

BHP Group Limited

1H FY24 results in line. Future of nickel and copper growth options in focus

Reiterate Rating: BUY | PO: 52.00 AUD | Price: 45.54 AUD

Results fine. Samarco, Nickel and Copper growth in focus

BHP has reported 1H FY24 earnings and dividends in line and reaffirmed all guidance. With underlying operations performing well, focus areas on the analyst call were the future of Western Australia Nickel; has BHP adequately provisioned for Samarco; growth in South Australian Copper to >500 ktpa longer term (vs 310-340 kt in FY24e); and Escondida growth options. We make minor (<5%) changes to our FY24-26 estimates while our price objective is trimmed to \$52.00/sh due to higher net debt and lower copper grades at Escondida from FY27. However, with 18% potential TSR we reiterate our Buy on BHP, the world's largest mining company. BHP provides exposure to higher for longer iron ore and coal prices and an expected strong increase in copper prices.

WAIO solid. Focus on Copper growth and future of nickel

WAIO is once again the bedrock for BHP, comprising 68% of group EBITDA and generating >60% ROCE. BHP is focused on increasing production to >305 Mtpa over the medium term (FY26e) while studying options to expand WAIO up to 330 Mtpa. Guidance for copper production at Escondida is unchanged at 1,080-1,180 kt for FY24, increasing to 1,200-1,300 ktpa in FY25 and FY26. However, BHP expects copper production to fall to 900-1,000 ktpa from FY27 for several years due to lower copper grades. To offset lower grades, BHP is assessing the potential for a new concentrator and the application of one or more leaching technologies. Regarding nickel, BHP expects the global nickel market to remain in surplus until the end of the decade. We therefore, see a high probability of Nickel West being placed into care and maintenance post FY24.

1H FY24 EBITDA & DPS in line, FY24 guidance unchanged

BHP reported 1H FY24 underlying EBITDA of \$13.9bn (+5% vs pc), in line with expectations for \$14.0bn. At the divisional level, all segments were in line with few surprises. BHP declared an interim dividend of 72 UScps (56% payout) vs consensus of 70 UScps (54% payout) and BofAe of 74 UScps. Net debt of \$12.6bn at 31 Dec-23, in the upper half of the \$5-15bn net debt target range hence the lower dividend payout ratio (vs 69% 1H FY23). FY24 guidance for unit costs, production and capex is also unchanged as is capex guidance for FY25 and the medium term.

Estimates (Jun)	2022A	2023A	2024E	2025E	2026E
EPS (Reported b/f exceptionals - US\$)	4.434	2.579	3.213	2.484	2.357
EPS (Reported b/f exceptionals - A\$)	6.380	3.902	4.991	3.854	3.672
Dividend / Share (US\$)	3.250	1.700	1.774	1.366	1.296
Dividend / Share (A\$)	4.676	2.572	2.756	2.120	2.020
Valuation (Jun)					
P/E	7.1x	11.7x	9.4x	12.1x	12.8x
Dividend Yield	10.8%	5.6%	5.9%	4.5%	4.3%
EV / EBITDA*	3.9x	5.6x	5.1x	5.6x	5.8x
Free Cash Flow Yield*	15.2%	7.6%	6.3%	6.6%	6.4%

* For full definitions of *IQmethod*SM measures, see page 15.

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Refer to important disclosures on page 16 to 19. Analyst Certification on page 13. Price Objective Basis/Risk on page 13.

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20 February 2024

Equity

Key Changes

(US\$)	Previous	Current
Price Obj.	A\$53.00	A\$52.00
2024E EBITDA (m)	31,136.8	30,973.6
2025E EBITDA (m)	28,327.6	28,083.0
2026E EBITDA (m)	27,281.7	27,057.5

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Stock Data

Price (ASX Ord / ADR / UK Ord)	45.54 AUD / 60.34 USD / 2,378 GBp
Price Objective	52.00 AUD / 65.00 USD / 2,650 GBp
Date Established	20-Feb-2024 / 15-Feb-2024 / 20-Feb-2024
Investment Opinion	B-1-7 / B-1-7 / B-1-7
52-Week Range	41.66 AUD-50.84 AUD
Market Value (mn)	150,533 USD
Market Value (mn)	230,296 AUD
Shares Outstanding (mn)	5,057.0 / 2,528.5 / 5,057.0
Average Daily Value (mn)	249.65 USD
Free Float	100.0%
BofA Ticker / Exchange	BHPLF / ASX
BofA Ticker / Exchange	BHP / NYS
BofA Ticker / Exchange	ZBHPF / LSE
Bloomberg / Reuters	BHP AU / BHPAX
ROE (2024E)	35.4%
Net Dbt to Eqty (Jun-2023A)	20.4%

iQprofileSM BHP Group Limited

Key Income Statement Data (Jun)	2022A	2023A	2024E	2025E	2026E
(US\$ Millions)					
Sales	66,050	54,211	58,716	53,534	52,668
Operating Expenses	-26,688	-26,812	-34,042	-25,191	-25,370
EBITDA	40,634	27,956	30,974	28,083	27,058
Depreciation & Amortization	-5,683	-5,061	-5,326	-5,634	-5,442
EBIT	34,951	22,895	25,648	22,449	21,616
Net Interest & Other income	-969	-1,531	-1,663	-1,524	-1,482
Pretax Income	34,089	21,401	18,150	21,878	21,102
Tax (expense) / Benefit	-10,737	-7,077	-6,166	-7,494	-6,999
Minorities	-2,155	-1,403	-1,355	-1,805	-2,167
Net Income (Reported b/f Exceptionals)	21,197	12,921	10,629	12,578	11,936
Exceptional Items (After Tax)	107	37	-5,835	952	968

