% premium to its long-term average of 6.7x (consolidated basis). This represents the largest premium alongside Boliden, which is our other key Underweight in the copper space. While we acknowledge the scarcity of low-risk liquid plays and supportive M&A narrative in the copper space, the stark valuation divergence between ANTO and peers prompts us to downgrade the stock to Underweight.

Exhibit 10: ANTO is implying one of the highest copper prices in our global coverage...



Source: Morgan Stanley Research estimates

Exhibit 11: ...and is trading at the largest EV/EBITDA premium to its LT average among copper peers

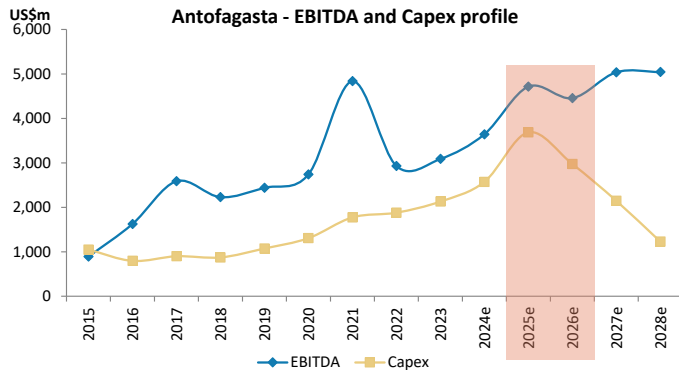


Source: Morgan Stanley Research estimates. EV/EBITDA multiples on a consolidated basis.

..amidst a capex hump...

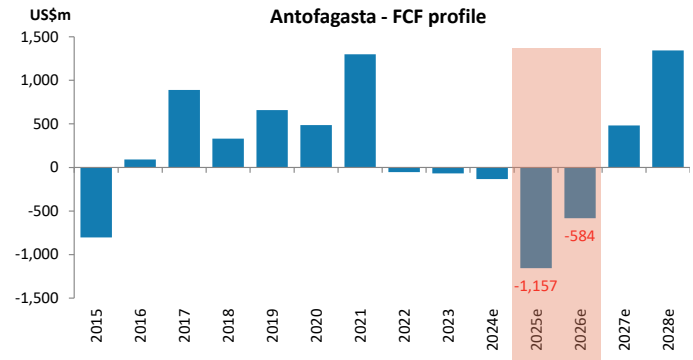
Antofagasta's lofty valuation coincides with a heavy investment cycle, with record capex of at least \$3.5bn in 2025, followed by another ~\$3.0bn in 2026 driven mainly by the Centinela expansion project (Exhibit 12). This translates into a pinch point with our estimated cash burn of \$1.2bn in 2025 and \$0.6bn in 2026. The FCF profile is based on our copper price forecasts of \$4.47-4.31/lb in 2025-2026, which are above spot levels. Further out, continued escalation of expansionary capex guidance will likely weigh on longer-dated project returns and FCF. While this should underpin volume CAGR of 5-7% through 2028, the impending capex hump and ANTO's mixed project execution track record points to an unfavourable risk-reward skew, in our view.

Exhibit 12: Capex hump upon us...



Source: Company data, Morgan Stanley Research estimates

Exhibit 13: ...leading to a FCF pinch point

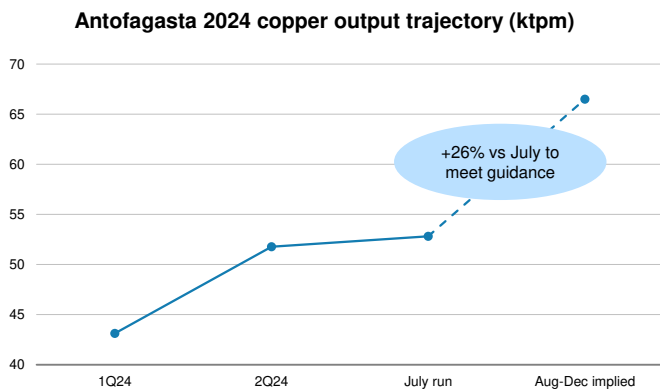


Source: Company data, Morgan Stanley Research estimates

...meets near-term production risks

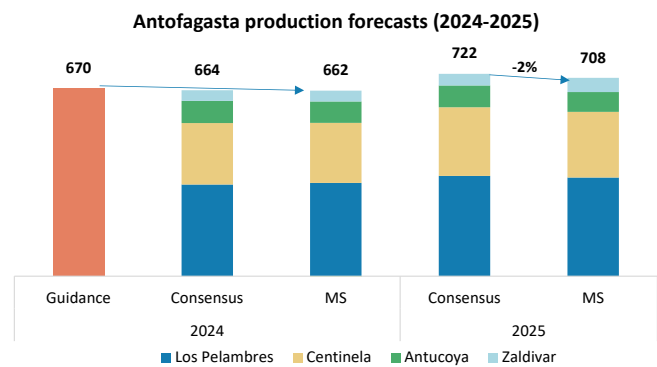
While Antofagasta has already implicitly cut its 2024 copper production guidance by 3% to ~670kt, we still see the revised target as challenging as it implies a significant step up of ~26% relative to the July run-rate ([Exhibit 14](#)). Our estimate of 662kt (VA cons of 664kt) generously assumes that (1) 20kt of the 27kt stockpiled at Los Pelambres is shipped in 2H24, and (2) Centinela Concentrates grades lift materially to 0.53% by 4Q24 (vs 0.32% in 2Q24) along with higher recoveries. Any slippage on either front could bring production below the 660kt mark. There was no notable uplift in the July Cochilco data, and therefore the August data alongside the 3Q24 production report on October 16 will be key to watch. By the same token, we see risks to 2025 consensus production expectations of 723kt and we project a more modest uplift to 708kt.

Exhibit 14: Antofagasta needs to deliver a big step up in H2 to meet its 2024 guidance...



Source: Company data, Morgan Stanley Research estimates

Exhibit 15: ...while 2025 consensus expectations may also prove optimistic



Source: Company data, Visible Alpha Consensus, Morgan Stanley Research estimates

Lowering PT to £16, moving to Underweight

Our Commodities team has lifted the long-term copper incentive price by a significant 20% to \$4.31/lb (2024 \$ terms) on (1) **rising capital intensity**, (2) **increased IRR at 15%** and (3) taking the **75th percentile of the incentive price curve** as more projects are needed to fill the projected deficits (see [here](#)). The revision to the long-term copper price assumption lifts our NPVs across the copper names, albeit from depressed levels. We now revert our Price Target derivation methodology for Antofagasta and the other copper

equities to 50/50 EV/EBITDA (2025-2027 average) and NPV. Applying ANTO's historical average EV/EBITDA multiple of 6.7x (consolidated basis) and 1.0x P/NPV brings our PT to £16.00 (from £19.20, [Exhibit 16](#)). Our revised PT implies 10% downside to the current share price, prompting our downgrade to Underweight (from Equal-weight). We would play upside in copper via KGHM (Overweight, Top Pick) in Europe and Freeport, Ivanhoe, Teck Resources in North America (covered by Carlos De Alba).

Exhibit 16: PT derivation methodology

	Revised	Previous	Change
Valuation Methodology	50%-50% EV/EBITDA-NPV	100% EV/EBITDA	
1.0x P/NAV	12.00	8.20*	
6.7x EV/EBITDA	20.00	19.20	
Price Target (£)	16.00	19.20	-17%

Source: Morgan Stanley Research estimates. * Previous Price Target based on 100% EV/EBITDA, rather than 50%/50% of EV/EBITDA and NPV.

Key drivers of our price target changes

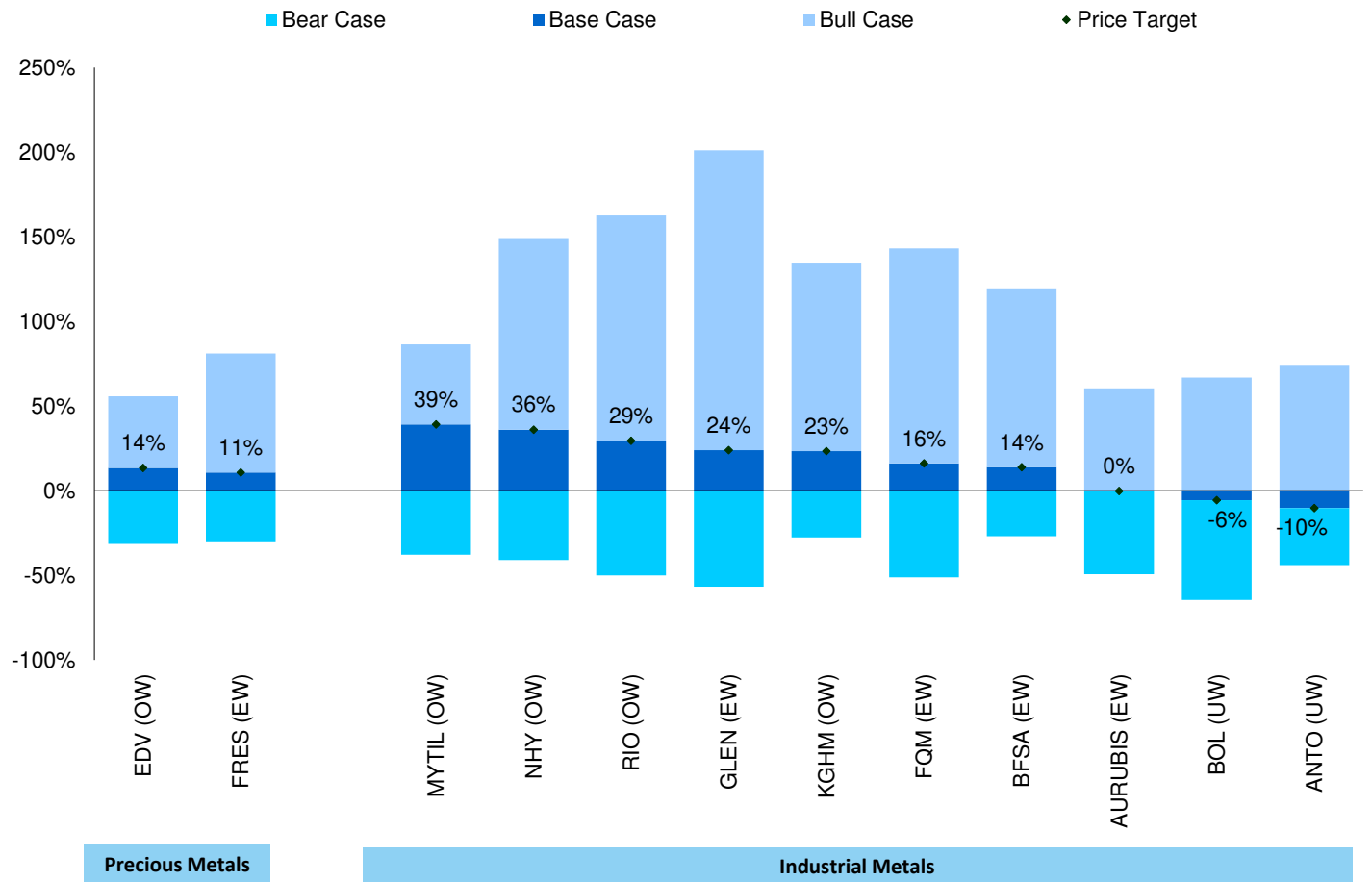
Exhibit 17: Mining: Key drivers of our price target changes

Mining	Curr.	New PT	Old PT	% Change	Why increase/decrease of PT?
Antofagasta	GBp	1,600	1,920	-17%	We incorporate our revised commodity price and FX forecasts. We also shift our valuation for the copper equities to 50/50 EV/EBITDA (2025-2027 average) and P/NPV, to account for both near term dynamics and the more fundamental value drivers.
Aurubis	EUR	69.0	74.0	-7%	We incorporate our revised commodity price and FX forecasts. We also shift our valuation for the copper equities to 50/50 EV/EBITDA (2025-2027 average) and P/NPV, to account for both near term dynamics and the more fundamental value drivers.
Befesa	EUR	28.0	30.0	-7%	We incorporate our revised commodity price forecasts, and adjust for the latest FX rates. We also roll forward our valuation.
Boliden	SEK	280	310	-10%	We incorporate our revised commodity price and FX forecasts. We also shift our valuation for the copper equities to 50/50 EV/EBITDA (2025-2027 average) and P/NPV to account for both near term dynamics and the more fundamental value drivers. Finally, we account for the latest capex guidance at Odda.
Endeavour Mining	GBp	2,082	1,873	11%	We incorporate our revised commodity price forecasts and adjust for the latest FX rates. We also roll forward our valuation.
Endeavour Mining	CAD	37.1	32.5	14%	We incorporate our revised commodity price forecasts and adjust for the latest FX rates. We also roll forward our valuation.
Fresnillo	GBp	630	610	3%	We incorporate our revised commodity price forecasts and adjust for the latest FX rates. We also roll forward our valuation.
First Quantum	CAD	20.2	19.4	4%	We incorporate our revised commodity price and FX forecasts. We also shift our valuation for the copper equities to 50/50 EV/EBITDA (2025-2027 average) and P/NPV to account for both near term dynamics and the more fundamental value drivers. We now assume restart of Cobre Panama in 2H25.
Glencore	GBp	470	470	0%	We incorporate our revised commodity price forecasts, and adjust for the latest FX rates. We also roll forward our valuation.
Glencore	ZAc	11,000	10,900	1%	We incorporate our revised commodity price forecasts, and adjust for the latest FX rates. We update FX used to set PT (GBP to ZAR) which resulted in disproportionate impact to PT vs Plc. We also roll forward our valuation.
KGHM Polska Miedz SA	PLN	174	200	-13%	We incorporate our revised commodity price and FX forecasts. We also shift our valuation for the copper equities to 50/50 EV/EBITDA (2025-2027 average) and P/NPV and P/NPV to account for both near term dynamics and the more fundamental value drivers.
Metlen	EUR	47.0	46.0	2%	We incorporate our revised commodity/power price forecasts and adjust for the latest FX rates. We also roll forward our valuation.
Norsk Hydro	NOK	83.0	80.0	4%	We incorporate our revised commodity price forecasts and adjust for the latest FX rates. We roll forward our valuation. We also fine-tune our Energy EBITDA estimates as we update our PPA assumptions, and our Bauxite & Alumina cost assumptions following the fuel switch update.
Rio Tinto	GBp	6,200	6,400	-3%	We incorporate our revised commodity price forecasts, and adjust for the latest FX rates. We also roll forward our valuation.

Source: Morgan Stanley Research estimates

Sector Risk-Reward Snapshot

Exhibit 18: Comparative risk-reward for European/EEMEA Mining stocks and Steel stocks



Source: Morgan Stanley Research estimates. Note: Priced at close on 17th September 2024

Order of preference

Exhibit 19: Order of preference: European mining companies

	Rating	Price	Bear	PT <i>upside/downside</i>	Bull
Most preferred (in alphabetical order)					
Endeavour Mining	OW	1834 GBp	1,258 -31%	2,082 14%	2,858 56%
KGHM	OW	141 PLN	102 -28%	174 23%	331 135%
Metlen	OW	34 EUR	21.0 -38%	47.0 39%	63.0 87%
Norsk Hydro	OW	61 NOK	36.0 -41%	83.0 36%	152.0 149%
Rio Tinto	OW	4790 GBp	2,390 -50%	6,200 29%	12,580 163%
Neutral (in alphabetical order)					
Aurubis	EW	69 EUR	35.0 -49%	69.0 0%	111.0 61%
Befesa	EW	25 EUR	18.0 -27%	28.0 14%	54.0 120%
FQM	EW	17.4 CAD	8.5 -51%	20.2 16%	42.3 143%

Source: Morgan Stanley Research estimates. Note: Priced at close on 17th September 2024. Stocks in each section are ranked in alphabetical order.

Exhibit 20: Order of preference (continued): European mining companies

	Rating	Price	Bear	PT <i>upside/downside</i>	Bull
Neutral (in alphabetical order)					
Fresnillo	EW	569 GBp	399 -30%	630 11%	1,030 81%
Glencore	EW	379 GBp	164 -57%	470 24%	1,142 201%
Least preferred (in alphabetical order)					
Antofagasta	UW	1783 GBp	1,000 -44%	1,600 -10%	3,100 74%
Boliden	UW	297 SEK	105 -65%	280 -6%	495 67%

Source: Morgan Stanley Research estimates. Note: Priced at close on 17th September 2024. Stocks in each section are ranked in alphabetical order.

