

Rio Tinto plc

2023 production in line, focus turns to FY23 earnings and dividends

Reiterate Rating: BUY | PO: 8,000 GBp | Price: 5,440 GBp

Production in-line, focus now on FY23 results due 21 Feb

Rio Tinto (RIO) reported 2023 production in line with expectations while production guidance for 2024 is unchanged. As always, Pilbara Iron Ore (~75% of FY23 EBITDA) is a key focus where 2023 shipments of 332 Mt (+3% vs 2022) were in line with BofA and consensus of 333 Mt. Unit cost guidance for Pilbara Iron ore in 2023 is unchanged while 2024 unit cost guidance will be provided with the FY23 results due 21 February 2024. We increase our FY23e EBITDA by 4% mainly reflecting higher 4Q23 realised iron ore prices. Turning to Rio's FY23 results next month, dividends are typically the focus and we forecast FY23 dividends of 485 UScps (vs VA consensus of 432 UScps) implying a 60% payout. We reiterate our Buy rating with a price objective of 8,000 GBp based on 1.0x NPV. Rio trades on 0.9x Price/NPV and offers a 6% FCF and dividend yield for 2024. We expect iron ore prices to remain elevated and forecast aluminium and copper prices to increase by 20% and 10% respectively in the next 12 months.

2023 Pilbara Iron Ore shipments: second highest on record

In **Iron Ore** (c.75% of FY23e EBITDA), Rio achieved Pilbara iron ore shipments of 332 Mt for 2023 (+3% vs 2022) within guidance for the upper half of the 320-335 Mt range and in line with expectations. Rio's 2023 Pilbara iron ore shipments were the second highest on record as Gudai-Darri reached nameplate capacity of 43 Mtpa. For 2024, Rio has maintained guidance for Pilbara iron ore shipments of 323-338 Mt (BofA 335 Mt). **Aluminium** production of 3.3 Mt for 2023 (+9% vs 2022) was 2% above consensus and +4% vs BofA as the Kitimat smelter returned to full capacity and RIO completed cell recovery efforts at Boyne during 3Q23 while all other smelters demonstrated stable performance. **Mined copper** production of 620 Kt for 2023 (+2% vs 2022) was broadly in line. The slight increase in copper production reflected first sustainable production from Oyu Tolgoi underground in 1Q23 a full year of increased ownership of Oyu Tolgoi, offsetting challenges at Kennecott following the conveyor failure in March, with the concentrator not returning to full capacity until 3Q23.

Estimates (Dec) (USD)	2021A	2022A	2023E	2024E	2025E
EPS (Adjusted)	13.21	8.20	8.09	9.36	7.11
EPS Change (YoY)	71.6%	-38.0%	-1.3%	15.7%	-24.0%
Dividend / Share	10.4	4.92	4.85	5.15	3.91
ADR EPS (Adjusted - US\$)	13.2	8.20	8.09	9.36	7.11
ADR Dividend / Share (US\$)	10.4	4.92	4.85	5.15	3.91
Valuation (Dec)					
P/E	5.6x	8.0x	8.6x	7.4x	9.7x
Dividend Yield	15.0%	7.1%	7.0%	7.4%	5.6%
EV / EBITDA*	3.4x	5.4x	5.1x	4.4x	5.3x
Free Cash Flow Yield*	16.1%	8.4%	9.5%	8.1%	4.9%
* For full definitions of <i>IQ</i> method SM measures, see page 6.					

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Refer to important disclosures on page 7 to 10. Analyst Certification on page 5. Price
Objective Basis/Risk on page 5.

Timestamp: 16 January 2024 12:59AM EST

16 January 2024

Equity

Key Changes		
(US\$)	Previous	Current
2023E EPS	7.64	8.09
2024E EPS	9.55	9.36
2025E EPS	7.29	7.11
2023E DPS	4.58	4.85

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Stock Data

Price (Common / ADR) 5,440 GBp / 70.18 USD 8,000 GBp / 98.00 USD Price Objective 20-Nov-2023 / 20-Nov-2023 Date Established Investment Opinion B-1-8 / B-1-8 52-Week Range 4,510 GBp-6,406 GBp Market Value (mn) 87.987 GBP Shares Outstanding (mn) 1,617.4 / 1,617.4 Average Daily Value (mn) 123.24 USD Free Float 100.0% BofA Ticker / Exchange RTPPF / LSE BofA Ticker / Exchange RIO / NYS Bloomberg / Reuters RIO I N / RIO I ROE (2023F) 24.4% Net Dbt to Eqty (Dec-2022A) ESGMeter™