Key Cash Flow Statement Data					
Net Income (Reported)	31,852	12,921	10,629	12,578	11,936
Depreciation & Amortization	-5,683	-5,061	-5,326	-5,634	-5,442
Change in Working Capital	-841	-263	-1,450	411	85
Deferred Taxation Charge	0	0	0	0	0
Other Adjustments, Net	1,339	-552	4,610	424	115
Cash Flow from Operations	29,285	18,701	19,646	19,844	18,381
Capital Expenditure	-6,111	-7,083	-10,001	-9,722	-8,676
(Acquisition) / Disposal of Investments	-537	-6,720	-948	0	0
Other Cash inflow / (Outflow)	1,675	738	1,109	333	333
Cash Flow from Investing	-4,973	-13,065	-9,840	-9,388	-8,343
Shares Issue / (Repurchase)	NA	NA	NA	NA	NA
Cost of Dividends Paid	-17,851	-13,268	-7,691	-9,171	-6,605
Cash Flow from Financing	-22,734	-10,315	-10,408	-10,560	-8,816
Free Cash Flow	23,174	11,618	9,645	10,122	9,705
Net Debt	333	9,917	9,195	9,300	8,078
Change in Net Debt	-5,404	9,584	-722	105	-1,222

Key Balance Sheet Data					
Cash & Equivalents	17,236	12,428	11,826	11,721	12,943
Other Current Assets	1,067	1,109	1,109	1,109	1,109
Property, Plant & Equipment	61,295	71,818	69,357	72,726	75,233
Investments	802	1,115	1,115	1,115	1,115
Total Assets	95,166	101,296	102,000	104,178	108,117
Short-Term Debt	2,594	7,173	7,173	7,173	7,173
Other Current Liabilities	14,325	11,870	11,691	11,194	11,234
Long-Term Debt	14,975	15,172	13,848	13,848	13,848
Other Non-Current Liabilities	14,506	18,555	17,862	16,714	15,327
Total Liabilities	46,400	52,766	50,570	48,925	47,577
Net Asset	48,766	48,530	51,430	55,254	60,540
Minorities	3,809	4,034	3,996	4,413	4,368
Shareholder Funds	44,957	44,496	47,434	50,841	56,172

iQmethodSM - Bus Performance*					
Return On Average Assets	34.3%	23.3%	25.2%	21.8%	20.4%
Return on Equity	46.6%	29.2%	35.4%	25.6%	22.3%
EBIT Margin	55.5%	42.6%	34.0%	43.7%	42.9%
EBITDA Margin	61.7%	51.6%	42.8%	54.2%	53.2%

iQmethodSM - Quality of Earnings*					
Price / EBITDA	3.7x	5.5x	4.9x	5.4x	5.6x
Price / Free Cash Flow	6.5x	13.0x	15.6x	14.9x	15.5x
Tax Rate (Effective)	31.5%	33.1%	34.0%	34.3%	33.2%
Net Debt-to-Equity Ratio	0.7%	20.4%	17.9%	16.8%	13.3%
Interest Cover (EBITDA Basis)	38.7x	13.6x	13.2x	14.1x	14.3x

Key Metrics					
Franking (%)	100%	100%	100%	100%	100%

* For full definitions of iQmethodSM measures, see page 15.

Company Sector

Non-Ferrous-Mining

Company Description

BHP is the world's largest mining company and a top 3 global producer of iron ore, metallurgical coal and copper in concentrate. BHP has some of the world's best undeveloped resources and it is this inventory of resources & growth projects that we expect will allow the company to maintain its position as a leading global resource company.

Investment Rationale

BHP is a diversified miner which provides greater earnings stability and less volatile cash flows vs. pure play mining companies. Earnings are driven by price and production and shares tend to trade according to earnings and NPV expectations. BHP's assets are low-cost and longer-life "franchise" assets, so the company has less sensitivity to prices than many of its peers.

Stock Data

Shares / ADR	2.00
Price to Book Value	3.2x

Key Changes

(US\$)	Previous	Current
2024E EPS	6.26	6.43
2025E EPS	5.23	4.97
2026E EPS	4.96	4.71

1H FY24 in line, all guidance reaffirmed

BHP reported 1H FY24 underlying EBITDA of \$13.9bn, in line with VA consensus and BofAe of \$14.0bn. Underlying EBITDA rose 5% vs pcg driven by higher iron ore and copper prices. BHP's group EBITDA remained strong at 53.3%. At the divisional level, all segments were in line with few surprises.

BHP noted it continues to experience the impacts of inflation on its underlying cost base, particularly on labour and parts, as reflected in a global inflation rate of 6.3% across BHP's operating jurisdictions during CY23.

Unit costs were approx. 5.4% higher across BHP's major assets during 1H FY24 reflecting disciplined cost and reliable operational performance and the normalisation of commodity linked consumable prices such as diesel and acid.

BHP declared an interim dividend of 72 UScps (56% payout) broadly in line with consensus of 70 UScps (54% payout) and BofAe of 74 UScps (55% payout).

As flagged last week (see [Samarco settlement moving closer? \\$5.7bn impairment for Nickel and Samarco](#)), BHP took a \$2.5bn (post-tax) impairment against the carrying value for Western Australia Nickel and increased its provision for Samarco by \$3.2bn (post-tax). As a result, reported income declined by 86% to \$927m in 1H FY24.

Net operating cash flow of \$8.9bn rose 31% vs pcg driven by higher underlying EBITDA and lower income tax and royalty related taxation payments, partially offset by an increase in working capital. Free cash flow in 1H FY24 was 9% higher vs pcg at \$3.8bn.

Net debt of \$12.6bn at 31 Dec-23, in the upper half of the \$5-15bn net debt target range hence the lower dividend payout ratio (vs 69% 1H FY23). Net gearing is also creeping up to 21.7% 18.7% in FY23.