Changes to our commodity price and currency assumptions

Exhibit 21: New commodity price forecasts

Base Metals (CY):

Period	Aluminium			Nickel			Copper			Zinc		
	New US\$/lb	Old US\$/lb	% Change	New US\$/lb	Old US\$/lb	% Change	New US\$/lb	Old US\$/lb	% Change	New US\$/lb	Old US\$/lb	% Change
2024e	1.08	1.15	-6%	7.76	7.86	-1%	4.18	4.48	-7%	1.23	1.28	-3%
2025e	1.12	1.12	1%	7.43	7.82	-5%	4.47	4.65	-4%	1.17	1.24	-5%
2026e	1.09	1.09	0%	8.28	8.62	-4%	4.31	4.31	0%	1.27	1.27	0%
2027e	1.18	1.18	0%	9.07	9.07	0%	4.31	4.31	0%	1.32	1.32	0%
2028e	1.32	1.32	0%	9.39	9.39	0%	4.31	4.11	5%	1.32	1.32	0%
2029e	1.32	1.32	0%	9.39	9.39	0%	4.31	4.11	5%	1.32	1.32	0%
LT Nominal	1.26	1.27	0%	9.51	9.29	2%	4.91	4.00	23%	1.37	1.27	8%

Precious Metals (CY):

Period	Gold			Platinum			Palladium			Silver		
	New US\$/lb	Old US\$/oz	% Change	New US\$/oz	Old US\$/oz	% Change	New US\$/oz	Old US\$/oz	% Change	New US\$/oz	Old US\$/oz	% Change
2024e	2,364	2,368	0%	966	1,003	-4%	978	977	0%	28	28	0%
2025e	2,588	2,538	2%	1,081	1,131	-4%	988	994	-1%	33	33	-2%
2026e	2,250	2,200	2%	1,275	1,325	-4%	950	913	4%	32	31	2%
2027e	2,200	2,200	0%	1,455	1,472	-1%	900	900	0%	31	31	0%
2028e	2,000	2,000	0%	1,499	1,499	0%	963	1,025	-6%	29	29	0%
2029e	1,800	1,800	0%	1,521	1,507	1%	1,100	1,206	-9%	26	26	0%
LT Nominal	2,166	1,596	36%	1,596	1,484	8%	1,254	1,288	-3%	29	23	27%

Bulks (CY):

Period	Hard Coking Coal			Thermal Coal - Newcastle			PCI Coal			Semi Soft Coal		
	New US\$/t	Old US\$/t	% Change	New US\$/t	Old US\$/t	% Change	New US\$/t	Old US\$/t	% Change	New US\$/t	Old US\$/t	% Change
2024e	242	277	-13%	135	135	0%	183	203	-10%	171	190	-10%
2025e	211	260	-19%	129	120	7%	159	199	-20%	146	183	-20%
2026e	223	238	-6%	125	115	9%	168	181	-7%	155	167	-7%
2027e	213	220	-3%	125	115	9%	162	169	-4%	149	156	-4%
2028e	214	200	7%	130	120	8%	163	154	6%	151	142	6%
2029e	215	200	8%	135	125	8%	163	152	8%	151	140	8%
LT Nominal	222	195	14%	142	125	14%	169	148	14%	156	137	14%

Period	Fe Fines (CFR China)			Alumina (Spot)			Molybdenum			Freight (W. Aus to N China)		
	New US\$/t	Old US\$/t	% Change	New US\$/t	Old US\$/t	% Change	New US\$/lb	Old US\$/lb	% Change	New US\$/lb	Old US\$/lb	% Change
2024e	108	119	-10%	446	447	0%	21.30	21.05	1%	10.5	10.1	4%
2025e	103	105	-2%	413	385	7%	20.50	19.50	5%	9.3	9.3	0%
2026e	100	100	0%	380	340	12%	19.00	17.50	9%	9.3	9.3	0%
2027e	95	100	-5%	400	370	8%	18.00	15.50	16%	9.5	9.5	0%
2028e	98	95	3%	400	400	0%	16.00	14.00	14%	10.0	10.0	0%
2029e	100	95	5%	430	403	7%	16.00	14.00	14%	9.9	10.0	0%
LT Nominal	103	95	8%	464	390	19%	16.67	14.59	14%	10.1	10.1	0%

Source: Morgan Stanley Research Global Commodities team estimates

Exhibit 22: New exchange rate assumptions

Period	1 AUD = USD			1 USD = ZAR			1 USD = CLP			1 USD = BRL		
	New	Old	% Change	New	Old	% Change	New	Old	% Change	New	Old	% Change
2024e	0.66	0.66	0%	18.3	19.0	-4%	935	910	3%	5.36	5.14	4%
2025e	0.69	0.69	0%	18.9	20.0	-6%	931	901	3%	5.88	5.33	10%
2026e	0.72	0.72	0%	19.9	21.0	-5%	941	909	3%	6.05	5.41	12%
2027e	0.72	0.72	0%	20.9	21.8	-4%	951	918	4%	6.14	5.50	12%
2028e	0.71	0.71	0%	21.9	22.6	-3%	961	926	4%	6.24	5.59	12%
2029e	0.71	0.71	0%	22.9	23.4	-2%	971	935	4%	6.34	5.67	12%
LT Nominal	0.72	0.71	1%	24.6	23.9	3%	953	926	3%	5.55	5.61	-1%

Source: Morgan Stanley Research Global Commodities team assumptions

Exhibit 23: Bull, base and bear case commodity prices

Base Metals (CY):

Period	Aluminium (US\$/lb)			Nickel (US\$/lb)			Copper (US\$/lb)			Zinc (US\$/lb)		
	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull
2024e	0.86	1.08	1.30	5.43	7.76	10.87	3.35	4.18	5.23	1.05	1.23	1.48
2025e	0.90	1.12	1.35	5.20	7.43	10.03	3.66	4.47	5.36	1.06	1.17	1.41
2026e	0.89	1.09	1.31	5.79	8.28	11.18	3.66	4.31	5.39	1.14	1.27	1.59
2027e	1.00	1.18	1.47	6.35	9.07	12.25	3.88	4.31	5.60	1.18	1.32	1.64
2028e	1.12	1.32	1.64	6.57	9.39	12.21	3.88	4.31	5.82	1.18	1.32	1.64
2029e	1.12	1.32	1.64	6.57	9.39	12.21	3.88	4.31	5.82	1.12	1.32	1.46
LT Nominal	1.14	1.26	1.45	6.66	9.51	12.37	4.18	4.91	6.39	1.10	1.37	1.51

Precious Metals (CY):

Period	Gold (US\$/oz)			Platinum (US\$/oz)			Palladium (US\$/oz)			Silver (US\$/oz)		
	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull
2024e	2,010	2,364	2,837	773	966	1,159	684	978	1,173	21	28	35
2025e	2,329	2,588	2,976	865	1,081	1,298	691	988	1,284	26	33	39
2026e	2,025	2,250	2,813	1,148	1,275	1,658	665	950	1,140	27	32	45
2027e	2,046	2,200	2,860	1,309	1,455	1,891	630	900	1,080	28	31	47
2028e	1,900	2,000	2,800	1,349	1,499	1,948	674	963	1,155	26	29	41
2029e	1,710	1,800	2,520	1,369	1,521	1,977	880	1,100	1,320	23	26	37
LT Nominal	1,949	2,166	3,032	1,436	1,596	2,075	1,003	1,254	1,505	25	29	38

Bulks (CY):

Period	Fe Fines (CFR China) (US\$/t)			Fe Lumps (CFR China) (US\$/t)			Alumina spot (US\$/t)		
	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull
2024e	70	108	134	76	117	146	357	446	535
2025e	67	103	138	76	117	158	330	413	495
2026e	65	100	150	74	114	171	312	380	456
2027e	62	95	143	71	109	164	340	400	500
2028e	63	98	146	73	112	167	340	400	500
2029e	65	100	149	76	114	176	382	430	539
LT Nominal	67	103	154	79	121	182	394	464	557

Period	Hard Coking Coal (US\$/t)			Thermal Coal - Newcastle			PCI Coal (US\$/t)			Semi Soft Coal (US\$/t)		
	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull
2024e	169	242	363	54	135	242	128	183	311	119	171	290
2025e	148	211	317	90	129	290	111	159	270	102	146	249
2026e	156	223	378	88	125	250	118	168	286	109	155	264
2027e	170	213	372	88	125	250	113	162	275	104	149	253
2028e	171	214	342	91	130	228	114	163	278	105	151	256
2029e	172	215	344	95	135	236	131	163	278	121	151	256
LT Nominal	178	222	356	100	142	249	135	169	270	124	156	249

Source: Morgan Stanley Research Global Commodities team estimates

Morgan Stanley revised commodity prices vs. consensus

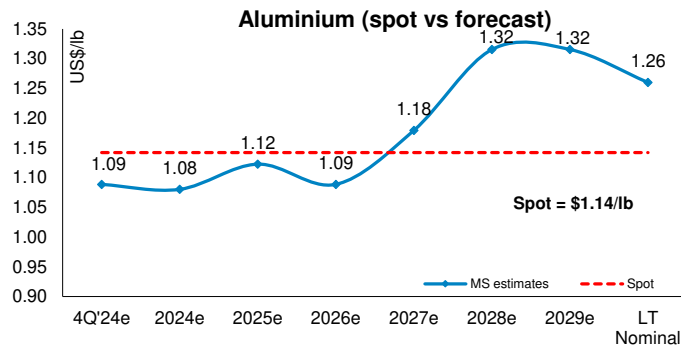
Exhibit 24: Morgan Stanley commodity prices vs. consensus

		2024e	2025e	2026e	2027e	2028e	2029e	LT Nominal
Aluminium	US\$/lb	1.08	1.12	1.09	1.18	1.32	1.32	1.26
Consensus		1.09	1.14	1.15	1.15	1.16	NA	1.15
<i>MSe vs. Consensus</i>		-1%	-1%	-5%	2%	13%	NM	9%
Copper	US\$/lb	4.18	4.47	4.31	4.31	4.31	4.31	4.91
Consensus		4.24	4.40	4.40	4.47	4.54	NA	4.26
<i>MSe vs. Consensus</i>		-1%	1%	-2%	-4%	-5%	NM	15%
Nickel	US\$/lb	7.76	7.43	8.28	9.07	9.39	9.39	9.51
Consensus		7.83	7.83	8.08	8.37	8.52	NA	8.97
<i>MSe vs. Consensus</i>		-1%	-5%	2%	8%	10%	NM	6%
Zinc	US\$/lb	1.23	1.17	1.27	1.32	1.32	1.32	1.37
Consensus		1.22	1.23	1.20	1.22	1.23	NA	1.29
<i>MSe vs. Consensus</i>		1%	-5%	6%	7%	7%	NM	6%
Lead	US\$/lb	0.95	0.90	0.95	1.00	1.07	1.11	1.16
Consensus		0.96	0.95	0.93	0.96	0.97	NA	1.00
<i>MSe vs. Consensus</i>		-1%	-6%	2%	5%	9%	NM	16%
Gold	US\$/oz	2,364	2,588	2,250	2,200	2,000	1,800	2,166
Consensus		2,312	2,448	2,331	2,264	2,221	NA	2,256
<i>MSe vs. Consensus</i>		2%	6%	-3%	-3%	-10%	NM	-4%
Silver	US\$/oz	28.00	32.51	32.14	31.43	28.57	25.71	28.88
Consensus		27.98	30.43	29.38	28.51	27.54	NA	27.33
<i>MSe vs. Consensus</i>		0%	7%	9%	10%	4%	NM	6%
Platinum	US\$/oz	966	1,081	1,275	1,455	1,499	1,521	1,596
Consensus		998	1,125	1,168	1,242	1,270	NA	1,309
<i>MSe vs. Consensus</i>		-3%	-4%	9%	17%	18%	NM	22%
Palladium	US\$/oz	978	988	950	900	963	1,100	1,254
Consensus		1,002	1,019	1,003	1,012	1,054	NA	1,248
<i>MSe vs. Consensus</i>		-2%	-3%	-5%	-11%	-9%	NM	0%
Iron Ore Fines 62%, CFR	US\$/t	108	103	100	95	98	100	103
Consensus		111	100	93	90	91	NA	93
<i>MSe vs. Consensus</i>		-3%	3%	8%	6%	8%	NM	11%
Thermal Coal (Newcastle FOB)	US\$/t	135	129	125	125	130	135	142
Consensus		134	121	107	104	102	NA	114
<i>MSe vs. Consensus</i>		1%	6%	17%	20%	28%	NM	25%

Source: Consensus data are from Consensus Economics as on 23rd August 2024, Morgan Stanley Research Global Commodities team estimates (e). NA = Not applicable, NM = Not meaningful

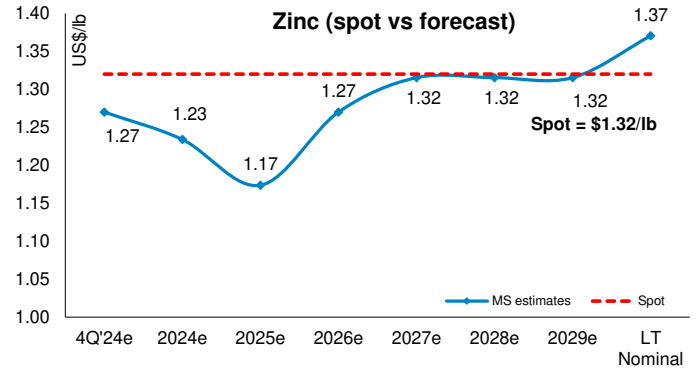
Morgan Stanley price assumptions vs. spot prices

Exhibit25: Aluminium: Spot vs. MS forecast



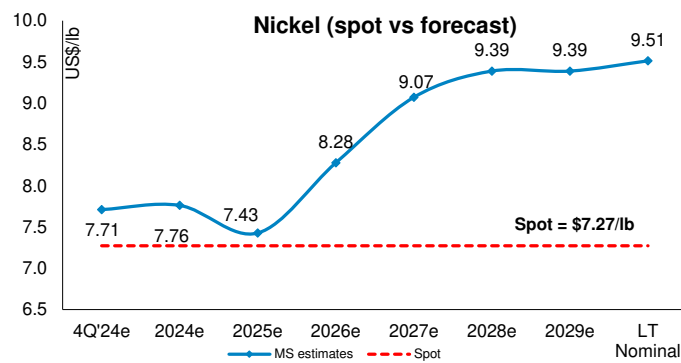
Source: Thomson Reuters, Morgan Stanley Research estimates (e). Note: Spot prices as on 17th September 2024.

Exhibit26: Zinc: Spot vs. MS forecast



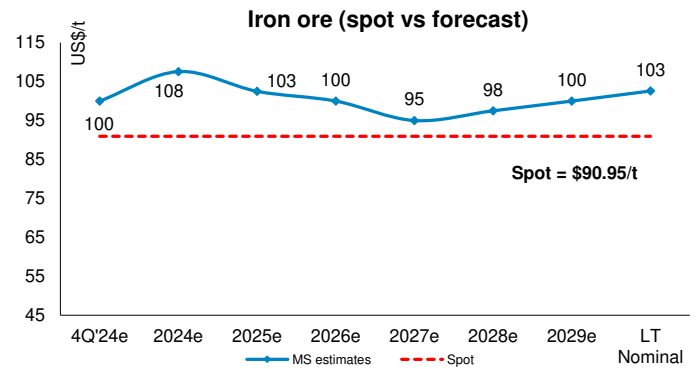
Source: Thomson Reuters, Morgan Stanley Research estimates (e). Note: Spot prices as on 17th September 2024.

Exhibit27: Nickel: Spot vs. MS forecast



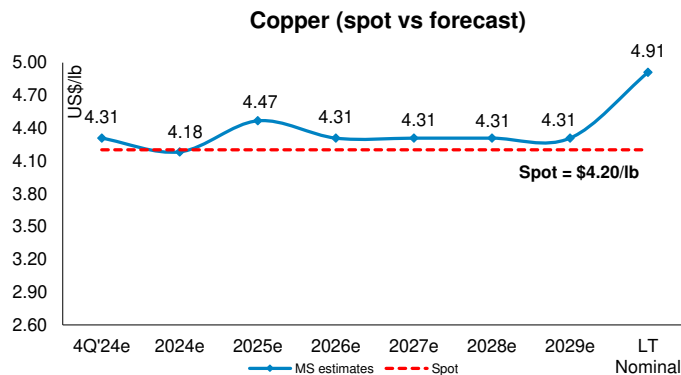
Source: Thomson Reuters, Morgan Stanley Research estimates (e). Note: Spot prices as on 17th September 2024.

Exhibit28: Iron ore: Spot vs. MS forecast



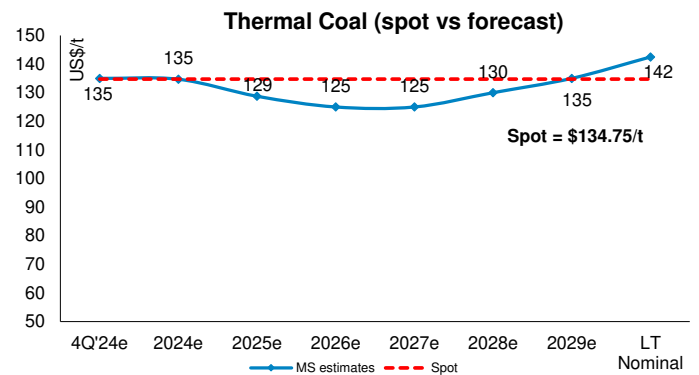
Source: Thomson Reuters, Morgan Stanley Research estimates (e). Note: Spot prices as on 17th September 2024.

Exhibit29: Copper: Spot vs. MS forecast



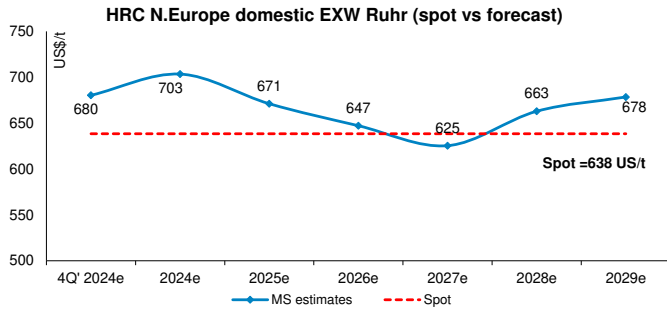
Source: Thomson Reuters, Morgan Stanley Research estimates (e). Note: Spot prices as on 17th September 2024.

Exhibit30: Thermal coal: Spot vs. MS forecast



Source: Thomson Reuters, Morgan Stanley Research estimates (e). Note: Spot prices as on 17th September 2024.

Exhibit 31: N. Europe HRC: Spot vs. MS forecast



Source: Thomson Reuters, Morgan Stanley Research estimates (e). Note: Spot prices as on 17th September 2024.

Changes in EBITDA and EPS estimates by company

Exhibit 32: Mining EBITDA: Summary of changes by company

Company	New EBITDA (US\$ mn)			Old EBITDA (US\$ mn)			Variation		
	2024e	2025e	2026e	2024e	2025e	2026e	2024e	2025e	2026e
Anglo American	8,375	8,944	9,692	10,288	10,415	10,329	-19%	-14%	-6%
Antofagasta	3,534	4,558	4,309	3,879	4,746	4,197	-9%	-4%	3%
Aurubis (EUR mn) ^{^^}	729	685	765	721	709	794	1%	-3%	-4%
Befesa (EUR mn)	219	246	231	219	245	247	0%	1%	-6%
Boliden (SKr mn)	17,282	15,362	18,412	18,339	17,439	18,732	-6%	-12%	-2%
Endeavour Mining	1,491	1,961	1,502	1,497	1,929	1,450	0%	2%	4%
Fresnillo	1,222	1,444	1,156	1,078	1,476	1,153	13%	-2%	0%
First Quantum	1,208	1,908	3,076	1,383	2,204	3,760	-13%	-13%	-18%
Glencore	14,577	16,218	16,846	16,293	18,629	17,937	-11%	-13%	-6%
KGHM (PLN mn)	6,643	7,156	6,416	7,222	7,814	6,505	-8%	-8%	-1%
Lundin Mining	1,896	2,180	2,145	2,140	2,250	2,161	-11%	-3%	-1%
Metlen (EUR mn)	1,125	1,288	1,282	1,126	1,277	1,285	0%	1%	0%
NHY (NOK mn)	26,246	31,823	28,346	26,861	30,539	27,677	-2%	4%	2%
Rio Tinto	23,761	25,834	24,884	27,783	26,845	24,790	-14%	-4%	0%
Average							-6%	-5%	-3%
Weighted Average*							-11%	-7%	-2%

Source: Morgan Stanley Research estimates. * Weighted by market cap. ^ (Jun ending). ^^ (Sept ending). EBITDA for GLEN and RIO includes EBITDA from associates, Aurubis and FQM EBITDA excludes associates NI.