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to "BofA ESGMeter Methodology".

iQprofile[™]Rio Tinto plc

Key Income Statement Data (Dec)	2021A	2022A	2023E	2024E	2025E
(US\$ Millions)					
Sales	63,495	55,554	56,384	60,045	53,875
EBITDA Adjusted	37,681	23,722	25,130	29,317	24,218
Depreciation & Amortization	(4,697)	(5,010)	(5,036)	(5,071)	(5,134)
EBIT Adjusted	32,984	18,712	20,095	24,247	19,084
Net Interest & Other Income	(26.0)	(1,846)	(855)	(167)	(177)
Tax Expense / Benefit	(8,258)	(5,586)	(4,709)	(6,890)	(5,235)
Net Income (Adjusted)	21,380	13,275	13,112	15,168	11,525
Average Fully Diluted Shares Outstanding	1,618	1,620	1,621	1,621	1,621
Key Cash Flow Statement Data					
Net Income (Reported)	21,094	12,420	12,509	15,168	11,525
Depreciation & Amortization	4,697	5,010	5,036	5,071	5,134
Change in Working Capital	(1,079)	(465)	(29.2)	(101)	259
Deferred Taxation Charge	0	0	0	0	0
Other CFO	633	(831)	278	(1,473)	(1,623)
Cash Flow from Operations	25,345	16,134	17,794	18,665	15,295
Capital Expenditure	(7,323)	(6,750)	(7,073)	(9,543)	(9,829)
(Acquisition) / Disposal of Investments Other CFI	NA 164	NA 43.0	NA 65.0	NA 0	NA 0
	(7,159)	(6,707)	(7,008)	(9,543)	
Cash Flow from Investing Share Issue / (Repurchase)	(7,139)	(0,707)	(7,008)	(9,543)	(9,829)
Cost of Dividends Paid	(15,357)	(11,727)	(6,515)	(9,181)	(6,953)
Increase (decrease) debt	154	(3,098)	1,586	0,101)	(0,555)
Other CFF	(559)	(633)	(234)	0	0
Cash Flow from Financing	(15,762)	(15,458)	(5,163)	(9,181)	(6,953)
Total Cash Flow (CFO + CFI + CFF)	2,424	(6,031)	5,623	(58.8)	(1,487)
FX and other changes to cash	(306)	(2,544)	(1.00)	0	0
Change in Cash	2,118	(8,575)	5,622	(58.8)	(1,487)
Change in Net Debt	(1,964)	5,477	(4,036)	58.8	1,487
Net Debt	(1,181)	4,296	260	318	1,806
Key Balance Sheet Data					
Property, Plant & Equipment	64,927	64,734	66,303	70,775	75,470
Goodwill	879	826	826	826	826
Other Intangibles	2,832	3,645	3,645	3,645	3,645
Other Non-Current Assets	9,826	8,596	8,949	9,283	9,767
Trade Receivables	3,574	3,478	3,526	3,761	3,433
Cash & Equivalents	15,350	6,775	12,397	12,339	10,851
Other Current Assets	5,508	8,720	7,967	8,376	7,686
Total Assets	102,896	96,774	103,613	109,005	111,678
Long-Term Debt	12,788	10,148	11,734	11,734	11,734
Other Non-Current Liabilities	20,891	22,282	21,032	19,893	18,755
Short-Term Debt	1,381	923	923	923	923
Other Current Liabilities	11,246	10,680	10,792	11,334	10,575
Total Liabilities	46,306	44,033	44,481	43,884	41,986
Total Equity	56,590	52,741	59,132 103,613	65,120	69,692
Total Equity & Liabilities	102,896	96,774	103,613	109,005	111,678
Business Performance*					
Return On Capital Employed	27.5%	15.0%	16.9%	18.2%	13.8%
Return On Equity	43.4%	26.0%	24.4%	25.3%	17.6%
Operating Margin	48.6%	36.9%	32.4%	38.6%	33.0%
Free Cash Flow (MM)	18,022	9,384	10,721	9,122	5,466
Quality of Earnings*					
			1 2 0	1 22	1 22
Cash Realization Ratio	1.19x	1.22x	1.36x	1.23x	
Cash Realization Ratio Asset Replacement Ratio	1.56x	1.35x	1.40x	1.88x	1.33x 1.91x
Cash Realization Ratio Asset Replacement Ratio Tax Rate	1.56x 26.8%	1.35x 29.9%	1.40x 27.0%	1.88x 30.0%	1.91x 29.7%
Cash Realization Ratio Asset Replacement Ratio	1.56x	1.35x	1.40x	1.88x	1.91x

For full definitions of ${\it N\!\!\!\! D}{\it method}^{\rm SM}$ measures, see page 6.