FY24 guidance for unit costs and production is unchanged. Capex guidance for FY24 and FY25 is also unchanged at ~US\$10 bn p.a. including US\$0.4 bn of exploration in FY24.

Medium term capex is also reaffirmed at ~US\$11 bn per annum on average.

Exhibit 1: 1H FY24 results summary

At the divisional level, all segments were in line with few surprises as BHP reported 1H FY24 underlying EBITDA in line with consensus.

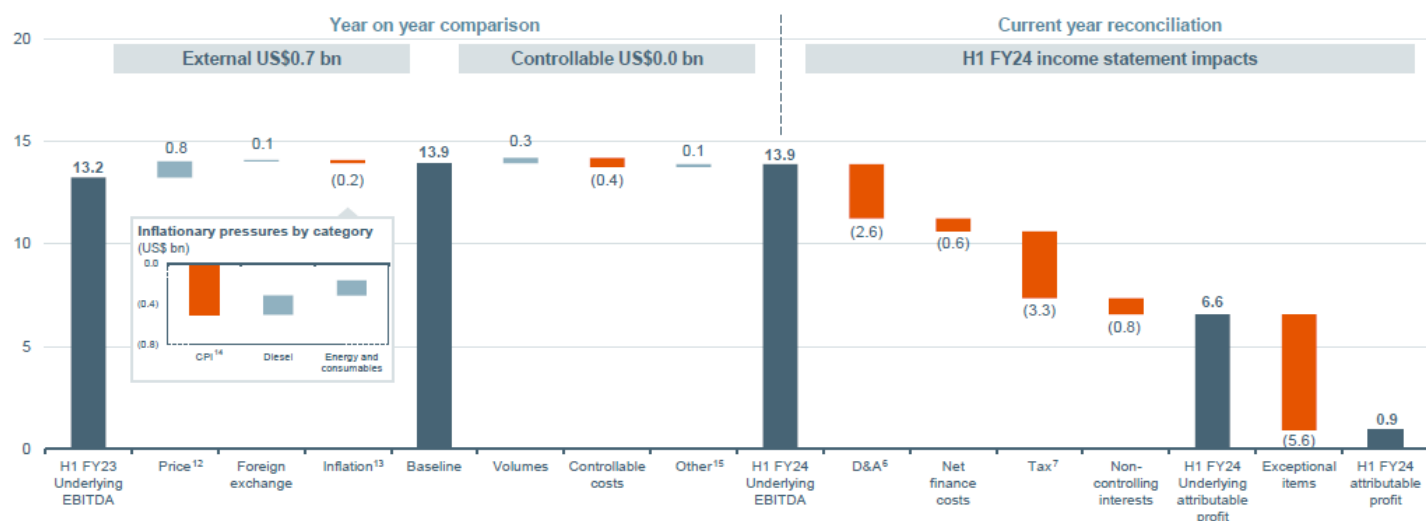
HY Results	Unit	1H23	2H23	1H24	HoH	YoY	Cons. Est.	vs Cons.	BofA Est.	vs BofA
Underlying EBITDA	US\$b	13.2	14.7	13.9	-6%	5%	14.0	-1%	14.0	-1%
Underlying EBIT	US\$b	10.8	12.0	10.8	-11%	0%	11.2	-4%	11.2	-4%
Underlying Profit	US\$b	6.6	6.8	6.6	-3%	0%	6.6	1%	6.8	-3%
Underlying EPS	US cps	129.8	134.1	129.6	-3%	0%	130	0%	134	-3%
DPS	US cps	90.0	80.0	72.0	-10%	-20%	70	3%	74	-2%
Payout ratio	US cps	69%	60%	56%	-7%	-20%	54%	3%	55%	1%
Segment EBITDA										
Copper	US\$b	2.8	3.8	3.5	-9%	24%	3.4	4%	3.5	-1%
Iron Ore	US\$b	7.6	9.0	9.7	7%	27%	9.7	0%	9.8	-1%
Coal	US\$b	2.6	2.4	1.0	-58%	-62%	1.2	-15%	0.9	9%
Group & unallocated	US\$b	0.1	-0.4	-0.2	-53%	-278%	-0.3	-	0.3	-

Source: BofA Global Research estimates, BHP, Visible Alpha

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Exhibit 2: BHP earnings waterfall

Underlying EBITDA rose 5% in 1H FY24 due to higher iron ore and copper prices, partially offset by higher costs

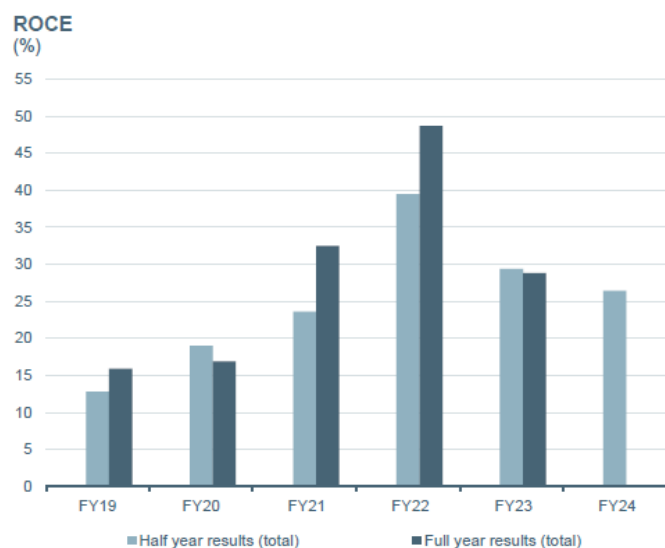


Source: BHP Presentation

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Exhibit 3: BHP generated a 26.4% return on capital employed for 1H FY24