Exhibit 33: Mining EPS: Summary of changes by company

Company	New EPS (USc/share)			Old EPS (USc/share)			Variation		
	2024e	2025e	2026e	2024e	2025e	2026e	2024e	2025e	2026e
Anglo American	151	162	193	236	239	236	-36%	-32%	-18%
Antofagasta	77	116	106	92	122	93	-16%	-5%	14%
Aurubis (EURc) ^^	868	712	742	853	741	780	2%	-4%	-5%
Befesa (EURc)	167	224	189	168	219	215	-1%	2%	-12%
Boliden (SKr)	29	22	31	32	28	32	-9%	-21%	-4%
Endeavour Mining	196	335	217	197	328	203	-1%	2%	7%
Fresnillo	31	65	38	36	77	51	-14%	-15%	-26%
First Quantum	-26	12	78	-12	28	122	NM	-55%	-36%
Glencore	32	39	41	41	53	48	-23%	-26%	-15%
KGHM (PLN)	14	17	15	16	20	15	-13%	-12%	-2%
Lundin Mining	52	85	80	71	94	85	-28%	-10%	-6%
Metlen (EURc)	489	570	562	489	563	562	0%	1%	0%
NHY (NOKc)	503	694	591	525	657	538	-4%	6%	10%
Rio Tinto	666	697	650	826	739	647	-19%	-6%	0%
Average							-13%	-12%	-7%
Weighted Average*							-19%	-15%	-6%

Source: Morgan Stanley Research estimates. * Weighted by market cap. ^ (Jun ending). ^^ (Sept ending). NM = Not meaningful.

Earnings estimates on spot and MS base case commodity prices

Exhibit 34: Mining EBITDA: Spot vs. MS estimates

Company	Spot EBITDA (US\$ mn)		Base EBITDA (US\$ mn)		Variation	
	2024e	2025e	2024e	2025e	2024e	2025e
Anglo American	8,067	6,731	8,375	8,944	-4%	-25%
Antofagasta	3,513	4,233	3,534	4,558	-1%	-7%
Aurubis (EUR mn) ^{^^}	729	671	729	685	0%	-2%
Befesa (EUR mn)	209	224	219	246	-5%	-9%
BHP Billiton [^]	29,016	24,117	29,016	27,252	0%	-12%
Boliden (SKr mn)	16,839	15,835	17,282	15,362	-3%	3%
Endeavour Mining	1,488	1,988	1,491	1,961	0%	1%
Fresnillo	1,214	1,362	1,222	1,444	-1%	-6%
First Quantum	1,191	1,715	1,208	1,908	-1%	-10%
Glencore	14,281	15,093	14,577	16,218	-2%	-7%
KGHM (PLN mn)	6,560	6,724	6,643	7,156	-1%	-6%
Lundin Mining	1,889	2,029	1,896	2,180	0%	-7%
Metlen (EUR mn)	1,133	1,369	1,125	1,288	1%	6%
NHY (NOK mn)	26,674	38,094	26,246	31,823	2%	20%
Rio Tinto	23,253	23,067	23,761	25,834	-2%	-11%
Average					-1%	-5%
Weighted Average*					-1%	-10%

Source: Morgan Stanley Research estimates. Note: Spot prices are as of 16th September 2024. * Weighted by market cap. ^ BHP is June ending company. 2024e is FY24e and 2025e is FY25e. ^^ (Sept ending). ^^ (Mar ending). NM = Not meaningful. EBITDA for BHP, GLEN and RIO includes EBITDA from associates, Aurubis EBITDA excludes associates NI.

Exhibit 35: Mining EPS: Spot vs. MS estimates

Company	Spot		Base		Variation	
	EPS (USc/share)		EPS (USc/share)		2024e	2025e
	2024e	2025e	2024e	2025e	2024e	2025e
Anglo American	135	58	151	162	-10%	-64%
Antofagasta	76	103	77	116	-1%	-11%
Aurubis (EURc) ^^	868	688	868	712	0%	-3%
Befesa (EURc)	150	185	167	224	-10%	-17%
BHP Billiton^	269	173	269	209	0%	-17%
Boliden (SKr)	28	24	29	22	-4%	6%
Endeavour Mining	195	341	196	335	0%	2%
Fresnillo	30	59	31	65	-2%	-10%
First Quantum	-28	-4	-26	12	NM	NM
Glencore	30	33	32	39	-5%	-14%
KGHM (PLN)	14	16	14	17	-2%	-9%
Lundin Mining	51	76	52	85	-1%	-11%
Metlen (EURc)	493	615	489	570	1%	8%
NHY (NOKc)	514	854	503	694	2%	23%
Rio Tinto	646	594	666	697	-3%	-15%
Average					-3%	-10%
Weighted Average*					-3%	-17%

Source: Morgan Stanley Research estimates. Note: Spot prices are as of 16th September 2024. * Weighted by market cap. ^ BHP is June ending company. 2024e is FY24e and 2025e is FY25e. ^^ (Sept ending). ^^^ (Mar ending). NM = Not meaningful. BHP is covered by Rahul Anand.

Company sensitivities

Exhibit 36: Diversified companies' sensitivity to commodities and currencies

Diversifieds	2025 Change in EBITDA (US\$ mn)	2025 Change in FCF/NI (US\$ mn)	2025 Change in EPS (US\$)	% Change EBITDA	Change in % FCF yield	% Change EPS
AAL*						
Iron Ore Prices +/- US\$10/t	572	245	0.20	6.2%	0.7%	12.4%
Hard coking Coal Prices +/- US\$10/t	138	68	0.06	1.5%	0.2%	3.4%
Platinum Prices +/- US\$100/oz	99	44	0.04	1.1%	0.1%	2.2%
Palladium Prices +/- US\$100/oz	93	42	0.03	1.0%	0.1%	2.1%
Rhodium Prices +/- US\$100/oz	14	6	0.01	0.2%	0.0%	0.3%
Copper Prices +/- US\$100/t	72	30	0.02	0.8%	0.1%	1.5%
Nickel Prices +/- US\$100/t	4	2	0.00	0.0%	0.0%	0.1%
Oil Prices +/- US\$10/bbl	102	57	0.05	1.1%	0.2%	2.9%
ZAR:USD +/-0.10 ZAR	28	12	0.01	0.3%	0.0%	0.6%
BRL:USD +/-0.10 BRL	20	11	0.01	0.2%	0.0%	0.6%
AUD:USD +/-0.01 AUD	16	5	0.00	0.2%	0.0%	0.3%
CLP:USD +/-10 CLP	12	5	0.00	0.1%	0.0%	0.3%
BHP****						
Iron Ore Prices +/- US\$10/t	2,671	1,561	0.31	9.8%	1.2%	14.7%
Hard coking Coal Prices +/- US\$10/t	152	92	0.02	0.6%	0.1%	0.9%
Copper Prices +/- US\$100/t	199	88	0.02	0.7%	0.1%	0.8%
Thermal Coal Australia Prices +/- US\$10/t	146	88	0.02	0.5%	0.1%	0.8%
Nickel Prices +/- US\$100/t	1	1	0.00	0.0%	0.0%	0.0%
AUD:USD +/-USD 1c	166	84	0.02	0.6%	0.1%	0.8%
CLP:USD +/-USD 1c	25	13	0.00	0.1%	0.0%	0.1%
GLEN**						
Australia export thermal coal* +/- 10 US\$/t	524	367	0.03	3.5%	0.6%	7.7%
Columbian thermal coal +/- 10 US\$/t	189	132	0.01	1.3%	0.2%	2.8%
South African export thermal coal +/- 10 US\$/t	149	89	0.01	1.0%	0.1%	1.9%
Canada hard coking coal +/- 10 US\$/t	250	135	0.01	1.7%	0.2%	2.8%
Australia hard coking coal +/- 10 US\$/t	69	49	0.00	0.5%	0.1%	1.0%
Copper +/- 100 US\$/t	94	63	0.01	0.6%	0.1%	1.3%
Zinc +/- 100 US\$/t	100	55	0.00	0.7%	0.1%	1.1%
Gold +/- 100 US\$/oz	54	38	0.00	0.4%	0.1%	0.8%
Nickel +/- 100 US\$/t	8	6	0.00	0.1%	0.0%	0.1%
Cobalt +/- 100 US\$/t	4	2	0.00	0.0%	0.0%	0.0%
RIO***						
Iron Ore Prices +/- US\$10/t	2,829	1,897	1.17	10.9%	1.8%	16.7%
Aluminium Prices +/- US\$100/t	329	230	0.14	1.3%	0.2%	2.0%
Oil Prices +/- US\$10/bbl	218	153	0.09	0.8%	0.1%	1.3%
Copper Prices +/- US\$100/t	157	60	0.04	0.6%	0.1%	0.5%
Gold Prices +/- US\$100/oz	110	42	0.03	0.4%	0.0%	0.4%
AUD:USD +/-0.10 AUD	1,139	716	0.44	4.4%	0.7%	6.3%
CAD:USD +/-0.10 AUD	432	272	0.17	1.7%	0.3%	2.4%

Source: Morgan Stanley Research estimates. * Based on reported sensitivities for 1H24. ** Based on MSe production. *** Based on reported sensitivities for 1H24, no minorities assumed. EPS sensitivities calculated using the corporate marginal tax rate. **** Based on reported sensitivities for FY24. Hard coking coal prices sensitivities are calculated at AAL: AUD/t 272, BHP: AUD/t 288 GLEN: AUD/t 289 and Thermal coal for GLEN: AUD/t 157 for FY25. Iron Ore royalty %s for sensitivities are calculated at AAL: Kumba 3%, Minas 3%, BHP: 7.5%, RIO: WAIO 9.2%, IOC 7.1% for FY25. Additionally, for GLEN we assume Royalty % for South Africa Coal - 0.8% and Cerrejon Coal - 10% for FY25.

Exhibit 37: Base metals stocks' sensitivity to commodities and currencies

Base Metals	2025 Change in EBITDA (US\$ mn)	2025 Change in FCF/NI (US\$ mn)	2025 Change in EPS (US\$)	% Change EBITDA	Change in % FCF yield	% Change EPS
ANTO						
Copper Prices +/- US\$100/t	66	33	0.03	1.4%	0.1%	2.9%
Gold Prices +/- US\$100/oz	24	11	0.01	0.5%	0.0%	1.0%
Moly Prices +/- US\$100/t	1	1	0.00	0.0%	0.0%	0.1%
CLP:USD +/- 5%	156	73	0.07	3.4%	0.3%	6.4%
Aurubis***						
Copper TC +/- 10%	10	8	0.18	1.3%	0.2%	2.2%
Copper RC +/- 10%	6	4	0.10	0.7%	0.1%	1.2%
Sulphuric Acid Prices +/- US\$10/t	22	17	0.39	2.9%	0.5%	4.9%
Scrap +/- US\$100/t	51	39	0.90	6.7%	1.2%	11.4%
EUR:USD +/- 10%	19	14	0.33	2.4%	0.4%	4.1%
Befesa						
Zinc Prices +/- US\$100/t (unhedged portion)	5	4	0.09	2.1%	0.4%	4.0%
TC/RC +/- US\$10/t	4	3	0.06	1.5%	0.3%	2.9%
Aluminium +/- US\$100/t	2	1	0.03	0.7%	0.1%	1.4%
Electricity/Gas +/- 10%	4	3	0.07	1.6%	0.3%	3.1%
Coke +/- 10%	5	4	0.09	2.1%	0.4%	4.1%
BOL*						
Copper Prices +/- US\$100/t	112	87	0.32	0.7%	0.1%	1.4%
Zinc Prices +/- US\$100/t	279	218	0.80	1.8%	0.3%	3.6%
Gold Prices +/- US\$100/oz	211	164	0.60	1.4%	0.2%	2.7%
Lead Prices +/- US\$100/t	54	42	0.15	0.4%	0.1%	0.7%
Nickel Prices +/- US\$100/t	8	6	0.02	0.1%	0.0%	0.1%
USD:SEK +/- 5%	929	724	2.65	6.0%	0.9%	11.8%
EUR:USD +/- 5%	399	311	1.14	2.6%	0.4%	5.1%
Copper TC/RC +/- 10%	65	51	0.19	0.4%	0.1%	0.8%
Zinc TC +/- 10%	57	45	0.16	0.4%	0.1%	0.7%
FQM						
Copper Prices +/- US\$100/t	49	34	0.04	2.6%	0.3%	32.9%
Gold Prices +/- US\$100/oz	14	10	0.01	0.7%	0.1%	9.2%
Nickel Prices +/- US\$100/t	2	1	0.00	0.1%	0.0%	1.3%
USD:ZMW +/- 10%	65	46	0.06	3.4%	0.4%	44.1%
Silver Prices +/- US\$1/oz	0	0	0.00	0.0%	0.0%	0.2%
Zinc Prices +/- US\$100/t	0	0	0.00	0.0%	0.0%	0.3%
KGHM^						
Copper Prices +/- US\$100/t	177	156	0.78	2.5%	0.6%	4.5%
Gold Prices +/- US\$100/oz	21	23	0.12	0.3%	0.1%	0.7%
Silver Prices +/- US\$1/oz	159	119	0.59	2.2%	0.4%	3.4%
USD:PLN +/- 5%	884	663	3.31	12.4%	2.4%	19.0%
USD:CLP +/- 5%	20	23	0.11	0.3%	0.1%	0.7%
Copper TC/RC +/- 10%	0	0	0.00	0.0%	0.0%	0.0%
LUN						
Copper Prices +/- US\$100/t	38	25	0.03	1.7%	0.3%	3.8%
Zinc Prices +/- US\$100/t	24	17	0.02	1.1%	0.2%	2.6%
Nickel Prices +/- US\$100/t	1	0	0.00	0.0%	0.0%	0.1%
Gold Prices +/- US\$100/oz	16	9	0.01	0.7%	0.1%	1.4%
USD:SEK +/- 5%	4	3	0.00	0.2%	0.0%	0.5%
EUR:USD +/- 5%	14	10	0.01	0.6%	0.1%	1.5%
USD:CLP +/- 5%	16	9	0.01	0.7%	0.1%	1.4%
MYTIL						
Aluminium Prices +/- US\$100/t	25	20	0.15	1.7%	0.4%	2.3%
Alumina Prices +/- US\$20/t	18	14	0.10	1.2%	0.3%	1.6%
EUR:USD +/- 5%	140	114	0.82	9.8%	2.2%	12.9%
NHY**						
Aluminium Prices +/- US\$100/t	145	101	0.05	4.7%	0.9%	7.6%
Alumina Prices +/- US\$20/t	47	33	0.02	1.5%	0.3%	2.5%
NOK:USD +/- 5%	202	142	0.07	6.6%	1.2%	10.6%
NOK:BRL +/- 5%	-46	-46	-0.02	-1.5%	-0.4%	-3.5%

Source: Morgan Stanley Research estimates. * In SEK. ** in NOK. *** in EUR, based on reported sensitivities, ignores hedges and ^ in PLN. N/A = Not applicable

Exhibit 38: Precious metal stocks' sensitivity to commodities and currencies

Precious metals	2025 Change in EBITDA (US\$ mn)	2025 Change in FCF/NI (US\$ mn)	2025 Change in EPS (US\$)	% Change EBITDA	Change in % FCF yield	% Change EPS
Endeavour Mining						
Gold Prices +/- US\$100/oz	131	88	0.18	6.7%	1.5%	5.4%
FRES						
Silver Prices +/- US\$1/oz	51	30	0.11	3.5%	0.5%	16.5%
Gold Prices +/- US\$100/oz	60	35	0.11	4.1%	0.6%	17.5%
MXN:USD +/- 10%	101	60	0.15	7.0%	1.1%	22.9%

Source: Morgan Stanley Research estimates

European sector valuation multiples on MS base case forecasts

Exhibit 39: Metals & Mining: Sector comps using our base case commodity prices and currency assumptions