Company Sector

Non-Ferrous-Mining

Company Description

Rio Tinto is the world's second-largest mining company, with operations in Australia, Africa, the Americas, Europe and Central/SE Asia. Rio Tinto is the world's largest producer of aluminium, second largest producer of iron ore and a top 5 producer of alumina, uranium, mined copper, export thermal & coking coal, and diamonds.

Investment Rationale

RIO is positioning itself as the diversified miner with the highest ROCE and cash distributions to shareholders, pointing to its record to date and a strategy that demands limited incremental capital to drive modest production growth. We see RIO broadly as a 'Blue Chip' and steward of capital as it has solid cash flows from T1 assets and a dependable dividend yield. We are less negative iron ore on lower Brazilian supply and higher Chinese steel production, hence our Buy rating.

Stock Data	
Shares / ADR	1.00
Price to Book Value	2 Ox

Half-yearly Earnings Estimates

	2022	2023
Н1	5.35A	3.53E
H2	2.85A	4.56E

Key Changes		
(US\$)	Previous	Current
2023E EPS	7.64	8.09
2024E EPS	9.55	9.36
2025E EPS	7.29	7.11
2023E DPS	4.58	4.85



FY23 production results summary

- In **Iron Ore** (c.75% of FY23e EBITDA), Rio achieved Pilbara iron ore shipments of 332 Mt for 2023 (+3% vs 2022) within guidance for the upper half of the 320-335 Mt range and in line with expectations. Rio's 2023 Pilbara iron ore shipments were the second highest on record as Gudai-Darri reached nameplate capacity of 43 Mtpa. In October 2023, RIO announced plans to increase iron ore production capacity at Gudai-Darri from 43 Mtpa to 50 Mtpa through incremental productivity gains, at a cost of c.\$70m. Rio has maintained 2024 guidance for Pilbara iron ore shipments of 323-338 Mt (BofA 335 Mt).
- Aluminium production of 3.3 Mt for 2023 (+9% vs 2022) was 2% above consensus and +4% vs BofA as the Kitimat smelter returned to full capacity and RIO completed cell recovery efforts at Boyne during 3Q23 while all other smelters demonstrated stable performance.
- Mined copper production of 620 Kt for 2023 (+2% vs 2022) was broadly in line.
 The slight increase in copper production reflected first sustainable production from
 Oyu Tolgoi underground in 1Q23 a full year of increased ownership of Oyu Tolgoi,
 offsetting challenges at Kennecott following the conveyor failure in March, with the
 concentrator not returning to full capacity until 3Q23.

Exhibit 1: FY23 Production Table

Iron ore shipments increased 3% YoY supported by Gudai-Darri, whilst mined copper was increased following ramp up from Oyu Tolgoi.

					FY23		FY2023	Act. vs.		
	Unit	FY22	FY23	% YoY	BofAe	%vs est.	Guidance	Guidance	Cons est.	vs. Cons %
Pilbara iron ore shipments (100% basis)	Mt	321.6	331.8	3%	332.1	-0.1%	320-335	1%	332.6	0%
Pilbara iron ore production (100% basis)	Mt	324.1	331.5	2%	332.1	-0.2%	-		331	0%
Bauxite	Mt	54.6	54.6	0%	54.4	0.3%	54-57	-2%	53.6	2%
Aluminium	Kt	3,009	3,273	9%	3,148	4.0%	3,100-3,300	2%	3,223	2%
Mined copper	Kt	521.2	619.6	19%	611.5	1.3%	590-640	1%	631.4	-2%
Titanium dioxide slag	kt	1,200	1,110	-8%	1,183	-6.1%	1,100-1,400	-11%	1,122	-1%
IOC Iron ore pellets and concentrate	Mt	10.3	9.7	-6%	9.7	0.0%	9.3-9.8	-7%	8.3	17%

Source: BofA Global Research estimates, Rio Tinto

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2024 production guidance unchanged

Guidance for 2024 production volumes is unchanged while 2024 Pilbara Iron Ore and Copper unit cost guidance will be provided with the 2023 results on 21 February 2024.