Western Australian Iron Ore is the jewel in the crown with a ROCE over 60%



Source: BHP Presentation



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All guidance reaffirmed

Exhibit 4: FY24 Production guidance

All production guidance for FY24 remains unchanged

FY24 Production Guidance	Unit	Notes	FY23A	FY24 Guidance	YoY Change	FY24 BofAe	BofA vs Guidance	FY24 Cons	Cons. Vs Guidance
Copper	Kt	Unchanged	1,777	1720-1910	2.2%	1,819	0.2%	1,811	-0.2%
Escondida	Kt	Unchanged	1,055	1080-1180	7.1%	1,117	-1.1%	1,092	-3.3%
Pampa Norte	Kt	Unchanged	289	210-250	-20.4%	250	8.6%	250	8.7%
South Australia	Kt	Unchanged	232	310-340	39.8%	321	-1.2%	322	-0.9%
Antamina	Kt	Unchanged	138	120-140	-6.1%	127	-2.5%	137	5.1%
Iron Ore (Equity %)	Mt	Unchanged	254	254-264.5	2.0%	259	0.0%	259	-0.3%
WAIO (100% basis)	Mt	Unchanged	281	282-294	2.5%	287	-0.4%	287	-0.5%
Metallurgical Coal (Equity %)	Mt	Unchanged	26.7	23-25	-10.1%	25	2.9%	25	3.3%
NSW Energy Coal	Mt	Unchanged	16.2	13-15	-13.6%	15	3.6%	15	5.4%
Nickel	kt	Unchanged	81.4	77-87	0.7%	81	-1.2%	81	-0.8%

Source: BofA Global Research estimates, company report, Visible Alpha

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Exhibit 5: FY24 cost guidance

All cost guidance was reaffirmed.

FY24 Cost Guidance	Unit	FY23A	FY24 Guidance	YoY Change	Medium term	FY24 BofAe	BofA vs Guidance
Escondida	US\$/lb	1.4	1.4-1.7	11%	1.3-1.6	1.57	1%
Spence	US\$/t	2.1	2-2.3	2%	-	2.20	2%
WA Iron Ore *	US\$/t	17.8	17.4-18.9	2%	<17	17.74	-2%
BMA Unit cost	US\$/t	96.5	110-116	17%	-	112.84	0%

* FY24 and medium term unit cost guidance are based on AUD/USD 0.67

Source: BofA Global Research estimates, company report

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Exhibit 6: FY24 & 25 capex guidance

Capex guidance was also retained.

Total Capex guidance	Unit	Guidance	BofA FY24e	vs BofA	Cons FY24e	Vs. Cons
FY24 capex	US\$m	10,000	10,001	0%	10,028	0%
FY25 capex	US\$m	10,000	9,722	3%	9,886	1%

Source: BofA Global Research estimates, company report, Visible Alpha

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Earnings forecast changes

We make minor (<5%) changes to our FY24-26 estimates while our price objective is trimmed to \$52.00/sh due to higher net debt and lower copper grades at Escondida from FY27.

Exhibit 7: Summary estimate changes

Production and cost guidance were unchanged resulting in minimal changes to our estimates.

	FY2024E			FY2025E			FY2026E		
US\$ millions	New	Prior	% Chg	New	Prior	% Chg	New	Prior	% Chg
Revenue	58,716	58,241	1%	53,534	53,534	0%	52,668	52,668	0%
Underlying EBITDA	31,135	31,137	0%	28,083	28,328	-1%	27,297	27,282	0%
Copper	7,092	7,032	1%	10,822	10,806	0%	12,314	12,299	0%
Iron Ore	22,076	22,076	0%	16,278	16,278	0%	13,808	13,808	0%
Coal	2,648	2,651	0%	1,708	1,708	0%	1,265	1,265	0%
Group & Unallocated	-680	-621	NA	-724	-464	NA	-90	-90	NA
EBIT reported	19,813	19,841	0%	23,402	23,492	0%	22,584	22,673	0%
Net profit underlying	16,271	15,840	3%	12,578	13,246	-5%	11,936	12,555	-5%
EPS underlying - US\$/share	3.21	3.13	3%	2.48	2.62	-5%	2.36	2.48	-5%
DPS - US\$/share	1.77	1.72	3%	1.37	1.44	-5%	1.30	1.36	-5%
Net Debt	9,195	6,331	45.2%	9,299.77	5,636.05	65.0%	8,078	3,909	106.6%

Source: BofA Global Research estimates

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Analyst conference call Q&A session

Nickel is lossmaking for BHP, market may remain in surplus until late 2020s, at what point will it be placed onto care and maintenance, and will you consider pausing on West Musgrave?

Yes, glut is significant out of Indonesia, impacting class I nickel prices. Expect a decision in months, not years on Western Australia Nickel. For West Musgrave, it still could generate reasonable returns. It's prudent to slow up spend on West Musgrave.

Unlike other Nickel producers, we have downstream processing, smelter and refinery also needs to be assessed, different to others as we need to think about how to recommence once we go into care and maintenance. Need a little more excess time to decide given our additional capacity.

Samarco, \$6.5bn provision is best estimate, but doesn't include class action in London, are you concerned? Any upside risk to provisions?

Best estimate to fully resolve in Brazil is \$6.5bn. We think the case in London is without merits and we will defend strongly. Not only UK, but Australian legal case, we will also vigorously defend. What are we here to do? Full remediation and resettlement cases. These are on track, and we are executing well.

Samarco, BHP has a view that the number is out of line where it should end up, what information is missing in Brazil to bridge the gap?

We have commenced process for clarification to the judicial decision in Brazil. Number of factual inaccuracies that need to be worked through. We will appeal the judgement as well. We believe all parties are motivated to settle, we have been in negotiations, and we have made an estimate in relation to that settlement, but there is upside and downside risk to that number.