	Rating	FX	Price Target	Equity Value per share	Share Price	Up/ (downside)	Market cap (US\$m)	EV** (US\$ mn)			P/E			EV/EBITDA			P/B			ROE**		
								2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY
Large Diversifieds																						
Anglo American Plc	++	Gbp	++	++	2,137	NM	34,458	64,032	65,224	65,617	18.6x	17.4x	14.6x	7.6x	7.3x	6.8x	1.4x	1.4x	1.3x	7.6%	7.8%	8.9%
BHP Group Ltd*	OW	AUD	47.5	48.5	39.6	20.1%	135,492	195,458	191,784	188,041	11.5x	11.3x	11.6x	7.1x	6.5x	6.9x	3.0x	2.6x	2.4x	26.0%	23.3%	20.9%
Glencore	EW	Gbp	470	487	379	23.9%	60,683	103,499	101,744	98,999	15.8x	12.8x	12.2x	7.9x	6.9x	6.5x	1.4x	1.4x	1.3x	8.9%	11.0%	11.3%
Rio Tinto Ltd*	OW	AUD	136	126	111	22.3%	122,121	150,365	152,030	153,576	11.2x	10.7x	11.5x	6.8x	6.4x	6.6x	2.1x	2.0x	1.8x	18.9%	18.3%	16.0%
Rio Tinto Plc*	OW	Gbp	6,200	6,319	4,790	29.4%	102,888	131,132	132,797	134,343	9.5x	9.0x	9.7x	5.9x	5.6x	5.8x	1.8x	1.7x	1.6x	18.9%	18.3%	16.0%
Weighted Average							333,521	494,121	491,548	487,000	12.4x	11.5x	11.5x	7.0x	6.4x	6.5x	2.2x	2.0x	1.8x	18.8%	17.9%	16.4%
Base metals																						
Antofagasta Plc	UW	Gbp	1,600	1,232	1,783	-10.3%	23,132	33,538	35,016	35,817	30.7x	20.3x	22.2x	9.5x	7.7x	8.3x	2.5x	2.3x	2.2x	8.0%	11.3%	9.7%
Aurubis AG	EW	EUR	69.0	66.1	69.2	-0.2%	3,255	3,907	4,275	4,479	8.3x	9.6x	9.2x	5.2x	5.4x	5.1x	0.6x	0.6x	0.6x	7.8%	6.4%	6.3%
Befesa	EW	EUR	28.0	30.2	24.6	13.8%	1,094	1,862	1,837	1,819	14.7x	11.0x	13.0x	7.8x	6.7x	6.9x	1.2x	1.1x	1.1x	8.3%	10.3%	8.4%
Boliden AB	UW	SEK	280	260	297	-5.6%	7,961	10,160	10,763	10,855	10.3x	13.2x	9.6x	6.2x	7.1x	5.8x	1.3x	1.2x	1.1x	12.6%	9.1%	11.3%
First Quantum Minerals Ltd	EW	CAD	20.2	19.8	17.4	16.1%	10,673	20,835	21,600	21,243	NA	NA	16.4x	18.4x	11.3x	6.9x	1.0x	0.9x	0.9x	-1.9%	0.9%	5.4%
KGHM Polska Miedz SA	OW	PLN	174	154.4	141	23.4%	7,335	9,876	10,008	10,147	10.2x	8.1x	9.6x	5.9x	5.4x	6.0x	0.9x	0.8x	0.8x	9.1%	10.4%	8.1%
Lundin Mining	++	SEK	++	++	95.3	NM	7,175	11,678	11,630	12,135	17.9x	10.9x	11.6x	6.2x	5.3x	5.7x	1.4x	1.3x	1.2x	7.9%	11.9%	10.4%
Mettlen Energy & Metals SA	OW	EUR	47.0	46.8	33.8	39.1%	5,195	8,232	8,014	7,815	6.9x	5.9x	6.0x	6.7x	5.6x	5.4x	1.7x	1.4x	1.2x	24.9%	24.1%	20.6%
Norsk Hydro	OW	NOK	83.0	69.4	61.0	36.1%	11,464	14,224	14,211	14,488	12.1x	8.8x	10.3x	5.7x	4.6x	5.3x	1.2x	1.1x	1.0x	9.6%	12.1%	9.9%
Weighted Average							77,283	114,312	117,354	118,798	18.2x	13.3x	14.4x	9.3x	7.3x	6.7x	1.5x	1.4x	1.3x	8.5%	10.4%	9.8%
Precious metals																						
Endeavour Mining	OW	Gbp	2,082	1,531	1,834	13.5%	5,891	7,061	6,352	5,882	12.3x	7.2x	11.1x	4.7x	3.2x	3.9x	1.8x	1.5x	1.4x	14.4%	20.9%	12.8%
Endeavour Mining	OW	CAD	37.1	27.3	33.0	12.3%	5,891	7,061	6,352	5,882	12.3x	7.2x	11.1x	4.7x	3.2x	3.9x	1.8x	1.5x	1.4x	14.4%	20.9%	12.8%
Fresnillo Plc	EW	Gbp	630	467	569	10.7%	5,518	5,119	4,628	4,453	24.3x	11.4x	19.8x	4.2x	3.2x	3.9x	1.4x	1.3x	1.2x	5.6%	10.9%	6.2%
Weighted Average							17,299	19,242	17,331	16,218	16.1x	8.6x	13.9x	4.6x	3.2x	3.9x	1.6x	1.4x	1.4x	11.6%	17.8%	10.7%

	Price to NAV	FCF Yield			Dividend Yield			Net debt/EBITDA			EBITDA (US\$m)			FCFE (US\$m)			Net debt (US\$m)			EBITDA 5Yr CAGR	Cash Conversion	WACC					
		2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY								
Large Diversifieds																											
Anglo American Plc	1.0x	0.3%	1.4%	3.2%	2.1%	2.3%	2.7%	1.5x	1.5x	1.4x	8,375	8,944	9,992	117	485	1,104	12,216	12,924	13,114	7.9%	9.3%	9.6%					
BHP Group Ltd*	0.8x	6.0%	5.6%	6.2%	4.7%	5.1%	5.2%	0.5x	0.4x	0.4x	27,472	29,479	27,350	8,130	7,535	8,367	11,962	10,271	9,066	-1.1%	32.7%	8.1%					
Glencore	0.8x	9.4%	8.6%	10.3%	3.9%	5.6%	4.9%	2.6x	2.3x	2.2x	13,112	14,775	15,286	5,726	5,073	5,919	34,320	34,342	33,369	3.8%	26.2%	9.5%					
Rio Tinto Ltd*	0.9x	3.7%	5.2%	4.9%	5.4%	5.6%	5.2%	0.2x	0.2x	0.2x	22,158	23,847	23,311	4,570	6,322	6,007	5,176	4,463	4,629	4.5%	34.8%	8.9%					
Rio Tinto Plc*	0.8x	4.4%	6.1%	5.8%	6.4%	6.7%	6.2%	0.2x	0.2x	0.2x	22,158	23,847	23,311	4,570	6,322	6,007	5,176	4,463	4,629	4.5%	34.8%	8.9%					
Weighted Average							5.6%	5.9%	6.5%	4.8%	5.4%	5.2%	0.9x	0.8x	0.8x	71,118	77,046	75,639	18,543	19,415	21,397	63,675	61,999	60,178	3.9%	27.5%	9.0%
Base metals																											
Antofagasta Plc	1.4x	-0.6%	-5.0%	-2.5%	1.4%	2.1%	1.9%	0.5x	0.7x	1.0x	3,534	4,558	4,309	-133	-1,157	-584	1,670	3,269	4,293	5.7%	42.6%	8.0%					
Aurubis AG	1.0x	-10.4%	-7.3%	-2.7%	1.2%	1.0%	1.1%	0.6x	0.9x	1.0x	754	787	883	-332	-237	-88	427	714	852	3.0%	-97.5%	8.0%					
Befesa	0.8x	6.6%	9.2%	9.0%	2.6%	4.1%	3.5%	2.9x	2.3x	2.2x	238	275	263	71	101	101	681	625	581	3.2%	74.0%	8.5%					
Boliden AB	1.1x	-0.7%	0.6%	6.0%	3.2%	2.5%	3.4%	1,651	1,110	0.8x	1,651	1,510	1,864	-58	46	496	1,264	1,610	1,427	-1.6%	33.7%	8.0%					
First Quantum Minerals Ltd	0.9x	-4.7%	-6.7%	3.6%	0.0%	0.0%	0.8%	4.8x	3.4x	2.0x	1,134	1,908	3,076	-503	-715	387	5,751	6,490	6,159	27.0%	60.4%	10.0%					
KGHM Polska Miedz SA	0.9x	0.1%	3.2%	1.6%	1.3%	1.9%	1.6%	0.6x	0.5x	0.6x	1,685	1,857	1,689	8	231	118	995	922	933	-0.8%	56.1%	8.2%					
Lundin Mining	0.9x	3.4%	1.9%	-5.2%	2.8%	2.8%	3.0%	0.8x	0.8x	1.1x	1,896	2,180	2,145	245	134	-373	1,600	1,678	2,276	12.7%	10.2%	8.5%					
Mettlen Energy & Metals SA	0.7x	-9.5%	12.9%	12.5%	5.1%	5.9%	5.8%	2.3x	1.8x	1.5x	1,228	1,438	1,458	-487	672	662	2,880	2,548	2,253	4.0%	69.8%	8.5%					
Norsk Hydro	0.9x	0.0%	6.8%	4.8%	4.1%	5.7%	4.8%	0.6x	0.4x	0.6x	2,483	3,060	2,726	1	799	559	1,381	1,192	1,485	3.8%	3.6%	9.0%					
Weighted Average							-1.6%	-0.2%	1.6%	2.2%	2.7%	2.7%	1.1x	1.1x	1.1x	14,602	17,574	18,412	-1,188	-125	1,279	16,649	19,048	20,259	6.3%	28.1%	8.5%
Precious metals																											
Endeavour Mining	1.2x	3.6%	16.4%	12.5%	4.0%	4.9%	5.3%	0.4x	Cash	Cash	1,491	1,961	1,502	212	966	734	777	99	Cash	-5.3%	55.4%	9.4%					
Endeavour Mining	1.2x	3.6%	16.4%	12.5%	4.0%	4.9%	5.3%	0.4x	Cash	Cash	1,491	1,961	1,502	212	966	734	777	99	Cash	-5.3%	55.4%	9.4%					
Fresnillo Plc	1.2x	10.7%	13.7%	9.3%	2.1%	4.4%	2.3%	Cash	Cash	Cash	1,222	1,444	1,156	591	754	514	Cash	Cash	Cash	-13.4%	57.1%	8.2%					
Weighted Average							5.9%	15.5%	11.5%	3.4%	4.7%	4.3%	0.4x	0.0x	Cash	4,205	5,367	4,161	1,015	2,686	1,982	1,555	198	Cash	-8.0%	56.0%	9.0%

Source: Thomson Reuters (historical share price data), Morgan Stanley Research estimates. Note: EBITDA includes NI from associates. * Market capitalisation based on total number of group shares. ** Provisions and pensions included in enterprise value calculation. ** e RoE calculated using year-end book value. *** Dividend per share includes special dividend paid by the company. # Ordinary net debt. Valuation sheet based on 17th September 2024 closing prices. NM = Not meaningful.

European sector valuation multiples on spot prices and rates

Exhibit 40: Metals & Mining: Sector comps using spot commodity prices and exchange rates

	Rating	FX	Price Target	Equity Value per share	Share Price	Up/ (downside)	Market cap (US\$m)	EV** (US\$ mn)			P/E			EV/EBITDA			P/B			ROE**		
								2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY
Large Diversifieds																						
Anglo American Plc	++	GBP	++	++	2,137	NM	34,458	64,198	66,239	67,470	20.8x	48.6x	26.7x	8.0x	9.8x	8.7x	1.4x	1.4x	1.4x	6.9%	2.9%	5.2%
BHP Group Ltd*	OW	AUD	47.5	49.8	39.6	20.1%	135,492	195,860	194,215	190,860	12.0x	14.3x	13.2x	7.3x	7.6x	7.5x	3.0x	2.7x	2.5x	25.3%	19.2%	19.1%
Glencore	EW	GBP	470	479	379	23.9%	60,683	103,716	102,248	99,409	16.7x	14.9x	12.5x	8.1x	7.5x	6.7x	1.4x	1.4x	1.3x	8.5%	9.5%	11.0%
Rio Tinto Ltd*	OW	AUD	136	142	111	22.3%	122,121	150,710	153,344	154,107	11.6x	12.6x	11.9x	7.0x	7.2x	6.8x	2.1x	2.0x	1.9x	18.4%	15.9%	15.7%
Rio Tinto Plc*	OW	GBP	6,200	6,474	4,790	29.4%	102,888	131,477	134,111	134,874	9.8x	10.6x	10.0x	6.1x	6.3x	5.9x	1.8x	1.7x	1.6x	18.4%	15.9%	15.7%
Weighted Average							333,521	495,250	496,813	492,614	13.1x	16.8x	13.5x	7.2x	7.5x	7.1x	2.2x	2.0x	1.9x	18.2%	14.7%	15.1%
Base metals																						
Antofagasta Plc	UW	GBP	1,600	1,416	1,783	-10.3%	23,132	33,543	35,290	35,975	30.9x	22.9x	20.5x	9.5x	8.3x	7.9x	2.5x	2.3x	2.2x	7.9%	10.1%	10.6%
Aurubis AG	EW	EUR	69.0	63.4	69.2	-0.2%	3,255	3,896	4,270	4,591	8.4x	9.6x	8.4x	5.2x	5.4x	5.1x	0.6x	0.6x	0.6x	7.8%	6.4%	6.9%
Befesa	EW	EUR	28.0	43.6	24.6	13.8%	1,094	1,805	1,782	1,700	16.4x	13.3x	9.4x	7.9x	7.1x	5.6x	1.2x	1.2x	1.1x	7.5%	8.7%	11.4%
Boliden AB	UW	SEK	280	450	297	-5.6%	7,961	10,217	10,778	10,484	10.8x	12.5x	7.9x	6.3x	6.9x	5.1x	1.3x	1.2x	1.1x	12.1%	9.6%	13.4%
First Quantum Minerals Ltd	EW	CAD	20.2	19.9	17.4	16.1%	10,673	20,831	21,742	21,412	NA	NA	16.7x	18.7x	12.7x	6.9x	1.0x	1.0x	0.9x	-2.0%	-0.3%	5.4%
KGHM Polska Miedz SA	OW	PLN	174	279.5	141	23.4%	7,335	9,902	9,987	9,605	10.4x	8.9x	7.9x	5.9x	5.8x	5.3x	0.9x	0.8x	0.8x	8.9%	9.5%	9.8%
Lundin Mining	++	SEK	++	++	95.3	NM	7,175	11,680	11,737	12,191	18.1x	12.2x	10.5x	6.2x	5.8x	5.4x	1.4x	1.3x	1.2x	7.8%	10.8%	11.5%
Mettlen Energy & Metals SA	OW	EUR	47.0	51.7	33.8	39.1%	5,195	8,248	7,934	7,489	6.8x	5.5x	5.3x	6.7x	5.2x	4.8x	1.7x	1.4x	1.2x	25.1%	25.5%	22.5%
Norsk Hydro	OW	NOK	83.0	123.2	61.0	36.1%	11,464	14,304	14,168	14,006	11.9x	7.1x	6.4x	5.7x	3.9x	3.6x	1.2x	1.0x	1.0x	9.7%	14.5%	14.9%
Weighted Average							77,283	114,427	117,687	117,451	18.4x	14.1x	12.8x	9.4x	7.7x	6.1x	1.5x	1.4x	1.3x	8.5%	10.1%	11.5%
Precious metals																						
Endeavour Mining	OW	GBP	2,082	2,607	1,834	13.5%	5,891	7,114	6,401	5,652	12.4x	7.1x	7.0x	4.8x	3.2x	2.8x	1.8x	1.5x	1.3x	14.3%	21.3%	18.7%
Endeavour Mining	OW	CAD	37.1	46.4	33.0	12.3%	5,891	7,114	6,401	5,652	12.4x	7.1x	7.0x	4.8x	3.2x	2.8x	1.8x	1.5x	1.3x	14.3%	21.3%	18.7%
Fresnillo Plc	EW	GBP	630	914	569	10.7%	5,518	5,129	4,684	4,434	24.9x	12.8x	14.4x	4.2x	3.4x	3.4x	1.4x	1.3x	1.2x	5.5%	9.9%	8.3%
Weighted Average							17,299	19,358	17,486	15,738	16.4x	8.9x	9.4x	4.6x	3.3x	3.0x	1.6x	1.4x	1.3x	11.5%	17.6%	15.4%

	Price to NAV	FCF Yield			Dividend Yield			Net debt/EBITDA			EBITDA (US\$m)			FCFE (US\$m)			Net debt (US\$m)			EBITDA 5Yr CAGR	Cash Conversion	WACC	
		2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY	2024CY	2025CY	2026CY				
Large Diversifieds																							
Anglo American Plc	1.9x	-0.3%	-2.6%	-0.8%	1.9%	0.8%	1.5%	1.5x	2.1x	2.0x	8,067	6,731	7,784	-107	-897	-262	12,440	14,191	15,294	6.1%	6.8%	9.6%	
BHP Group Ltd*	0.8x	5.7%	3.8%	5.1%	4.5%	4.0%	4.6%	0.5x	0.5x	0.5x	26,788	25,473	25,457	7,703	5,151	6,873	12,389	12,083	11,164	0.1%	31.9%	8.1%	
Glencore	0.8x	9.1%	7.2%	9.1%	3.7%	4.7%	4.7%	2.7x	2.5x	2.3x	12,815	13,715	14,813	5,502	4,281	5,295	34,545	34,689	33,498	4.8%	24.9%	9.5%	
Rio Tinto Ltd*	0.8x	3.5%	3.7%	4.7%	5.2%	4.8%	5.1%	0.3x	0.3x	0.2x	21,654	21,209	22,805	4,220	4,547	5,776	5,526	5,862	5,250	5.7%	33.9%	8.9%	
Rio Tinto Plc*	0.7x	4.1%	4.4%	5.6%	6.2%	5.7%	6.0%	0.3x	0.3x	0.2x	21,654	21,209	22,805	4,220	4,547	5,776	5,526	5,862	5,250	5.7%	33.9%	8.9%	
Weighted Average		5.2%	4.0%	5.4%	4.6%	4.3%	4.7%	0.9x	1.0x	0.9x	69,324	67,128	70,859	17,317	13,082	17,683	64,901	66,823	65,207	4.5%	26.3%	9.0%	
Base metals																							
Antofagasta Plc	1.3x	-0.6%	-5.0%	-2.4%	1.4%	1.9%	2.1%	0.5x	0.8x	1.0x	3,513	4,233	4,554	-133	-1,157	-548	1,670	3,228	4,212	11.3%	42.7%	8.0%	
Aurubis AG	1.1x	-10.0%	-8.0%	-9.0%	1.2%	1.0%	1.2%	0.5x	1.0x	1.2x	750	785	907	-320	-262	-294	416	724	1,052	3.3%	-98.4%	8.0%	
Befesa	0.6x	6.2%	7.5%	10.9%	2.3%	3.4%	4.8%	3.0x	2.6x	1.8x	228	249	306	66	82	119	687	642	558	10.6%	73.9%	8.5%	
Boliden AB	0.7x	-0.9%	0.4%	7.1%	3.1%	2.7%	4.2%	1,616	1,556	2,045	-70	31	562	1,282	1,626	1,332	7.4%	1,282	1,626	1,332	7.4%	32.5%	8.0%
First Quantum Minerals Ltd	0.9x	-4.7%	-8.0%	3.4%	0.0%	0.0%	0.8%	4.8x	3.9x	2.0x	1,117	1,715	3,088	-500	-855	359	5,748	6,627	6,322	30.8%	60.2%	10.0%	
KGHM Polska Miedz SA	0.5x	0.2%	1.4%	3.7%	1.3%	1.7%	1.9%	1,669	1,722	1,818	11	103	257	995	1,020	870	4.8%	995	1,020	870	4.8%	55.8%	8.2%
Lundin Mining	0.7x	3.5%	0.8%	-4.9%	2.8%	2.9%	2.9%	1,889	2,029	2,269	251	57	-348	1,596	1,754	2,318	19.0%	1,596	1,754	2,318	19.0%	10.2%	8.5%
Mettlen Energy & Metals SA	0.7x	-9.5%	13.7%	14.6%	5.2%	6.4%	6.6%	2.3x	1.6x	1.3x	1,239	1,522	1,576	-485	715	759	2,884	2,491	2,064	5.4%	69.8%	8.5%	
Norsk Hydro	0.5x	-0.6%	8.4%	10.1%	4.2%	7.0%	7.8%	2,523	3,663	3,909	-73	979	1,175	1,454	1,098	927	11.6%	1,454	1,098	927	11.6%	4.6%	9.0%
Weighted Average		-1.6%	-0.4%	2.6%	2.2%	2.8%	3.3%	1.2x	1.1x	1.0x	14,545	17,475	20,472	-1,252	-308	2,041	16,731	19,210	19,655	11.6%	27.9%	8.5%	
Precious metals																							
Endeavour Mining	0.7x	3.6%	16.5%	18.0%	4.0%	4.9%	5.3%	0.4x	Cash	Cash	1,488	1,988	1,989	212	972	1,058	778	93	Cash	8.7%	55.4%	9.4%	
Endeavour Mining	0.7x	3.6%	16.5%	18.0%	4.0%	4.9%	5.3%	0.4x	Cash	Cash	1,488	1,988	1,989	212	972	1,058	778	93	Cash	8.7%	55.4%	9.4%	
Fresnillo Plc	0.6x	10.5%	12.5%	10.4%	2.0%	3.9%	3.1%	Cash	Cash	Cash	1,214	1,362	1,315	582	689	576	Cash	Cash	Cash	3.4%	57.1%	8.2%	
Weighted Average		5.8%	15.2%	15.6%	3.3%	4.6%	4.6%	0.4x	0.0x	Cash	1,489	5,338	5,293	1,005	2,633	2,692	1,556	187	Cash	6.9%	56.0%	9.0%	

Source: Thomson Reuters (historical share price data), Morgan Stanley Research estimates. Note: EBITDA includes NI from associates. For BOL and Aurubis, we take 85% of 2023 MSe benchmark TCs and 15% of spot TCs for copper and zinc. * Market capitalisation based on total number of group shares. ** Provisions and pensions included in enterprise value calculation. ** e RoE calculated using year end book value. *** Dividend per share includes special dividend paid by the company. # Ordinary net debt. Valuation sheet based on 17th September 2024 closing prices and spot prices are as of 16th September 2024. NM = Not meaningful.