Exhibit 2: FY24 Guidance Table

2024 Pilbara iron ore shipments remain unchanged with guidance range of 323-338 Mt (BofA 335 Mt).

				BofAe vs.		
Production Guidance for FY24	Unit	New	BofAe	Guidance	Consensus	% vs. Consensus
Pilbara iron ore shipments (100% basis)	Mt	323-338	335	1%	334	1%
Bauxite	Mt	53-56	54	-1%	55	1%
Aluminium	Mt	3.2-3.4	3.3	-1%	3.3	1%
Alumina	Mt	7.6-7.9	7.8	1%	7.8	0%
Mined copper	Kt	660-720	716	4%	750	9%
Refined copper	Kt	230-260	247	1%	238	-3%
IOC	Mt	9.8-11.5	10.3	-3%	9.8	-8%
Borates	Mt	0.5	0.5	-1%	1	2%
Titanium Dioxide Slag	Mt	0.9-1.1	1.1	7%	1.2	23%

Source: BofA Global Research estimates, Rio Tinto

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Earnings forecast changes

We increase 2023E underlying group EBITDA by 3.9%, largely driven by an 8% increase in average iron ore prices for 2H 2023. Iron ore EBITDA increased by 6.7% following the mark-to-market as 4Q production results were in-line with BofAe. Copper estimates decreased due to lower-than-expected volumes from Oyu Tolgoi (OT), trimming 2023E EBITDA by 15%. We also increased 2023E EBITDA Aluminium by 27% following stronger realised prices in 2H 2023.

Exhibit 3: Estimate changes

2023E underlying group EBITDA increased by 3.9%, largely driven by an 8% increase in average realised iron ore prices for 2H 2023.

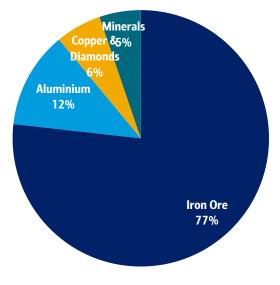
		2023E			2024E			2025E	
US\$mn	Current	Prior	% change	Current	Prior	% change	Current	Prior	% change
Financials estimates									
Consolidated Revenue	56,384	54,008	4.4%	60,045	59,485	0.9%	53,875	53,194	1.3%
Profit before finance items and taxation (P&L EBIT)	18,272	17,396	5.0%	23,172	23,613	-1.9%	17,800	18,213	-2.3%
EBITDA "Underlying"	25,130	24,194	3.9%	29,317	29,688	-1.2%	24,218	24,554	-1.4%
Iron Ore	20,297	19,019	6.7%	21,579	21,315	1.2%	13,232	13,044	1.4%
Aluminium	3,225	2,546	26.7%	3,655	3,718	-1.7%	4,933	4,927	0.1%
Copper	1,536	1,814	-15.3%	3,315	3,338	-0.7%	5,947	5,914	0.6%
Minerals	1,379	1,592	-13.3%	2,029	2,035	-0.3%	1,398	1,404	-0.4%
Other	-1,230	-700	75.7%	-1,261	-718	75.7%	-1,292	-735	75.7%
Net Profit adjusted	13,112	12,380	5.9%	15,168	15,474	-2.0%	11,525	11,812	-2.4%
EPS (basic) adjusted	8.09	7.64	5.9%	9.36	9.55	-2.0%	7.11	7.29	-2.4%
DPS	4.85	4.58	5.9%	5.15	5.25	-2.0%	3.91	4.01	-2.4%
Net Debt (cash)	260	264	-1.8%	318	-231	-237.6%	1,806	1,195	51.1%

Source: BofA Global Research estimates

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Exhibit 4: FY23 EBITDA by division

Iron ore is expected to be 77% of FY23 EBITDA

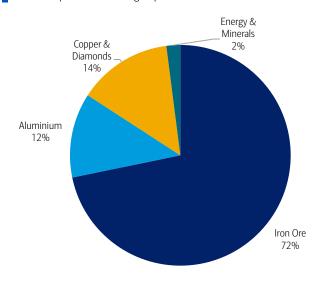


Source: BofA Global Research estimates

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Exhibit 5: NPV by division

Iron ore represents 72% of group NPV



Source: BofA Global Research estimates

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Price objective basis & risk

Rio Tinto Plc (RTPPF / RIO)

Our price objective of GBp 8000 (ADR: US\$98) is based on c.1.0x our NPV estimate. Our NPV uses 9% WACC and 2% terminal growth rate. Diversified miners have historically traded in a range of 0.7-1.4x NPV.