BHP's strategy is to appeal but also try to settle, are you trying to avoid a 5-year timeline?

We believe parties are motivated to settle, that's our intent as well. We aim to find a fair and equitable resolution to the prosecutors claim. The appeal process is 2-5 years, but a settlement will be over a period of time.

Copper growth projects: FY27 will see falling grades at Escondida but you've pushed out concentrator timeline? Why are you deferring tonnes despite the grade decline?

It's a value optimisation decision and it is flexible; we continue to look at options and firm up as practicable but given the myriad of options and capital associated with those, we need to get it right. Given the choices between concentrator/leaching and the numerous options within each, we need to work out the best return and NPV path forward. Hence FID has slipped by a year. Late CY24 we should have more to say about copper options and the returns associated with those.

South Australia, Prominent hill shaft \$670m, has the block cave capex at Carrapateena, gone up against OZL estimate?

For both Carrapateena and Prominent Hill, have a look at the independent experts reports which are different to what OZL have calculated. Nothing different to what we have anticipated. But overall, the copper market is going to move into deficit, and we are pretty well placed. Plus, we're in the process of firming up growth options.

Great drill results at OD deep, conceptual thinking how it fits into regional plans?

OD deep work began before OZL assets were acquired. OD deep is now a further option to draw upon for near-term expansion of OD, looking to move to 2-stage smelter to allow over 500ktpa of copper production. Growth comes from combination of OD improvement, OD Deep, Carrapateena and Prominent Hill. High grade copper is an attractive asset to hold today, and we have an impressive resource base.

Met coal and wet weather in Queensland, any updates for this year?

Supposed to be a drier year but it hasn't turned out that way, heavy rain does impact underlying operations. Pretty quick to flow through weather disruptions into production. We're rebuilding stripping inventory but that takes time, we've updated guidance already, and having seen heavy rains early this half, I'd say we're trending towards lower end of the guidance range.

Capital management, net debt 5-15%, any option to push net debt above top of range?

We are comfortable with 5-15% and we are targeting \$11bn of capital, but it's not a hard number. We can deliver on growth platform (largely copper) but don't forget potash Stage 1 which will produce a lot of cash too. \$8.9bn operating cash flow, we are in a solid position in relation to the balance sheet.

Copper South Australia, OD Deep block cave? Any chance of changing mining methodology at OD? Timing of studies?

Still too early to call it, but all options on the table. OD Deep is way too early to have a view on whether there is a block cave opportunity. Major smelter outage is 2027-2028, that's the natural time to look at expanding smelter. To meet that, we need FID around 2026, but there's a range of other projects to consider too.

Copper South Australia, unit costs were roughly \$3.5/lb, where can these costs get to? And what's the capital intensity of smelter upgrade?

We had a plan in 2017-2018 where we needed to have operational stability for OD. To secure operational stability, we needed asset integrity and capability within the business. OD is operating at high cost as it lacks scale. Drilling at Oak Dam also contributes to costs. Expanding smelter will help scale returns quickly. OZL has given us optionality in extracting synergies and expansion from the combined asset. Capital intensity is still a work in process.

Having reviewed the Oz Minerals transaction and capital allocation framework, any lessons learned given there's been an impairment on West Musgrave that's roughly ~20% of deal value?

You need to concentrate on where majority of the value sits, which was South Australian Copper. Yes, impairment on nickel, we did assume there would be synergies between concentrate processing through Nickel West. Clearly if that goes into care and maintenance then those synergies won't happen. No one saw the severity of the impact of Indonesian nickel on class I/LME prices, which we got wrong, but we're not alone in that context. However, we see more than expected optionality in the copper side, proven by our accelerated synergies.

500kt target in Copper SA, what's the asset split?

We are targeting more than that. Pre-OD Deep, existing growth was through OZL assets, OD improvements and development out of Oak Dam. Oak dam sizing still to be determined.

If Nickel West goes into care and maintenance, when will you spend \$900m rehab costs?

Closure provisions across the board are not an immediate spend. There needs to be plans in place to meet obligations. It's not cash out the door immediately. Also moving into care and maintenance doesn't mean we need to use that. This isn't a slow burn for the Nickel West decision as need to consider technical issues of moving a refinery into C&M.

Given the copper production shortfall from FY27 at Escondida, will you accelerate options?

The same time as when we forecast the Escondida grade dip is when Jansen comes online which will have cash flows, plus there is continued creep growth at WAIO. We have such optionality, and we want to mature these options quickly as possible. But for Escondida, there are also other options can be brought forward more quickly. Inorganic? No, we will remain disciplined on the M&A front, same as Noront and OZL. We already have the resources that underpin long term growth outlook.

Upcoming spend on nickel smelter rebuild now on hold at Nickel West? Are you looking to ship nickel concentrate?

All is being considered as part of review underway. Smelter investment is part of consideration. Decision will take months, not years.

Outlook of production from FY27 does look lower, how do you rate confidence for Escondida to get above 1Mt again?

It's a very large resource, higher grade relatively, plus options in concentrate and leaching. We couldn't ask for a better set up of opportunity here. We will demonstrate our confidence later this calendar year.

Carrapateena block cave capability?

We acquired block cave capability, and the two OZL assets are behaving as expected (capital costs and operating costs). We are pleased and getting Prominent Hill feed through OD. Sharing infrastructure which has delivered synergies.

Iron ore market, China Mineral Resources Group, any chance there will be movement back to fixed price contracts?

Our CMRG relationship is constructive, but as far as we're aware, nobody is looking at moving back to fixed price contracts at this point in time. It's been a constructive engagement to date. All market participation recognise pitfalls of fixed price contracts and we need to consider sensible risk management.