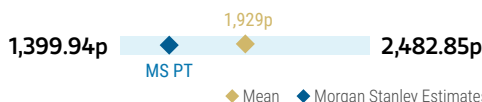
Risk Reward – Antofagasta (ANTO.L)

Lofty valuation meets production risks

PRICE TARGET 1,600p

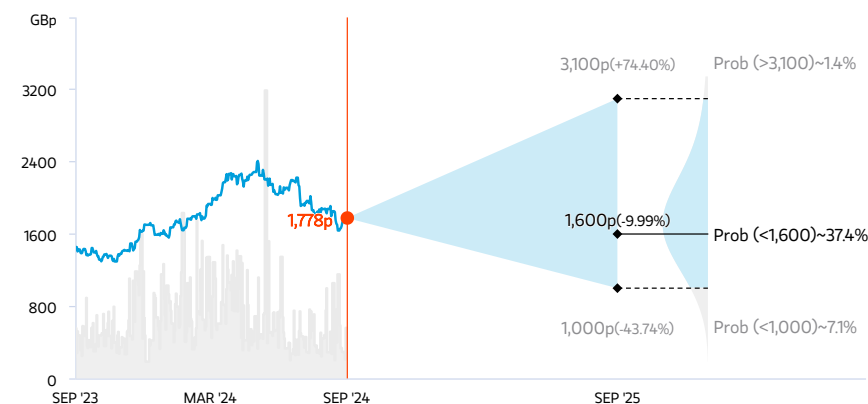
Our valuation is based on a simple average of EV/EBITDA and P/NPV. We use EV/EBITDA multiple of 6.7x, in line with its LT average. The target P/NPV multiple of 1.0x and NPV is based on a blended WACC of 8.0%. We incorporate key projects such as Los Pelambres expansion Phase 2 and Centinela 2nd Concentrator.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



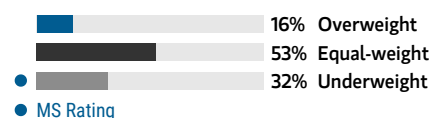
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 18 Sep 2024. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology [here](#)

UNDERWEIGHT THESIS

- Antofagasta's risk-reward is skewed to the downside following a weak H1 performance and resulting downside risk to its full year production target.
- Valuation appears full and has diverged from peers.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

BULL CASE

3,100p

Commodity and multiple re-rating

Assumes (1) bull case commodity price deck (copper ~29% above MS base case for 2025-29) and (2) EV/EBITDA re-rating to 8.0x.

BASE CASE

1,600p

Base case prices, all future growth projects

Our valuation is based on a simple average of EV/EBITDA and P/NPV. We use EV/EBITDA multiple of 6.7x, in line with its LT average. The target P/NPV multiple s 1.0x and NPV is based on a blended WACC of 8.0%. We incorporate key projects in our base case such as Los Pelambres expansion Phase 2 and Centinela 2nd Concentrator.

BEAR CASE

1,000p

Bear case prices, multiple de-rating

Assumes (1) bear case price deck (copper ~13% below MS base case for 2025-29; and (2) EV/EBITDA de-rating to 6.0x.

Risk Reward – Antofagasta (ANTO.L)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Copper Sales (kt)	667	657	708	727
Copper Price (US\$/lb)	3.89	4.36	4.57	4.31
Net Cash Cost (US\$/lb)	1.61	1.71	1.40	1.49

CATALYST CALENDAR

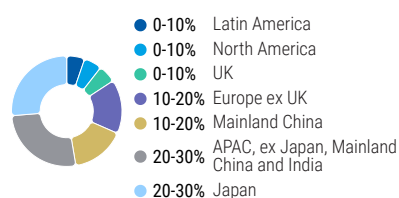
Date	Event
16 Oct 2024	Q3 2024 Antofagasta PLC Production Report
16 Jan 2025	Q4 2024 Antofagasta PLC Production Report

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Copper price, cash costs and production volumes
- Capex reductions at projects
- Reserve and resource upgrades

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

5/5 MOST 3 Month Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Better operating performance and unit costs
- China growing faster than our base case expectation, resulting in higher commodity prices

RISKS TO DOWNSIDE

- Operational disappointments, higher operating costs
- Rising capital intensity and risks related to water scarcity

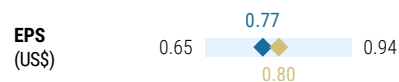
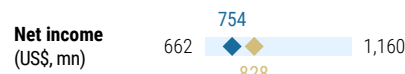
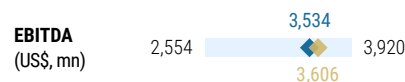
OWNERSHIP POSITIONING

Inst. Owners, % Active	74.8%
HF Sector Long/Short Ratio	2.5x
HF Sector Net Exposure	5.5%

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

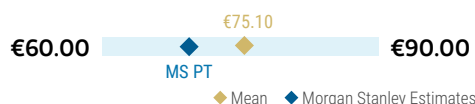
Risk Reward – Aurubis AG (NAFG.DE)

Smelter margin pressure and leadership transition pose uncertainties

PRICE TARGET €69.00

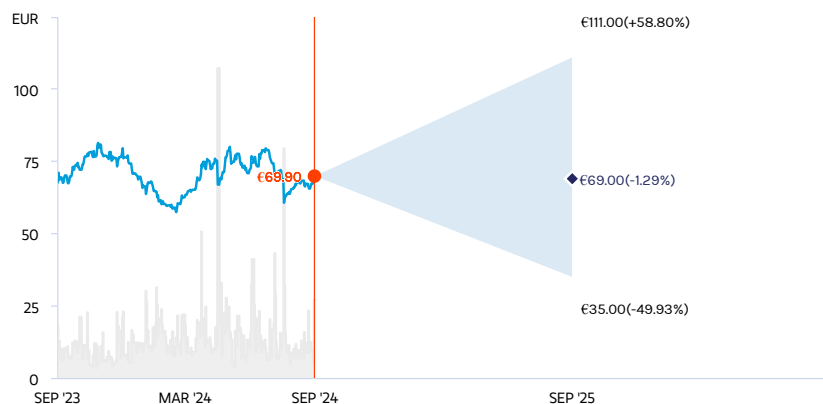
We value Aurubis based on a simple average of our EV/EBITDA and P/NAV methodologies. Our EV/EBITDA valuation is at a modest discount to its LT historical average of 6.5x to account for project execution risks and earnings risks related to the tightness in the copper concentrate market. Meanwhile, our target P/NPV multiple is set at 1.0x and derived by applying a ~8.0% WACC and 2% terminal growth rate

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



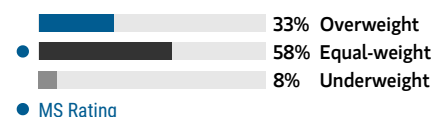
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

EQUAL-WEIGHT THESIS

- Aurubis' growth push points to execution risks and negative FCF for at least the next two years.
- Smelter margin pressure poses risks into next year.
- Leadership transition introduces strategy and capital allocation uncertainties
- Decarbonisation capex may lead to rising capital intensity.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

BULL CASE

€111.00

Margin expansion leading to enhanced returns

Assumes a return to >13% ROIC, either by better EBITDA improvements or a structural shift in profitability, which sees the shares re-rate to c.1.05x EV/IC. An additional €150mn of value-accretive Recycling growth.

BASE CASE

€69.00

Successful Recycling growth

We value Aurubis based on a simple average of our EV/EBITDA and P/NAV methodologies. Our EV/EBITDA valuation is at a modest discount to its LT historical average of 6.5x to account for project execution risks and earnings risks related to the tightness in the copper concentrate market. Meanwhile, our target P/NPV multiple is set at 1.0x and derived by applying a ~8.0% WACC and 2% terminal growth rate.

BEAR CASE

€35.00

Returns profile under pressure

Assumes a structural shift down in ROIC as competition increases and copper concentrates are scarce, causing Aurubis to de-rate towards the historical low of 0.65x EV/IC. Project capex inflation of €300mn.

Risk Reward – Aurubis AG (NAFG.DE)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
TC (\$/t)	82	82	42	41
Scrap RC(US\$/t)	401	384	387	396
Sulfuric acid (US\$/t)	86	88	91	92
USD/EUR	1.07	1.08	1.11	1.13

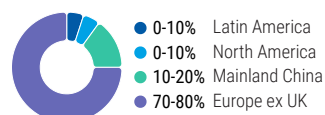
CATALYST CALENDAR

Date	Event	Source: Refinitiv, Morgan Stanley
05 Dec 2024	Annual Report 2023/24	
05 Feb 2025	Q1 2025 Aurubis AG Earnings Release	

INVESTMENT DRIVERS

- Scrap margins
- Sulphuric acid prices
- TC/RCs

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

5/5
MOST

3 Month
Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Successful execution of value-accretive growth in recycling.
- Sustainable decline in energy costs.

RISKS TO DOWNSIDE

- Further weakness in scrap refining charges and acid prices
- Capex overruns and project delays
- Possible rebound in energy costs

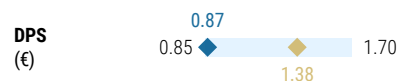
OWNERSHIP POSITIONING

Inst. Owners, % Active	61.5%	<div style="width: 61.5%;"></div>
HF Sector Long/Short Ratio	2.5x	<div style="width: 2.5x;"></div>
HF Sector Net Exposure	5.5%	<div style="width: 5.5%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Sep 2024e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

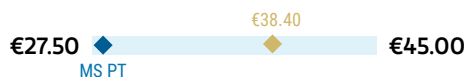
Risk Reward – Befesa SA (BFSA.DE)

Balanced risk-reward

PRICE TARGET €28.00

We value Befesa based on: 1) applying a 3.0-turn discount to historical EV/EBITDA of ~10x (on average estimated 2025-27 EBITDA), to reflect execution risks around €430mn expansion projects and risk around quality of steel dust supply, yielding a valuation of €26.3; and 2) applying an ~8.5% WACC and 2% terminal growth rate, yielding a valuation of €30.2.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



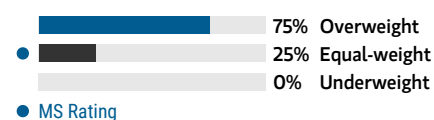
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

EQUAL-WEIGHT THESIS

We see a balanced risk-reward, with shares trading on only a modest premium to their M&M peers on EV/normalised EBITDA basis. Moving forward, potential upside hinges on the successful execution of growth projects, and realisation of synergies in the US.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Secular Growth: *Positive*

View descriptions of Risk Rewards Themes [here](#)

BULL CASE

€54.00

Bull case price deck, Global Growth Plan upside

Assumes our bull case commodity price deck, and upside from the company's Sustainable Global Growth Plan. We factor in full EBITDA potential from the newly acquired American Zinc Refining asset.

BASE CASE

€28.00

Base case commodity price deck

We value Befesa based on: 1) applying a 3.0-turn discount to historical EV/EBITDA of ~10x (on average estimated 2025-27 EBITDA), to reflect execution risks around €430mn expansion projects and risk around quality of steel dust supply, yielding a valuation of €26.3; and 2) applying an ~8.5% WACC and 2% terminal growth rate, yielding a valuation of €30.2.

BEAR CASE

€18.00

Bear case price deck

We use our bear case commodity price deck. No contribution from two China plants and zinc refining assets.

Risk Reward – Befesa SA (BFSA.DE)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Zinc (US\$/t)	2,649	2,720	2,588	2,800
Aluminium (US\$/t)	2,255	2,382	2,475	2,400
Zinc TC (US\$/t conc.)	274	165	100	200
Waelz oxide (WOX) sold (US\$/t)	399	401	414	470
Secondary aluminium alloys (US\$/t)	168	183	195	195

CATALYST CALENDAR

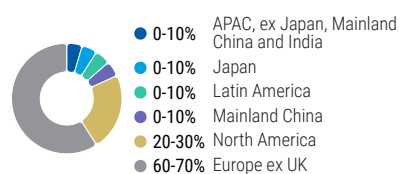
Date	Event
31 Oct 2024	Q3 2024 Befesa SA Earnings Call

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Commodity prices and FX
- Variability in operating performance, operating costs and capital expenditure

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

RISKS TO PT/RATING

RISKS TO UPSIDE

- Higher commodity prices
- US utilisation at nameplate capacity
- Higher zinc content
- Lower TC/RC
- China plants performance better than expected

RISKS TO DOWNSIDE

- Lower commodity prices
- High energy costs
- No improvement in US operations
- Lower zinc content
- High TC/RC
- China plants performance do not improve

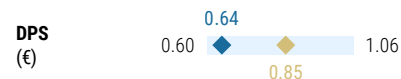
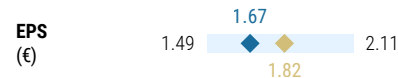
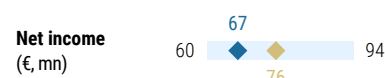
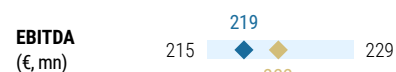
OWNERSHIP POSITIONING

Inst. Owners, % Active	87.4%	<div style="width: 87.4%;"></div>
HF Sector Long/Short Ratio	2.8x	<div style="width: 2.8x;"></div>
HF Sector Net Exposure	26%	<div style="width: 26%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

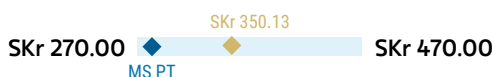
Risk Reward – Boliden (BOL.ST)

Not Out of the Woods

PRICE TARGET SKr 280.00

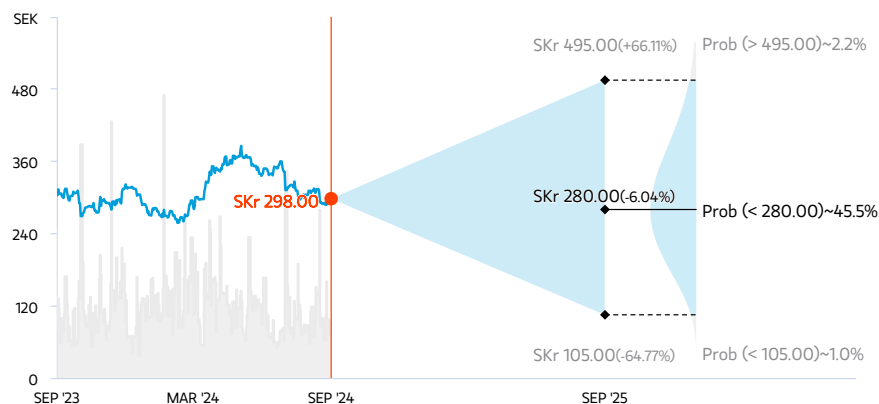
We value Boliden on a simple average of EV/EBITDA (on 2025-27 average estimated EBITDA) and P/NAV. We assume our base case commodity price deck. Our target EV/EBITDA multiple of 6.5x is one StDev higher than the long-term historical average (5.7x) to account for the prospect of an ESG-related re-rating given the company sustainability leadership. We use 1.0x P/NPV to account for the long-term fair value of the company.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 18 Sep 2024. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology [here](#)

BULL CASE

SKr 495.00

Bull prices

We assume that (i) our bull case commodity price deck is realised (for 2025-29 copper ~29% above our base case).

BASE CASE

SKr 280.00

Base case commodity prices

We value Boliden on a simple average of EV/EBITDA (on 2025-27 average estimated EBITDA) and P/NAV. We assume our base case commodity price deck. Our target EV/EBITDA multiple of 6.5x is one StDev higher than the long-term historical average (5.7x) to account for the prospect of an ESG-related re-rating given the company sustainability leadership. We use 1.0x P/NPV to account for the long-term fair value of the company.

BEAR CASE

SKr 105.00

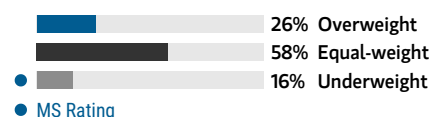
Bear case prices, EV/EBITDA de-rates to 4.0x

We assume (i) our bear case commodity price deck is realised (for 2025-29 copper ~13% below our base case), (ii) EV/EBITDA de-rates to 4.5x.