Downside risks :1) commodity prices, which could be lower than our forecasts, resulting in lower-than-forecast earnings, 2) unsuccessful project execution, and 3) operational problems at mines and smelters.

Upside risks: 1) China growth is higher vs. our expectations, 2) Iron ore price surprises to the upside.

Analyst Certification

I, Jason Fairclough, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

EMEA - Metals & Mining, Steel, Paper Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Acerinox	ANIOF	ACX SQ	Patrick Mann, CFA
	Alleima AB	SAMHF	ALLEISS	Patrick Mann, CFA
	Anglo American	AAUKF	AAL LN	Jason Fairclough
	Anglo American plc	NGLOY	NGLOY US	Jason Fairclough
	Antofagasta	ANFGF	ANTO LN	Jason Fairclough
	Atalaya Mining Plc	XPGBF	ATYM LN	Jason Fairclough
	Befesa	BFSAF	BFSA GY	Cameron Needham
	Centamin Plc	CELTF	CEY LN	Jason Fairclough
	Centamin Plc	YCEE	CEE CN	Jason Fairclough
	DS Smith plc	DITHF	SMDS LN	Patrick Mann, CFA
	Ecora Resources Plc	ECRAF	ECOR LN	Cameron Needham
	Eramet	ERMAF	ERA FP	Jason Fairclough
	Glencore	GLCNF	GLEN LN	Jason Fairclough
	Glencore Plc	GLNCY	GLNCY US	Jason Fairclough
	Hochschild Mining plc	HCHDF	HOC LN	Jason Fairclough
	Mondi plc	MONDY	MONDY US	Joffrey Bellicha Meller
	Mondi Plc	MONDF	MNDI LN	Joffrey Bellicha Meller
	Mondi Plc	XDPMF	MNP SJ	Joffrey Bellicha Meller
	Norsk Hydro	NHYDY	NHYDY US	Jason Fairclough
	Norsk Hydro	NHYKF	NHY NO	Jason Fairclough
	Rio Tinto Plc	RIO	RIO US	Jason Fairclough
	Rio Tinto Plc	RTPPF	RIO LN	Jason Fairclough
	SCA	SVCBF	SCAB SS	Joffrey Bellicha Meller
	SIG Group	SCBGF	SIGN SW	Patrick Mann, CFA
	Smurfit Kappa	SMFTF	SKG ID	Joffrey Bellicha Meller
	Smurfit Kappa	XNKFF	SKG LN	Joffrey Bellicha Meller
	Smurfit Kappa	SMFKY	SMFKY US	Joffrey Bellicha Meller
	Stora Enso	SEOJF	STERV FH	Joffrey Bellicha Meller
	Stora Enso	SEOAY	SEOAY US	Joffrey Bellicha Meller
	Thyssenkrupp	TYEKF	TKA GY	Jason Fairclough
	Verallia	VRLAF	VRLA FP	Patrick Mann, CFA
	Yellow Cake Plc	YLLXF	YCA LN	Jason Fairclough
NEUTRAL				
	ArcelorMittal	AMSYF	MT NA	Patrick Mann, CFA
	ArcelorMittal	MT	MT US	Patrick Mann, CFA
	Horizonte Minerals	HZMMF	HZM LN	Jason Fairclough
	Imerys	IMYSF	NK FP	Jason Fairclough
	Salzgitter	SZGPF	SZG GY	Patrick Mann, CFA
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EMEA - Metals & Mining, Steel, Paper Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Voestalpine	VLPNF	VOE AV	Patrick Mann, CFA
UNDERPERFORM				
	Aperam	XASPF	APAM NA	Patrick Mann, CFA
	Aurubis	AIAGF	NDA GY	Jason Fairclough
	Billerud AB	BLRDF	BILL SS	Joffrey Bellicha Meller
	Billerud AB	BLRDY	BLRDY US	Joffrey Bellicha Meller
	Boliden	BOLIF	BOL SS	Jason Fairclough
	Ferrexpo plc	FEEXF	FXPO LN	Jason Fairclough
	Fresnillo plc	FNLPF	FRES LN	Jason Fairclough
	Outokumpu	OUTFF	OUT1V FH	Patrick Mann, CFA
	Sappi Limited	SPPJF	SAP SJ	Joffrey Bellicha Meller
	Sappi Limited	SPPJY	SPPJY US	Joffrey Bellicha Meller
	SSAB	SSAAF	SSABA SS	Patrick Mann, CFA
	UPM-Kymmene	UPMKF	UPM FH	Joffrey Bellicha Meller