Operating performance has seen 3 fatalities in last year?

CEO: Personally gutted, it is something we take seriously. We are spending a lot more time in the field to listen to people and their concerns. Both employees and contractors agree that safety culture and approach has improved over time, and yet we've had 3 fatalities. All involved moving equipment, we pay attention to that. It's a big business and there are variable practices, so we need to be more consistent with how we lead safety.

Who do you buy concentrate from for Nickel West? Are there certain silos you can operate standalone?

We have high degree of optionality to sell different products, matte, refined, sulphate and concentrate. Each have different market liquidity; in the past we've optimised in the moment. But with the discounts it can be economically unattractive.

30% production comes from 3rd party sources, and these are moving into care and maintenance which impacts on our scale and ability to wash through fixed costs.

What are the Spence recoveries going forward? Below 80%?

As we get deeper into the pit, more sulphide leads to improvement in overall recoveries.

Is Nickel commodity still a pillar for BHP? Counter cyclical transactions in this space?

Nickel has been small part of BHP portfolio, even under growth scenario, still a small but attractive business. By no means a needle mover for BHP. There is oversupply until end of the decade. One thing to hang onto nickel assets, another thing to acquire for an opportunity in the 2030s, would prefer to remain disciplined given copper options to deploy capital for attractive returns.

What options are there around productivity to offset inflation headwinds?

Broader business (flagship WAIO) maintaining good cost control. How do we go about doing that? A well engaged frontline and deployment of technology and innovation (Automated trucks) will allow us to operate at peak performance.

Does 900-1,000kt at Escondida include leaching?

Only the full SaL leaching, which plays out over a number of years but not a material contributor to the tonnes.

DRI in terms of steelmaking. Some of your peers have shown interest in West African Iron ore deposits... why not BHP?

We prefer to deploy capital into copper and potash. Only 3% iron ore resources are suitable to DRI production. If you're a steelmaker, it's not an attractive outlook, so they will look at alternative routes (ESF) as this methodology is much more suitable for Pilbara ore. Why we intend to stay in that area.

Spence tailings dam rebuild capex, what's gone wrong?

Keep in mind the minute projects go well, there is too much fat in the projects, Spence, a real focus on bringing on a project more efficiently, the assumptions made were slightly off, i.e., remediating the concentrator required further spend. Tailings dam was just issues with underlying surface upon which it was built, unfortunately remediation work is relatively expensive. Note that the challenges haven't impacted production but will require remediation effort as we've called out. Learnings are to check, recheck and recheck again. We don't want to gold plate, need to have acceptable distribution around the mean of outcomes.

Remodelling required across street required for Samarco, Jansen, Nickel, Escondida pushed out, Met Coal proceeds. What's the balance sheets ability to take on capex and bolt-ons?

No change in strategy, \$11bn, minimum 50% dividend to be paid. But everything comes into the mix, and we think \$11bn is appropriate.

Segment analysis for 1H FY24

Iron ore (68% of 1H-FY24 EBITDA)

Iron ore EBITDA increased 27% to \$9.7bn from \$7.6bn in 1H-FY23 driven by higher average realised price of iron ore at \$103.7/wmt (21% vs. 1H-FY23) and lower diesel prices. The iron ore segment delivered an underlying EBITDA margin of 69%.

WAIO production was 3% lower at 126kt (1H-FY23: 130kt). A ramp up in South Flank to 80Mtpa by end of FY24 continues with full-year guidance unchanged at 282-294Mt (100% basis). Medium-term production of >305Mtpa continues to be supported by projects including the Port Debottlenecking Project (on track for completion in 2024), the Rail Technology Programme and the Western Ridge Crusher project to replace depleting production and adding ~25Mtpa by FY28.

WAIO unit costs performed well achieving \$18.46/t only 1% higher vs 1H-FY23, with C1 costs of \$15.98/t, (3% vs. 1H-FY23). Unit costs in FY24 are expected to be between \$17.40-18.90/t based on guidance exchange rates of AUD/USD 0.67. In the medium term, unit costs remain unchanged at less than \$17/t reflecting inflationary pressures and a plan to creep production to greater than 305 Mtpa.

Copper (25% of 1H-FY24 EBITDA)

Underlying EBITDA for copper increased 23% to \$3.5bn from \$2.8bn in 1H-FY23. Copper's EBITDA growth was largely driven by the contribution (\$0.3bn) from acquired OZL assets Carrapateena and Prominent Hill and slightly higher average realised copper price of \$3.66/lb (5% vs. 1H-FY23).

Group FY24 copper guidance remains unchanged at 1,720-1,910kt as is Escondida's copper guidance of 1,080kt-1,180kt. Escondida production is expected to increase to 1,200kt – 1,400kt in FY25-FY26 before declining to 900-1,000ktpa in line with lower concentrator feed grades. Studies at Escondida to offset grade decline are underway including new and expansion concentrators as well as leaching trials.

Unit costs at Escondida of \$1.51/lb were up 5% vs. pcg and on track to remain in-line with full year guidance of \$1.40-1.70 \$/lb in FY24. Unit costs at Spence were 10% lower vs. pcg following record concentrate production yet lower volumes in 2H-FY24 will keep unit costs within full year guidance of \$2.00-2.30/lb.

Copper South Australia (Olympic Dam, Carrapateena and Prominent Hill) aims to increase smelting capacity range potential from 0.5Mt to 1.0-1.7Mt as they will leverage multiple mines to feed a new centralised smelter two-stage in 2027-28. BHP also continue to develop growth projects at Prominent Hill (Wira shaft mine expansion) and Carrapateena (Block cave expansion) as well as exploration at Oak Dam and Olympic Dam Deep.