UNDERWEIGHT THESIS

- Well placed longer term, but seeing earnings downside shorter term.
- Diminishing confidence on operational performance could weigh on valuation multiples.
- Not paid to wait given weak FCF prospects amidst a protracted turnaround.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward – Boliden (BOL.ST)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Copper mined production (kt)	315	234	231	253
Zinc mined production (kt)	653	615	776	861
Smelter EBITDA Margin (%)	8.0	8.2	4.1	6.2

CATALYST CALENDAR

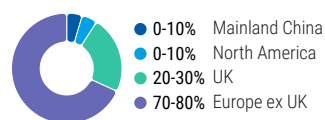
Date	Event
22 Oct 2024	Q3 24 Interim report
06 Feb 2025	Q4 2024 Interim Report

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- SEK/USD exchange rate: we estimate a 10% change in SEK/USD is worth ~12% to EBITDA and ~15% to EPS
- Copper and zinc prices; production volume; cash costs; changes in smelting fees
- Deployment of a rapidly rising cash balance to generate further returns

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

RISKS TO PT/RATING

RISKS TO UPSIDE

- Repricing of jurisdictional risks (esp. across LatAm), favouring Boliden's Nordic metal exposure
- China grows faster than our base case expectation, resulting in higher commodity prices
- Growth projects completed on time and on budget

RISKS TO DOWNSIDE

- Rising cost inflation and labour contract resets
- Operational disappointments across mines and smelters

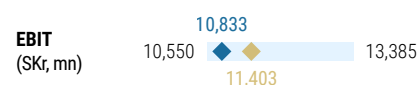
OWNERSHIP POSITIONING

Inst. Owners, % Active	70.6%	<div style="width: 70.6%;"></div>
HF Sector Long/Short Ratio	2.5x	<div style="width: 2.5;"></div>
HF Sector Net Exposure	5.5%	<div style="width: 5.5%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Risk Reward – Endeavour Mining (EDV.L)

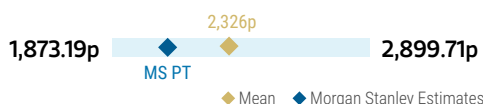
Relative preference vs other gold miners

PRICE TARGET 2,082p

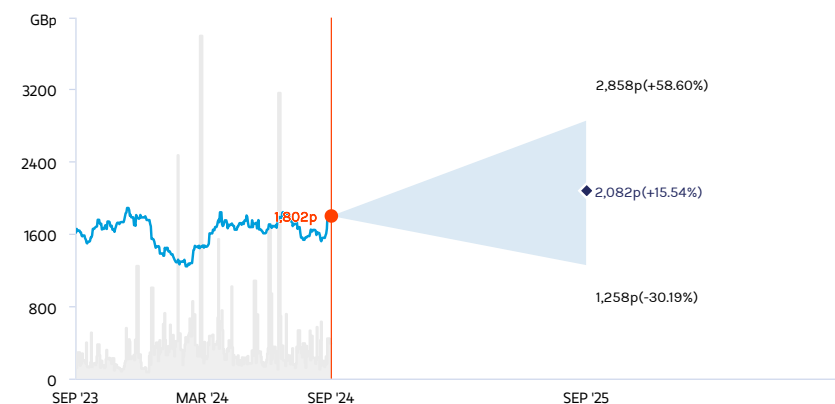
Our Endeavour Mining (EDV.L) price target is based on the average of the net asset value (NAV) in our base case scenario and our spot scenario. Our NAVs are derived from a 2035 DCF, which is based on a WACC of 9.4% and a long-term growth rate of 2%. Our spot scenario reflects gold price of US\$2,575/oz.

Consensus Price Target Distribution

Source: Refinitiv, Morgan Stanley Research



RISK REWARD CHART



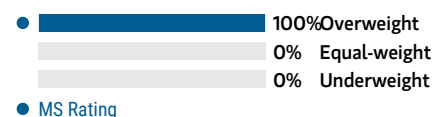
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

We expect Endeavour to continue to generate sector-leading pre-tax RoCE, underpinned by value-accretive projects, a low-cost position and a net cash balance sheet that allows the company to exploit opportunities as they arise. Attractive volume growth should enable the company to enhance its geographic diversification.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

BULL CASE

2,858p

Bull case commodity price deck; lower WACC

Assumes bull case commodity prices, WACC lower by 100bps.

BASE CASE

2,082p

An average P/NPV in our base case spot case

Our base case is based on the average NAV in our base case scenario and spot scenario. The NAVs are derived from a 2035 DCF, which is based on a WACC of 9.4% and a long-term growth rate of 2%. Our spot scenario reflects gold price of US\$2,575/oz.

BEAR CASE

1,258p

Bear deck; higher WACC; no/low-value key projects

Assumes bear case commodity prices, Lafigue project (Ivory Coast) @ 50% of NPV, Sabodala-Massawa (Senegal) production at 2021 production levels (until 2031e), WACC higher by 100bps, Burkina Faso assets @ 0.6x P/B.

Risk Reward – Endeavour Mining (EDV.L)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Gold price (\$/oz)	1,943	2,364	2,588	2,250
Production volumes (in koz)	1,072	1,164	1,308	1,243
EUR/USD	1.08	1.09	1.12	1.14

CATALYST CALENDAR

Date	Event	Source: Refinitiv, Morgan Stanley
07 Nov 2024 - 11 Nov 2024	Q3 2024 Endeavour Mining plc Earnings Release	

INVESTMENT DRIVERS

The gold price is the key driver of returns. We calculate that every +/-10% move in the gold price is worth \$274m of EBITDA, or c.17% of our 2024 estimate.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

5/5 MOST	3 Month Horizon
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Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- The gold price remains above our base case longer term
- Faster delivery of production growth provides an NPV boost

RISKS TO DOWNSIDE

- A weaker gold price than we include in our numbers
- Political risks in West Africa
- Growth depends on delivery of one greenfield project, which carries inherently more risk than a brownfield

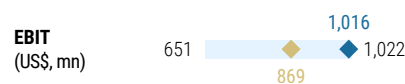
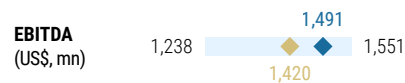
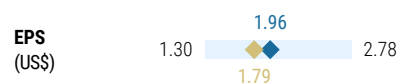
OWNERSHIP POSITIONING

Inst. Owners, % Active	69.5%	<div style="width: 69.5%;"></div>
HF Sector Long/Short Ratio	2.5x	<div style="width: 2.5;"></div>
HF Sector Net Exposure	5.5%	<div style="width: 5.5%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure – Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates
Source: Refinitiv, Morgan Stanley Research

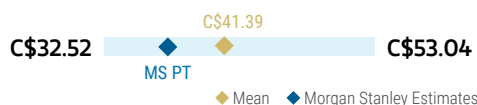
Risk Reward – Endeavour Mining (EDV.TO)

Relative preference vs other gold miners

PRICE TARGET C\$37.10

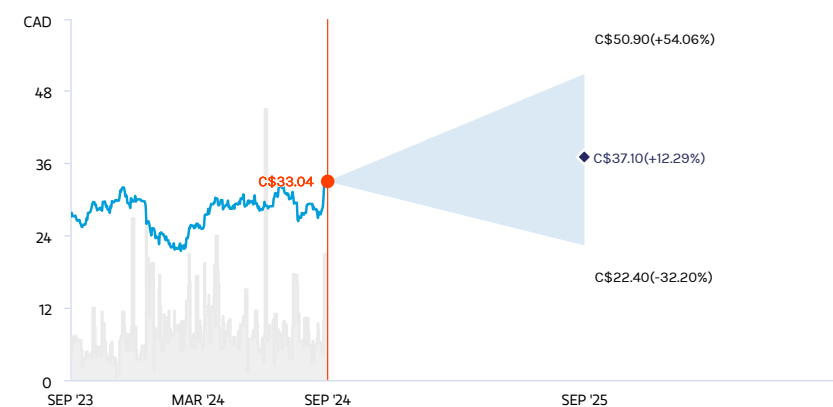
Our Endeavour Mining price target is set by converting our GBP PT for EDV.L into CAD using GBP 1 = CAD 1.78. Our EDV.L price target is based on the average of the net asset value (NAV) in our base case scenario and our spot scenario. Our NAVs are derived from a 2035 DCF, which is based on a WACC of 9.4% and a long-term growth rate of 2%. Our spot scenario reflects gold price of US\$2,575/oz.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



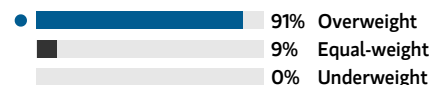
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

We expect Endeavour to continue to generate sector-leading pre-tax RoCE, underpinned by value-accretive projects, a low-cost position and a net cash balance sheet that allows the company to exploit opportunities as they arise. Attractive volume growth should enable the company to enhance its geographic diversification.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

BULL CASE

C\$50.90

Bull case commodity price deck; lower WACC

Assumes bull case commodity prices, WACC lower by 100bps.

BASE CASE

C\$37.10

An average P/NPV in our base case spot case

Our base case is based on the average NAV in our base case scenario and spot scenario. The NAVs are derived from a 2035 DCF, which is based on a WACC of 9.4% and a long-term growth rate of 2%. Our spot scenario reflects gold price of US\$2,575/oz. This is set by converting our base for EDV.L in GBP to CAD using GBP 1 = CAD 1.78.

BEAR CASE

C\$22.40

Bear deck; higher WACC; no/low-value key projects

Assumes bear case commodity prices, Lafigue project (Ivory Coast) @ 50% of NPV, Sabodala-Massawa (Senegal) production at 2021 production levels (until 2031e), WACC higher by 100bps, Burkina Faso assets @ 0.6x P/B.

Risk Reward – Endeavour Mining (EDV.TO)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Gold price (\$/oz)	1,943	2,364	2,588	2,250
Production volumes (in koz)	1,072	1,164	1,308	1,243
EUR/USD	1.08	1.09	1.12	1.14

CATALYST CALENDAR

Date	Event	Source: Refinitiv, Morgan Stanley
07 Nov 2024 - 11 Nov 2024	Q3 2024 Endeavour Mining plc Earnings Release	

INVESTMENT DRIVERS

The gold price is the key driver of returns. We calculate that every +/-10% move in the gold price is worth \$274m of EBITDA, or c.17% of our 2024 estimate.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

RISKS TO PT/RATING

RISKS TO UPSIDE

- The gold price remains above our base case longer term
- Faster delivery of production growth provides an NPV boost

RISKS TO DOWNSIDE

- A weaker gold price than we include in our numbers
- Political risks in West Africa
- Growth depends on delivery of one greenfield project, which carries inherently more risk than a brownfield

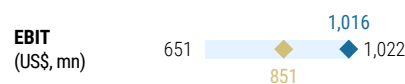
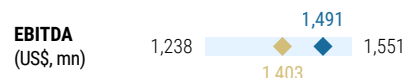
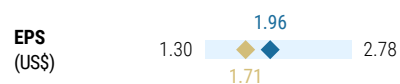
OWNERSHIP POSITIONING

Inst. Owners, % Active	69.5%	<div style="width: 69.5%;"></div>
HF Sector Long/Short Ratio	1.9x	<div style="width: 1.9x;"></div>
HF Sector Net Exposure	4.7%	<div style="width: 4.7%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure – Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates
Source: Refinitiv, Morgan Stanley Research

Risk Reward – First Quantum Minerals Ltd (FM.TO)

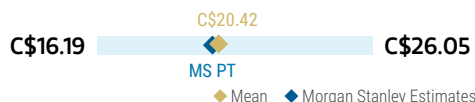
A more balanced risk reward

PRICE TARGET C\$20.20

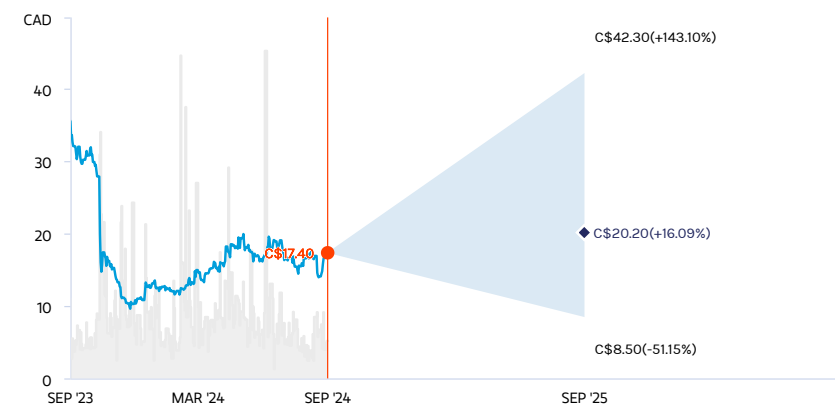
Our valuation is based on a simple average of EV/EBITDA and P/NPV. We use an EV/EBITDA multiple of 7.0x, around a 1.0x discount to the current peer average and the company's own historical valuation. The target P/NPV multiple is 1.0x and NPV is based on a blended WACC of 10%.

Consensus Price Target Distribution

Source: Refinitiv, Morgan Stanley Research



RISK REWARD CHART



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

BULL CASE

C\$42.30

Bull case commodity prices

Our bull case price deck (2025-29 average copper price ~29% above our base case) points to stronger FCF generation and faster deleveraging.

BASE CASE

C\$20.20

Base case commodity price deck

Base case commodity price deck and assumption that FQM delivers on production and cost guidance in the next three years. Our valuation is based on a simple average of EV/EBITDA and P/NPV. We use an EV/EBITDA multiple of 7.0x, around a 1.0x discount to the current peer average and the company's own historical valuation. The target P/NPV multiple is 1.0x and NPV is based on a blended WACC of 10%.

BEAR CASE

C\$8.50

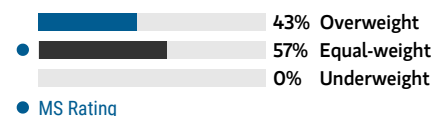
Bear case price deck

Bear case price deck 2025-29 average copper price ~13% below our base case.

EQUAL-WEIGHT THESIS

- FM's balance sheet de-risking and Cobre Panama's improving restart prospects are adequately reflected in the shares, we believe.
- We argue that further outperformance will depend on securing an attractive mine restart deal in Panama and/or a successful Zambia stake sale.
- The stock is now trading in line with peers on spot P/NAV.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Self-help: *Positive*

View descriptions of Risk Rewards Themes [here](#)

Risk Reward – First Quantum Minerals Ltd (FM.TO)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Copper C1 Cash cost (US\$/lb) (US\$)	1.82	1.92	1.95	1.89
Nickel C1 Cash cost (US\$/lb) (US\$)	8.28	5.58	NA	NA
Copper output (kt)	707.7	409.9	488.4	716.2
Nickel output (kt)	26.3	22.8	19.7	29.5

CATALYST CALENDAR

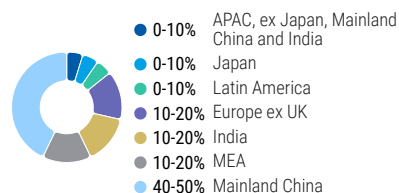
Date	Event
22 Oct 2024 - 28 Oct 2024	Q3 2024 First Quantum Minerals Ltd Earnings Release
18 Feb 2025 - 24 Feb 2025	Q4 2024 First Quantum Minerals Ltd Earnings Release

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Copper price, cash costs, and production volumes
- Capex reductions at projects
- Reserve and resource upgrades

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

5/5
MOST

3 Month
Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

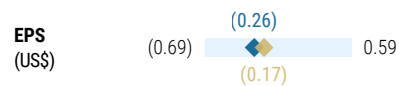
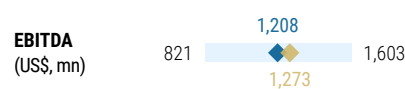
- Zambia stake sale could offer upside to MSe/Consensus valuation.
- Cobre Panama restarts with limited value leakage.
- Copper market sees structural deficits in the medium term, leading to higher prices.

RISKS TO DOWNSIDE

- Cobre Panama potential restart proves short-lived.
- Capex overruns and delays in execution of S3 project.
- Lower copper prices weighing on FCF and the balance sheet.

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

OWNERSHIP POSITIONING

Inst. Owners, % Active	80.1%	<div style="width: 80.1%;"></div>
HF Sector Long/Short Ratio	1.9x	<div style="width: 1.9x;"></div>
HF Sector Net Exposure	4.7%	<div style="width: 4.7%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

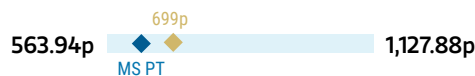
Risk Reward – Fresnillo PLC (FRES.L)

Risks largely priced in

PRICE TARGET 630p

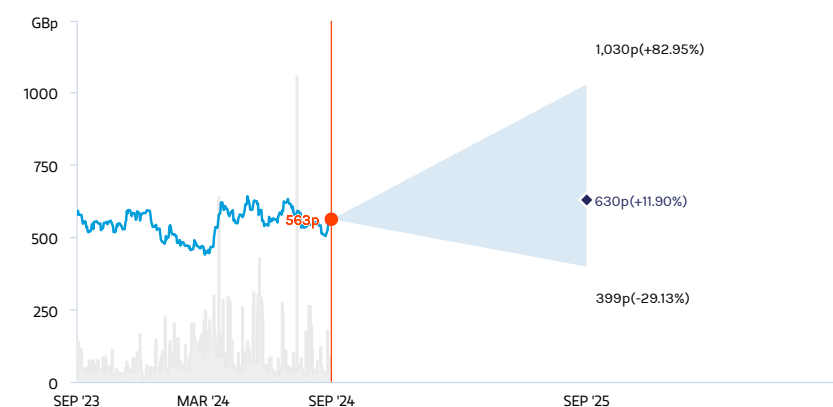
Our Fresnillo price target is based on the average of the net asset value (NAV) in our base case scenario and our spot scenario. Our NAVs are derived from a 2035 DCF, which is based on a WACC of 8.2% and a long-term growth rate of 2%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



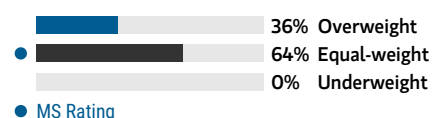
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

EQUAL-WEIGHT THESIS

We see a balanced risk-reward with the shares back to trading close to their historical average multiple following a significant de-rating on account of inflationary pressures, operational issues and weak silver prices. Commodity fundamentals remain supportive.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Self-help: *Positive*

View descriptions of Risk Rewards Themes [here](#)

BULL CASE

1,030p

Bull case commodity prices

Commodity prices are at our bull case, which lifts the equity NPV and earnings profile.

BASE CASE

630p

Base case commodity prices

Our Fresnillo price target is based on the average of the net asset value (NAV) in our base case scenario and our spot scenario. Our NAVs are derived from a 2035 DCF, which is based on a WACC of 8.2% and a long-term growth rate of 2%.

BEAR CASE

399p

Bear case commodity prices, royalty at 8%

Assumes bear case commodity prices. We also incorporate the impact of introducing an 8% royalty on net revenue.