IQmethod[™] Measures Definitions

Business Performance	Numerator	Denominator
Return On Capital Employed	NOPAT = (EBIT + Interest Income) × (1 - Tax Rate) + Goodwill Amortization	Total Assets - Current Liabilities + ST Debt + Accumulated Goodwill
		Amortization
Return On Equity	Net Income	Shareholders' Equity
Operating Margin	Operating Profit	Sales
Earnings Growth	Expected 5 Year CAGR From Latest Actual	N/A
Free Cash Flow	Cash Flow From Operations — Total Capex	N/A
Quality of Earnings	Numerator	Denominator
Cash Realization Ratio	Cash Flow From Operations	Net Income
Asset Replacement Ratio	Capex	Depreciation
Tax Rate	Tax Charge	Pre-Tax Income
Net Debt-To-Equity Ratio	Net Debt = Total Debt — Cash & Equivalents	Total Equity
Interest Cover	EBIT	Interest Expense
Valuation Toolkit	Numerator	Denominator
Price / Earnings Ratio	Current Share Price	Diluted Earnings Per Share (Basis As Specified)
Price / Book Value	Current Share Price	Shareholders' Equity / Current Basic Shares
Dividend Yield	Annualised Declared Cash Dividend	Current Share Price
Free Cash Flow Yield	Cash Flow From Operations — Total Capex	Market Cap = Current Share Price × Current Basic Shares
Enterprise Value / Sales	EV = Current Share Price × Current Shares + Minority Equity + Net Debt +	Sales
	Other LT Liabilities	
EV / EBITDA	Enterprise Value	Basic EBIT + Depreciation + Amortization

Monethod Suis the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of iQmethod are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

Relatabase is our real-time global research database that is sourced directly from our equity analysts' earnings models and includes forecasted as well as historical data for income statements, balance sheets, and cash flow statements for companies covered by BofA Global Research.

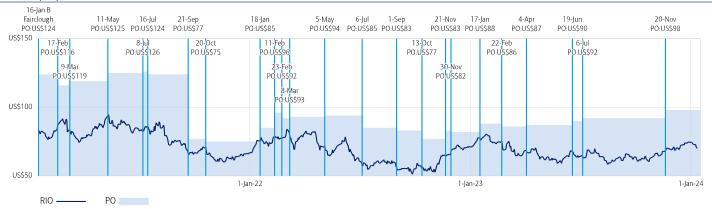
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Disclosures

Important Disclosures

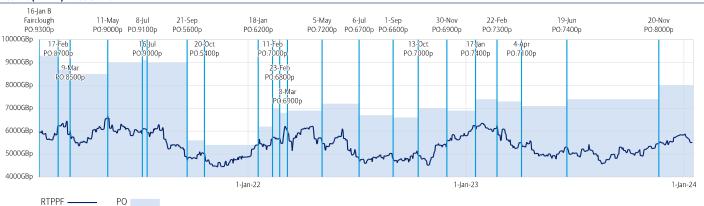
Rio Tinto Plc (RIO) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

Rio Tinto Plc (RTPPF) Price Chart



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Equity Investment Rating Distribution: Non-Ferrous Metals/Mining & Minerals Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	58	53.70%	Buy	26	44.83%
Hold	24	22.22%	Hold	10	41.67%
Sell	26	24.07%	Sell	13	50.00%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

R1 Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.



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Investment rating Total return expectation (within 12-month period of date of initial rating) Ratings dispersion guidelines for coverage cluster^{R2}

 Buy
 ≥ 10%
 ≤ 70%

 Neutral
 ≥ 0%
 ≤ 30%

 Underperform
 N/A
 ≥ 20%

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