Coal (7% of 1H-FY24 EBITDA)

Coal generated an underlying EBITDA of \$1.0bn, down 63% from \$2.6bn in 1H-FY23 following lower average thermal coal prices and lower metallurgical coal sales volumes. BHP achieved an average realised thermal coal price of \$123/t (-63% vs. 1H-FY23: \$354/t) whilst metallurgical coal prices were flat at \$266 (-1% vs 1H-FY23).

Lower sales volumes from Queensland's BMA assets in-line with lower production of 11.3Mt (-17% vs. 1H-FY23: 13.6Mt) following increased planned maintenance across the asset and an extended longwall move. Unit costs increased to \$129/t (+29% vs. 1H-FY23) following an increase in prime stripping to recover depleted inventory positions, higher maintenance activity and inflation impacts. BHP aim to focus on operations stability and maintain their full year cost guidance of \$110-116/t in FY24.

Strong operating performance at NSW Energy Coal energy coal volumes of 7.5 Mtpa was 36% higher vs. 1H-FY23. Yet lower thermal coal prices saw an 84% decline in underlying EBITDA to \$0.2bn (1H-FY23: \$1.2bn).

Coal guidance in FY24 remains unchanged with BMA production of 46-50Mt (excluding Blackwater and Daunia), and NSWEC production of 13-15Mt.

Given the high royalty rates in Queensland and risk of further raises, BHP doesn't expect any growth capital in BMA in the future.

Group & Unallocated (0% of 1H-FY24 EBITDA)

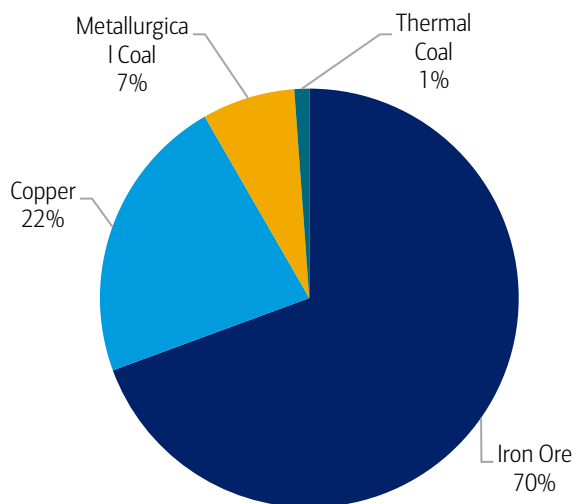
Western Australia Nickel delivered a \$0.2bn loss following significantly lower realised prices for nickel metal and intermediate products combined with cost base inflation. WA Nickel produced 40kt (+2% vs. 1H-FY23: 38kt) however averaged realised nickel prices fell 24% to \$18,600/t from \$24,360/t in 1H-FY23. The deterioration in the outlook for nickel, BHP recognised a \$2.5bn impairment (post tax) against the carrying value of WA Nickel. BHP doesn't expect nickel to rebalance until late in the 2020's and are considering entering a period of care and maintenance at Nickel West, and assessing phasing and capital spend for the development of the West Musgrave project.

Jansen Potash Stage 1 is 38% complete and on track for first production by CY26, slightly ahead of the original schedule. Capital expenditure in 1H HY24 for Jansen Stage 1 and Jansen Stage 2 was \$0.5bn and on track to spend \$1.2bn for the full year

Valuation and EBITDA split by segment

Exhibit 8: BHP FY24 NPV contribution by segment

Iron ore makes up the majority of our valuation

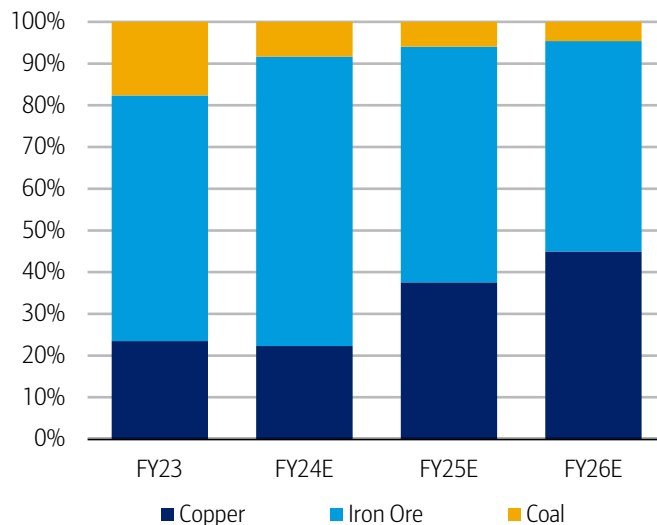


Source: BofA Global Research estimates

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Exhibit 9: BHP EBITDA contribution by segment (%)

We expect copper to take a greater % of EBITDA share in FY25-26 driven by volume growth and price increases.



Source: BofA Global Research estimates

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Sensitivities

Exhibit 10: Key underlying EBITDA sensitivities

BHP is most leveraged to iron ore prices, the AUD/USD exchange rate, then copper

Approximate impact ¹ on H1 FY24 Underlying EBITDA of changes of:	US\$ m
US\$1/t on iron ore price ²	115
US\$1/t on metallurgical coal price	6
US¢1/lb on copper price ²	18
US\$1/t on energy coal price ^{2,3}	7
US¢1/lb on nickel price	0.6
AUD (US¢1/A\$) operations ⁴	81
CLP (US¢0.10/CLP) operations ⁴	14

Source: BHP presentation

BofA GLOBAL RESEARCH

Price objective basis & risk

BHP Group Limited (BHPLF / BHP)

Our price objective of A\$52.0/share (US\$65.0/share) represents approximately 1.0x our DCF-derived NPV. Our DCF is based on BofA commodity price forecasts and assumes a 9% discount rate. Diversified miners have historically traded in a range of 0.7-1.4x NPV with lower multiples paid during periods of economic slowdown and higher multiples paid during periods of rising commodity prices and earnings.