Risk Reward – Fresnillo PLC (FRES.L)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Gold price (\$/oz)	1,943	2,364	2,588	2,250
Silver price (\$/oz)	23.40	28.00	32.51	32.14
Gold Production volumes (in koz)	611	563	599	574
Silver Production volumes (in koz)	53,454	53,440	48,508	47,595

CATALYST CALENDAR

Date	Event	Source: Refinitiv, Morgan Stanley
23 Oct 2024	Q3 2024 Fresnillo PLC Production Report	
03 Mar 2025 - 07 Mar 2025	Full Year 2024 Fresnillo PLC Earnings Release	

INVESTMENT DRIVERS

Gold and silver prices remain the fundamental driver of earnings and equity performance, along with the MXN/USD rate and operational turnaround.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

4/5 MOST 3 Month Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Faster than expected delivery on turnaround
- Higher than expected gold and silver prices

RISKS TO DOWNSIDE

- More volatile operational performance while turnaround is under way
- Lower-than-expected gold and silver prices

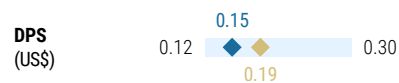
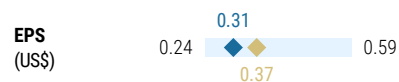
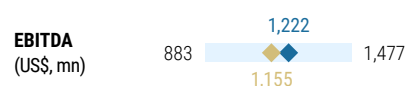
OWNERSHIP POSITIONING

Inst. Owners, % Active	84.7%	<div style="width: 84.7%;"></div>
HF Sector Long/Short Ratio	2.5x	<div style="width: 2.5;"></div>
HF Sector Net Exposure	5.5%	<div style="width: 5.5%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure – Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates
Source: Refinitiv, Morgan Stanley Research

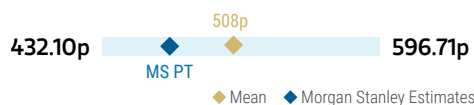
Risk Reward – Glencore PLC (GLEN.L)

Scope for additional shareholder returns at year end

PRICE TARGET 470p

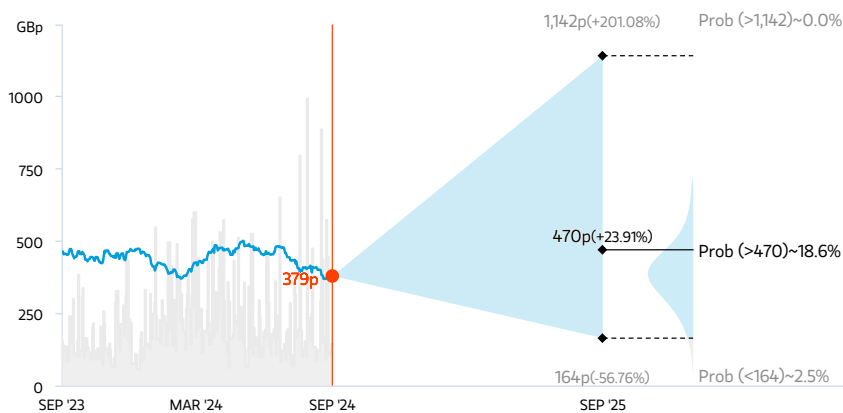
We value Glencore based on a simple average of our EV/EBITDA (average estimated 2025-26 EBITDA x historical average EV/EBITDA) and P/NAV methodologies. This allows us to reflect both the shorter-term earnings power and longer-term value of the company. We apply an EV/EBITDA multiple of 7.8x, in line with its historical average. We apply a 1.0x multiple to our NPV estimate, which is based on a blended WACC of 9.5% with 2% perpetuity growth.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



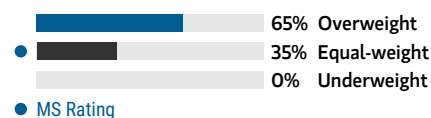
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 18 Sep 2024. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology [here](#)

EQUAL-WEIGHT THESIS

- The decision to keep coal assets as part of the group, and reset higher of the Net Debt target to US\$10bn should trigger additional shareholder returns.
- A potential value crystallisation of the company's stake in Bunge could accelerate deleveraging and boost shareholder returns.
- Nonetheless, M&A risks could be back in focus given the rise in cash generation and the assets that are available for sale at present.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Self-help: *Positive*
 View descriptions of Risk Rewards Themes [here](#)

BULL CASE

1,142p

Bull prices, marketing profit, reinvestment

Assumes our bull case commodity price deck. Marketing profits are reset at upper end of guidance. Reinvestment of 50% of FCF at 15% IRR for the period 2025-29.

BASE CASE

470p

Base prices, 2024 forecasts based on guidance

We value Glencore based on a simple average of our EV/EBITDA (average estimated 2025-26 EBITDA x historical average EV/EBITDA) and P/NAV methodologies. Our 2024 volume assumptions are at mid-point of guidance range. Marketing EBIT of US\$3.0bn in FY24. We value Marketing using a WACC of 6% and a terminal growth rate of 1%. We assume 2024 industrial capex of US\$6.2bn.

BEAR CASE

164p

Bear prices, marketing profits

Uses our bear case commodity price deck. Marketing profits reset at lower end of guidance.

Risk Reward – Glencore PLC (GLEN.L)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Copper Sales (kt 100% basis)	864	818	819	882
Copper Price (US\$/lb)	3.85	4.18	4.47	4.31
Copper Net Cash Cost (US\$/lb)	1.55	1.67	1.58	1.43
Zinc Sales (kt 100% basis)	671	642	722	620
Zinc Net Cash Cost (US\$/lb)	0.64	0.99	1.14	1.12

CATALYST CALENDAR

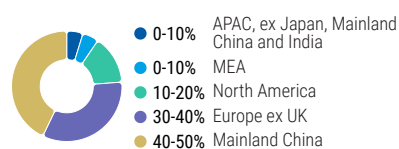
Date	Event
30 Oct 2024	Q3 2024 Glencore PLC Production Report
19 Feb 2025 - 24 Feb 2025	Full Year 2024 Glencore PLC Earnings Release

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Commodity prices
- Currency
- Costs

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

2/5
MOST

3 Month
Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Stronger-than-expected commodity prices
- Better operating performance, lower operating costs, and capital expenditure

RISKS TO DOWNSIDE

- Weaker-than-expected commodity prices
- Weaker operating performance, higher operating costs, and capital expenditure
- A potential sector rotation towards early-cycle commodities that would benefit from a resumption in China activity

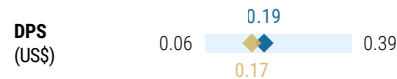
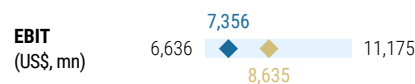
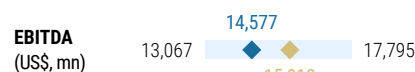
OWNERSHIP POSITIONING

Inst. Owners, % Active	77.5%	<div style="width: 77.5%;"></div>
HF Sector Long/Short Ratio	2.5x	<div style="width: 2.5;"></div>
HF Sector Net Exposure	5.5%	<div style="width: 5.5%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates
Source: Refinitiv, Morgan Stanley Research

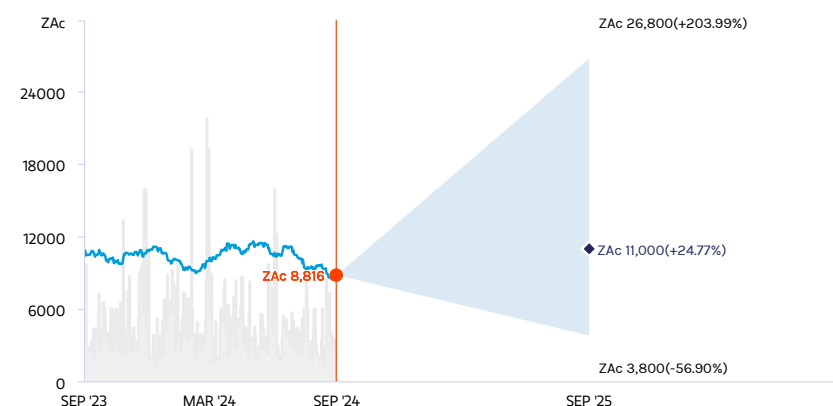
Risk Reward – Glencore PLC (GLNJ.J)

Scope for additional shareholder returns at year end

PRICE TARGET ZAc 11,000

Our PT is set by converting PT for GLEN.L, 1GBP =23.45ZAR. We value Glencore based on a simple average of EV/EBITDA (avg. 2025-26e EBITDA x historical average EV/EBITDA) and P/NAV. This allows us to reflect both the shorter-term earnings power and longer-term value of the company. We apply an EV/EBITDA multiple of 7.8x, in line with its historical average. We apply a 1.0x multiple to our NPV estimate (blended WACC 9.5% with 2% perpetuity growth).

RISK REWARD CHART



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

EQUAL-WEIGHT THESIS

- The decision to keep coal assets as part of the group, and reset higher of the Net Debt target to US\$10bn should trigger additional shareholder returns.
- A potential value crystallisation of the company's stake in Bunge could accelerate deleveraging and boost shareholder returns.
- Nonetheless, M&A risks could be back in focus given the rise in cash generation and the assets that are available for sale at present.

Risk Reward Themes

Self-help: *Positive*

View descriptions of Risk Rewards Themes [here](#)

BULL CASE

ZAc 26,800

Bull prices, higher marketing profit, reinvestment

Assumes our bull case commodity price deck. Marketing profits are reset at upper end of guidance. Reinvestment of 50% of FCF at 15% IRR for the period 2025-29.

BASE CASE

ZAc 11,000

Base prices, 2024 forecasts based on guidance

We value Glencore based on a simple average of our EV/EBITDA (average estimated 2025-26 EBITDA x historical average EV/EBITDA) and P/NAV methodologies. Our 2024 volume assumptions are at mid-point of guidance range. Marketing EBIT of US\$3.0bn in FY24. We value Marketing using a WACC of 6% and a terminal growth rate of 1%. We assume 2024 industrial capex of US\$6.2bn.

BEAR CASE

ZAc 3,800

Bear prices, marketing profits

Uses our bear case commodity price deck. Marketing profits reset at lower end of guidance.

Risk Reward – Glencore PLC (GLNJ.J)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Copper Sales (kt 100% basis)	864	818	819	882
Copper Price (US\$/lb)	3.85	4.18	4.47	4.31
Copper Net Cash Cost (US\$/lb)	1.55	1.67	1.58	1.43
Zinc Sales (kt 100% basis)	671	642	722	620
Zinc Net Cash Cost (US\$/lb)	0.64	0.99	1.14	1.12

CATALYST CALENDAR

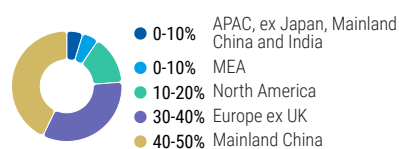
Date	Event
30 Oct 2024	Q3 2024 Glencore PLC Production Report
19 Feb 2025 - 24 Feb 2025	Full Year 2024 Glencore PLC Earnings Release

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Commodity prices
- Currency
- Costs

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

RISKS TO PT/RATING

RISKS TO UPSIDE

- Stronger-than-expected commodity prices
- Better operating performance, lower operating costs, and capital expenditure

RISKS TO DOWNSIDE

- Weaker-than-expected commodity prices
- Weaker operating performance, higher operating costs, and capital expenditure
- A potential sector rotation towards early-cycle commodities that would benefit from a resumption in China activity

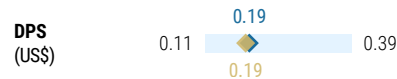
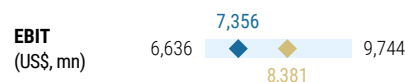
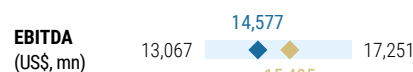
OWNERSHIP POSITIONING

Inst. Owners, % Active	77.5%	<div style="width: 77.5%;"></div>
HF Sector Long/Short Ratio	2.5x	<div style="width: 2.5;"></div>
HF Sector Net Exposure	5.5%	<div style="width: 5.5%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates
Source: Refinitiv, Morgan Stanley Research

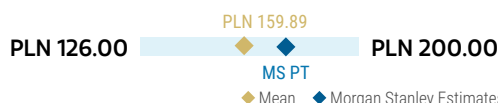
Risk Reward – KGHM Polska Miedz SA (KGH.WA) Top Pick

Attractive self-help prospects

PRICE TARGET PLN 174.00

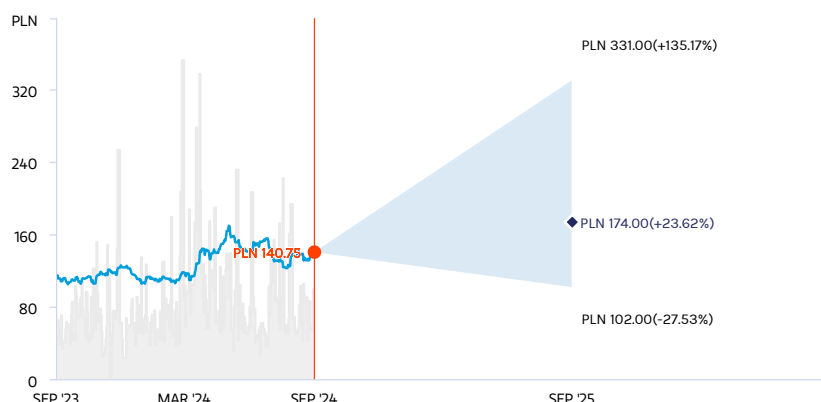
Our price target is derived using a simple average of 2025-2027 EV/EBITDA and 1.0x P/NPV. Our target EV/EBITDA multiple is in line with the company's historical average. Our 1.0x P/NAV is based on NAV from a 2035 DCF, which assumes a WACC of 9.4% for the Polish assets, ~8.0% for assets in North and South Americas and a LT growth rate of 0%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

BULL CASE

PLN 331.00

Bull case price deck

We reflect our bull case commodity price deck, which significantly lifts our fair value for the stock, due to KGHM's above-average operating leverage.

BASE CASE

PLN 174.00

Base case commodity price deck

Our base case is derived using a simple average of 2025-2027 EV/EBITDA and 1.0x P/NPV. Our target EV/EBITDA multiple is in line with the company's historical average. Our 1.0x P/NAV is based on NAV from a 2035 DCF, which assumes a WACC of 9.4% for the Polish assets, ~8.0% for assets in North and South Americas and a LT growth rate of 0%.

BEAR CASE

PLN 102.00

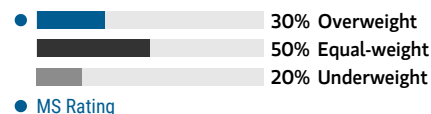
Bear case price deck

We reflect our bear case price deck, which has a disproportionately negative impact on fair value owing to the high cost base of the company's Polish mining operations. We use an EV/EBITDA multiple of 6.0x

OVERWEIGHT THESIS

- Management change offers potential around opex/capex containment, operational turnaround and improved capital allocation.
- Core assets are positioned in the upper half of the cost curve, offering significant operating leverage.
- Improving FCF profile and a more comfortable balance sheet position.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Self-help: *Positive*

View descriptions of Risk Rewards Themes [here](#)

Risk Reward – KGHM Polska Miedz SA (KGH.WA)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Cu Price (US\$/lb)	3.85	4.18	4.47	NA
Gold price (\$/oz)	1,943	2,364	2,588	NA
TC/RC (\$/lb)	0.25	0.23	0.08	NA
USD/PLN	4.20	3.94	3.85	NA

CATALYST CALENDAR

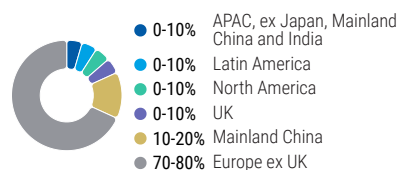
Date	Event
13 Nov 2024	Q3 2024 KGHM Polska Miedz SA Earnings Release

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Production at Sierra Gorda stabilising and thereafter achieving targets set in the technical report.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

4/5
MOST
3 Month
Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Commodity price upside given high operating leverage
- Improved operating and cost performance
- Capex containment and improved shareholder returns prospects

RISKS TO DOWNSIDE

- Risk of capex catch-up
- Cost inflation disproportionately impacting higher-cost mines
- Rising PLNUSD FX rate, weighing on costs

OWNERSHIP POSITIONING

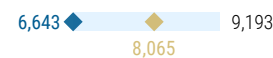
Inst. Owners, % Active	64.9%	<div style="width: 64.9%;"></div>
HF Sector Long/Short Ratio	2.5x	<div style="width: 2.5;"></div>
HF Sector Net Exposure	5.5%	<div style="width: 5.5%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

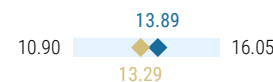
MS ESTIMATES VS. CONSENSUS

FY Dec 2024e

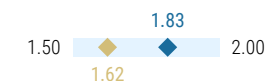
EBITDA
(PLN, mn)



EPS
(PLN)



DPS
(PLN)



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

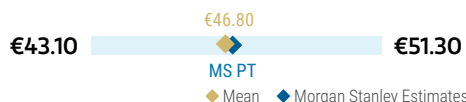
Risk Reward – Metlen Energy & Metals SA (MYTr.AT)

An attractive Energy & Metals Play

PRICE TARGET €47.00

Our PT is derived from a SOTP, with each business valued via DCF. We use a 9.1% WACC for Metals, M Energy Customer Solutions, and M Power Projects (EPC business); 6.5% WACC for Renewables, 10.8% WACC for Integrated (gas) Supply & Trading, and 9.2% WACC for Thermal gas plants. We assume zero terminal growth for each business.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

BULL CASE

€63.00

Higher top line across Energy and Metallurgy

- Long-term power price assumption of €70/MWh
- Long-term aluminium price assumption of \$2,806/t (real terms) and higher product premiums by \$100/t
- Higher clean spark spread by €5/MWh
- Full CO2 compensation in Metals

BASE CASE

€47.00

Renewables growth & solid profitability in Thermal

- Long-term power price assumption of €60/MWh
- Long-term aluminium price assumption of \$2,440/t (real terms)
- Long-term clean spark spread assumption of €15/MWh (real terms)
- 8 GW of renewable capacity in operation by 2030, of which 2 GW monetised via farm-downs (MSe)

BEAR CASE

€21.00

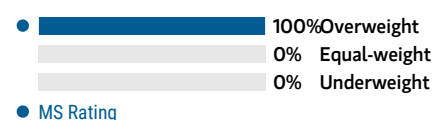
Lower top line and higher yields

- Long-term power price assumption of €40/MWh
- Asset rotation at a lower realised price
- Long-term aluminium price assumption of \$2,196/t (real terms) and lower product premiums by \$100/t
- Lower clean spark spread by €15/MWh
- Increase in bond yields by 170bps, impacting the discount rate

OVERWEIGHT THESIS

MYTIL offers a unique trifecta - multi-faceted Energy growth, unique aluminium business, and highly synergistic business model. These attributes coupled with an undemanding valuation point to a compelling risk-reward.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Electric Vehicles: *Positive*
Renewable Energy: *Positive*

View descriptions of Risk Rewards Themes [here](#)

Risk Reward – Metlen Energy & Metals SA (MYTr.AT)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Alumina Production (kt)	869	868	875	875
Aluminium Production (kt)	239	242	248	248
Aluminium EBITDA/t (US\$/t)	1,208	926	1,052	1,007
Clean Spark Spread (€/MWh)	36	30	25	25
Power Production (TWh)	5.7	9.7	11.8	13.1

CATALYST CALENDAR

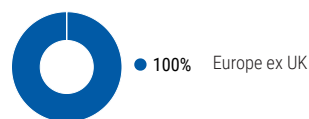
Date	Event
24 Oct 2024	Q3 2024 Mytilineos SA Trading Update

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Multi-faceted growth in Energy segment
- Low-cost, cash generative Aluminium business
- Highly synergistic business model
- Jurisdictional derisking

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

3/5 MOST 3 Month Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Further acceleration in global renewables build-out
- Strong demand for renewable assets and thus better returns in asset rotation
- Increasing political support for decarbonisation goals
- Higher aluminium and alumina prices
- Higher power prices

RISKS TO DOWNSIDE

- Increasing pressures putting renewable growth/returns at risk
- Higher bond yields
- Lower power prices
- Stronger EUR
- Resurgent political risk
- Aluminium overcapacity

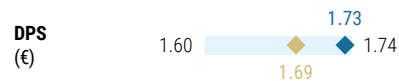
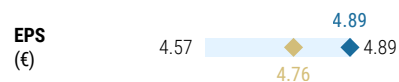
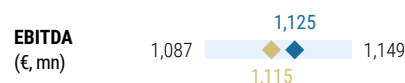
OWNERSHIP POSITIONING

Inst. Owners, % Active	68%	<div style="width: 68%;"></div>
HF Sector Long/Short Ratio	2.8x	<div style="width: 2.8;"></div>
HF Sector Net Exposure	26%	<div style="width: 26%;"></div>

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

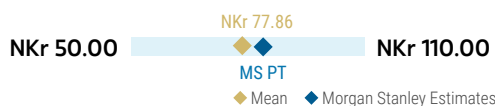
Risk Reward – Norsk Hydro ASA (NHY.OL) Top Pick

Structural attractions remain

PRICE TARGET **NKr 83.00**

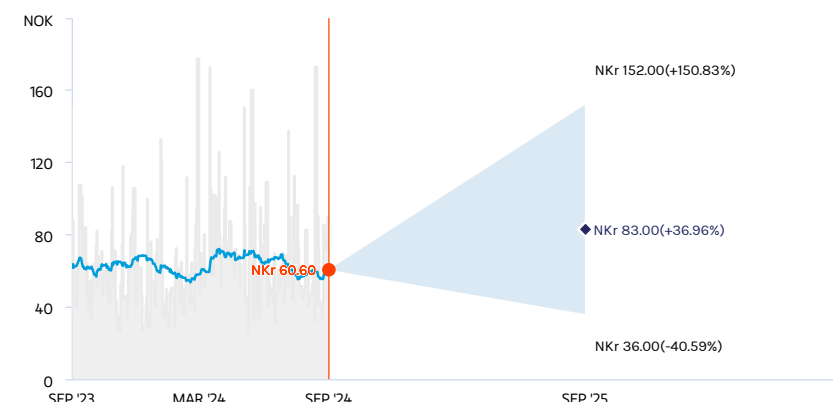
Our PT is based on an average of EV/EBITDA at 7.0x (on estimated 2025-27 EBITDA) and 1.0x P/NPV. (1) Our target EV/EBITDA multiple is set in line with its LT average of 7.0x. (2) For our 1.0x P/NAV, we derive the NAV from a 2035 DCF, which is based on a WACC of 9.1% for upstream and 6.5-7.5% for the other divisions plus a LT growth rate of 2%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- Norsk Hydro is uniquely placed to leverage its superior power mix as well as market leadership in recycling and extrusions.
- We favour the stock structurally on attractive commodity exposure, ESG credentials, and re-rating potential as the growth narrative matures.
- Soft aluminium demand backdrop continues to be a headwind.

Consensus Rating Distribution



● MS Rating

Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Self-help: *Positive*

View descriptions of Risk Rewards Themes [here](#)

BULL CASE

NKr 152.00

Bull case commodity price

Takes our bull case aluminium price deck. 2) Premia upside. 3) Self-help and EU policy exceed expectations. 4) Value accretion via green growth pillars (Recycling, Batteries), with Renewables offering further upside.

BASE CASE

NKr 83.00

Aluminium and alumina markets into surplus

Uses our house base case price deck, including aluminium and alumina price forecasts of \$2,475/2,240 and \$413/380 per tonne in 2025 and 2026, respectively.

BEAR CASE

NKr 36.00

Bear case commodity prices

We assume bear case commodity prices and de-rating to an EV/EBITDA of 3.5x.

Risk Reward – Norsk Hydro ASA (NHY.OL)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
Alumina Production (kt)	6,185	6,019	6,111	6,111
Primary Aluminium Production (kt)	1,709	1,718	1,835	1,844
Alumina EBITDA/t (US\$/t)	19	86	110	80
Aluminium EBITDA/t (US\$/t)	598	528	593	520
Power production (GWh)	9,697	9,660	9,400	9,400

CATALYST CALENDAR

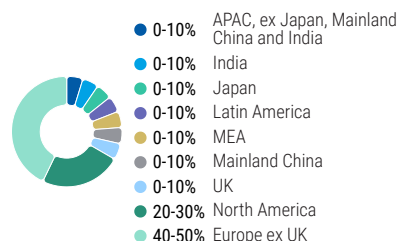
Date	Event
24 Oct 2024	Q3 Quarterly Report 2024
12 Feb 2025 - 17 Feb 2025	Q4 2024 Norsk Hydro ASA Earnings Release

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- China's adherence to capacity cap of 45mt, leading to better pricing power and returns for Western smelters
- Competitive advantage stemming from superior power mix
- Value-accretive growth via recycling and new energy initiatives

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

3/5 MOST 3 Month Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Resilient demand dynamics
- Acceleration of China's decarbonisation agenda and of power consumption curbs
- Value accretive execution on growth initiatives (Recycling, Renewables, Batteries)

RISKS TO DOWNSIDE

- Rapid demand deceleration
- Stronger NOK and BRL
- Potential legal liabilities stemming from pollution claims in Brazil

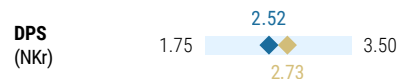
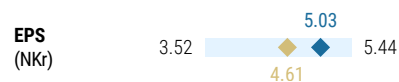
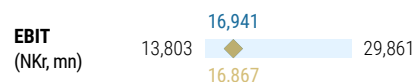
OWNERSHIP POSITIONING

Inst. Owners, % Active	84.2%
HF Sector Long/Short Ratio	2.5x
HF Sector Net Exposure	5.5%

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure - Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates
Source: Refinitiv, Morgan Stanley Research

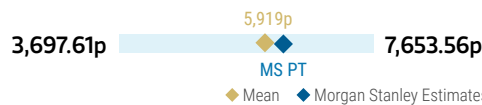
Risk Reward – Rio Tinto Plc (RIO.L) Top Pick

Strong FCF yield, attractive and disciplined growth, wide valuation buffer

PRICE TARGET 6,200p

We value RIO based on a simple average of EV/EBITDA (avg 2024-25e EBITDA x historical avg EV/EBITDA) and P/NAV. This allows us to reflect the company's shorter-term earnings power and longer-term value. We apply an EV/EBITDA multiple of 6.4x, in line with its historical average given the business structure, B/S, and portfolio mix have not materially changed. We apply a 1.0x multiple to our NPV estimate, which is based on a blended WACC of ~8.9%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

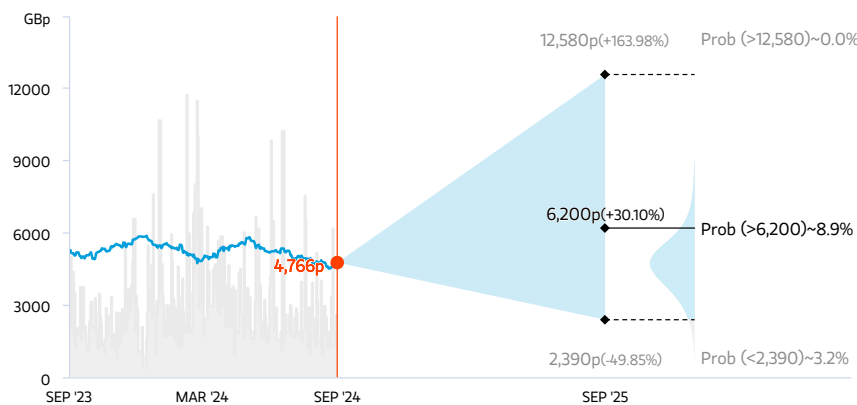
- Rio Tinto's low-cost assets sustain robust cash generation though the cycle.
- The company offers superior volume growth prospects relative to peers, dominated by copper.
- An improving operating performance and a best-in-class balance sheet underpin attractive capital returns prospects.
- Shares are pricing in a long-term price below spot iron ore price and marginal cost.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 18 Sep 2024. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology [here](#)

BULL CASE

12,580p

Bull prices, recovery in Ali margins, reinvestment

Uses our bull case commodity price deck. For Aluminium, we assume full recovery in margins to 40% and US\$1.5bn is reinvested at 20% IRR for 5 years.

BASE CASE

6,200p

Base case commodity price deck

We value RIO based on a simple average of our EV/EBITDA (average estimated 2024-25 EBITDA x historical average EV/EBITDA) and P/NAV methodologies, enabling us to capture the shorter-term earnings power and longer-term value of the company. We use an EV/EBITDA multiple of 6.4x, in line with the historical average given that the business structure, balance sheet, and portfolio mix have not materially changed. We apply a 1.0x multiple to our NPV estimate, based on a blended WACC of ~8.9%.

BEAR CASE

2,390p

Bear prices and Lithium investments

Uses our bear case commodity price deck and assumes that the company's Lithium investments prove value destructive.

Risk Reward – Rio Tinto Plc (RIO.L)

KEY EARNINGS INPUTS

Drivers	2023	2024e	2025e	2026e
WAIO Shipments	332	329	337	339
Iron Ore Price (US\$/t)	120	108	102	100
WAIO Operating Cost (US\$/t)	38.3	39.7	39.9	40.1
Copper production - Mined (kt)	620	675	886	953
Cu Price (US\$/lb)	3.85	4.18	4.47	4.31

CATALYST CALENDAR

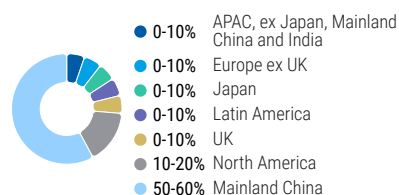
Date	Event
16 Oct 2024	Third Quarter Operations Review 2024
16 Jan 2025	2024 Fourth Quarter Operations Review
26 Feb 2025	2024 Full Year Results

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Oyu Tolgoi
- Performance at Iron Ore business
- Commodity prices and FX, as well as variability in operating performance, operating costs and capital expenditure.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

3/5 MOST 3 Month Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

RISKS TO PT/RATING

RISKS TO UPSIDE

- Better volumes and lower costs at Oyu Tolgoi
- Iron ore volumes and/or cost performance better than our estimates
- Higher commodity prices

RISKS TO DOWNSIDE

- Lower volumes and higher costs at Oyu Tolgoi
- Renewed operating challenges in the IO business, impacting volumes and/or cost performance
- Lower commodity prices

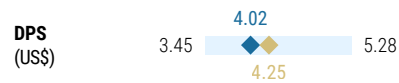
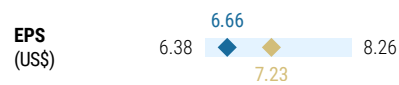
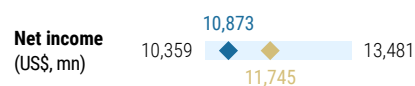
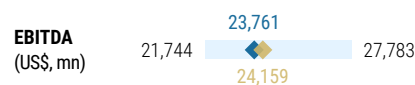
OWNERSHIP POSITIONING

Inst. Owners, % Active	75.3%	
HF Sector Long/Short Ratio	2.5x	
HF Sector Net Exposure	5.5%	

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MS ESTIMATES VS. CONSENSUS

FY Dec 2024e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Recent reports

Title	Date
ArcelorMittal SA: AMNS India trip prelude	11-Sep-24
Norsk Hydro ASA: Showcasing Its Recycling Growth Angle	10-Sep-24
KGHM Polska Miedz SA: Self-Help Gaining Traction	04-Sep-24
Carbon Steel: Taking stock, looking ahead	20-Aug-24
voestalpine AG: Resilient in tough times – raise to Overweight	20-Aug-24
The Pipe – Diamond Intel: July data – a de-stock in motion	16-Aug-24
Metals & Mining: Investor Presentation: Mining - August 2024	09-Aug-24
Salzgitter AG: Cash burn remains in focus	06-Aug-24
Glencore PLC: Keeping Coal?	01-Aug-24
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Metals & Mining: 2Q24 mid-cap previews	08-Jul-24
First Quantum Minerals Ltd: Taking a Breather, Move to EW	08-Jul-24
Global Coal: Our Picks on Near-Term Coking Coal Upside	03-Jul-24
Stainless Steel: 2Q24 Previews – Mixed signals	02-Jul-24
Carbon Steel: 2Q24 Previews – no inflection	27-Jun-24
Metlen Energy & Metals SA: A confluence of tailwinds	26-Jun-24

Risk Reward Reference links

1. View explanation of Options Probabilities methodology - [Options_Probabilities_Exhibit_Link.pdf](#)
2. View descriptions of Risk Rewards Themes - [RR_Themes_Exhibit_Link.pdf](#)
3. View explanation of regional hierarchies - [GEG_Exhibit_Link.pdf](#)
4. View explanation of Theme/Exposure methodology - [ESG_Sustainable_Solutions_External_Link.pdf](#)
5. View explanation of HERS methodology - [ESG_HERS_External_Link.pdf](#)

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(as of August 31, 2024)

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Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1418	38%	338	44%	24%	649	39%
Equal-weight/Hold	1736	47%	351	46%	20%	793	47%
Not-Rated/Hold	4	0%	0	0%	0%	1	0%
Underweight/Sell	573	15%	76	10%	13%	230	14%
Total	3,731		765			1673	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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INDUSTRY COVERAGE: Metals & Mining

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/18/2024)
Alain Gabriel, CFA		
Anglo American Plc (AAL.L)	++	2,124p
Glencore PLC (GLEN.L)	E (11/20/2023)	380p
Glencore PLC (GLNJ.J)	E (11/20/2023)	ZAc 8,816
Rio Tinto Plc (RIO.L)	O (05/26/2023)	4,766p
Ioannis Masvoulas, CFA		
Antofagasta (ANTO.L)	U (09/18/2024)	1,778p
Aurubis AG (NAFG.DE)	E (02/13/2023)	€69.90
Befesa SA (BFSA.DE)	E (04/29/2024)	€24.50
Boliden (BOL.ST)	U (12/06/2023)	SKr 298.00
KGHM Polska Miedz SA (KGH.WA)	O (05/07/2024)	PLN 140.75

Lundin Mining Corp. (LUMIN.ST)	++	SKr 94.50
Lundin Mining Corp. (LUN.TO)	++	C\$12.56
Metlen Energy & Metals SA (MYTr.AT)	O (07/17/2023)	€33.22
Norsk Hydro ASA (NHY.OL)	O (12/09/2020)	NKr 60.60

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

INDUSTRY COVERAGE: EEMEA - Metals & Mining

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/18/2024)
Alain Gabriel, CFA		
Anglo American (AGLJ.J)	++	ZAc 49,077
Erdemir (EREGL.IS)	U (09/14/2022)	TL 48.24
Brian Morgan		
African Rainbow Minerals (ARIJ.J)	O (06/21/2023)	ZAc 17,428
Exxaro Resources Limited (EXXJ.J)	E (05/21/2023)	ZAc 15,603
Kumba Iron Ore (KIOJ.J)	E (06/20/2024)	ZAc 34,134
Thungela Resources Ltd (TGAJ.J)	U (01/23/2024)	ZAc 10,437
Christopher Nicholson		
AngloGold Ashanti Ltd (ANGJ.J)	E (10/18/2023)	ZAc 48,098
Anglo Platinum Limited (AMSJ.J)	U (06/07/2024)	ZAc 56,750
Gold Fields Limited (GFIJ.J)	E (06/20/2024)	ZAc 25,680
Harmony Gold Mining Company Ltd (HARJ.J)	U (10/18/2023)	ZAc 17,284
Implats Limited (IMPJ.J)	E (01/26/2023)	ZAc 9,238
Northam Platinum Limited (NPHJ.J)	O (07/07/2016)	ZAc 10,857
Sibanye-Stillwater (SSWJ.J)	U (10/03/2023)	ZAc 1,823

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Carbon Steel

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/18/2024)
Alain Gabriel, CFA		
ArcelorMittal SA (MT.AS)	O (03/10/2016)	€21.10
Salzgitter AG (SZGG.DE)	U (03/29/2023)	€15.19
SSAB AB (SSABa.ST)	E (12/06/2023)	SKr 47.71
thyssenkrupp AG (TKAG.DE)	E (05/23/2021)	€3.06
voestalpine AG (VOES.VI)	O (08/20/2024)	€21.22

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Gold and Precious Metals

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/18/2024)
Alain Gabriel, CFA		
Endeavour Mining (EDV.L)	O (03/16/2023)	1,802p
Endeavour Mining (EDV.TO)	O (03/16/2023)	C\$33.04
Fresnillo PLC (FRES.L)	E (03/03/2024)	563p

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Stainless Steel

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/18/2024)
Ioannis Masvoulas, CFA		

Acerinox SA (ACX.MC)	O (05/12/2023)	€9.47
Aperam SA (APAM.AS)	E (05/12/2023)	€24.22
Outokumpu Oyj (OUT1V.HE)	O (05/12/2023)	€3.30

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

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