Downside (upside) risks to our price objective are: Global economic slowdown (growth), volatility in commodity prices, operational risks associated with mining, project execution risk, currency pressures and mining cost inflation (deflation).

BHP Group Limited (ZBHPF)

Our price objective of 2,650 GBp represents approximately 1.0x our DCF-derived NPV. Our DCF is based on BofA commodity price forecasts and assumes a 9% discount rate. Diversified miners have historically traded in a range of 0.7-1.4x NPV with lower multiples paid during periods of economic slowdown and higher multiples paid during periods of rising commodity prices and earnings.

Downside (upside) risks to our price objective are: Global economic slowdown (growth), volatility in commodity prices, operational risks associated with mining, project execution risk, currency pressures and mining cost inflation (deflation).

Analyst Certification

I, James Redfern, 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.

Special Disclosures

BofA Securities is currently acting as Financial Advisor and Financer to Whitehaven Coal Ltd in connection with its proposed acquisition of Daunia and Blackwater coal mines from BHP Group and Mitsubishi Development Pty Ltd, which was announced on 18 Oct 2023.

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Australia - Materials & Industrials Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	29Metals Limited	XMLNF	29M AU	James Redfern
	AGL Energy	AGLNF	AGL AU	Reinhardt van der Walt
	APA Group	APAJF	APA AU	Reinhardt van der Walt
	BHP Group Limited	BHPLF	BHP AU	James Redfern
	BHP Group Limited	ZBHPF	BHP LN	James Redfern
	BHP Group-ADR	BHP	BHP US	James Redfern
	BlueScope	BLSFF	BSL AU	Chen Jiang
	Boss Energy	BQSSF	BOE AU	Cameron Taylor
	Brambles Limited	BMBLF	BXB AU	Reinhardt van der Walt
	Champion Iron	CIAFF	CIA AU	Chen Jiang
	Champion Iron	YCIA	CIA CN	Chen Jiang
	Coronado	CODQL	CRN AU	Chen Jiang
	Evolution Mining	CAHPF	EVN AU	Meredith Schwarz



Australia - Materials & Industrials Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Gold Road Resources	ELKMF	GOR AU	Meredith Schwarz
	GWA Group	GWAXF	GWA AU	Shaurya Visen
	Incitec Pivot	ICPVF	IPL AU	Reinhardt van der Walt
	Mineral Resources	MALRF	MIN AU	Matt Chalmers, CFA
	Monadelphous	MDPHF	MND AU	Josephine Forde
	Nickel Industries	NICMF	NIC AU	Cameron Taylor
	Northern Star Resources	NESRF	NST AU	Meredith Schwarz
	NRW Holdings	NRWWF	NWH AU	Josephine Forde
	Nufarm	NUFMF	NUF AU	Reinhardt van der Walt
	Orica	OCLDF	ORI AU	Reinhardt van der Walt
	Origin Energy	OGFGF	ORG AU	Reinhardt van der Walt
	Orora	ORRAF	ORA AU	Roy Harrison
	Paladin Energy	PALAF	PDN AU	Cameron Taylor
	Regis Resources	RGRNF	RRL AU	Meredith Schwarz
	Reliance Worldwide Corporation Limited	RLLWF	RWC AU	Shaurya Visen
	Rio Tinto Ltd	RTNTF	RIO AU	James Redfern
	Seven Group Holdings	XSEVF	SVW AU	Shaurya Visen
	South32 Ltd	SHTLF	S32 AU	James Redfern
	South32 Ltd	XKTPF	S32 LN	James Redfern
	South32 Ltd	XMWTF	S32 SJ	James Redfern
	Ventia	XVXGF	VNT AU	Roy Harrison
	Whitehaven Coal Limited	WHITF	WHC AU	Chen Jiang
	Worley Limited	WYGPF	WOR AU	Cameron Taylor

NEUTRAL

	Codan	CODAF	CDA AU	Sriharsh Singh
	CSR Limited	CSRLF	CSR AU	Shaurya Visen
	Deterra Royalties	DETRF	DRR AU	Chen Jiang
	Downer EDI Limited	DNERF	DOW AU	Roy Harrison
	Fletcher Building	FRCEF	FBU NZ	Shaurya Visen
	Fletcher Building	YFLBF	FBU AU	Shaurya Visen
	Pilbara Minerals	PILBF	PLS AU	Matt Chalmers, CFA
	Qube Holdings	QUBHF	QUB AU	Reinhardt van der Walt
	Reece Limited	REECF	REH AU	Shaurya Visen
	Sandfire Resources	SFRRF	SFR AU	Matt Chalmers, CFA
	Sims Limited	SMUPF	SGM AU	Chen Jiang
	Transurban Group	XTRAF	TCL AU	Reinhardt van der Walt
	Transurban Group	TRAUF	TRAUF US	Reinhardt van der Walt

UNDERPERFORM

	ALS Limited	CPBLF	ALQ AU	Reinhardt van der Walt
	Alumina Limited	AWCMF	AWC AU	Chen Jiang
	Atlas Arteria Ltd	MAQAF	ALX AU	Reinhardt van der Walt
	Cleanaway Waste Management	TSPCF	CWY AU	Reinhardt van der Walt
	Fortescue Ltd.	FSUMF	FMG AU	James Redfern
	IGO	IPGDF	IGO AU	Matt Chalmers, CFA
	James Hardie Industries Plc	JHIUF	JHX AU	Shaurya Visen
	James Hardie Industries Plc	JHX	JHX US	Shaurya Visen
	Vulcan Steel Limited	XVULF	VSL AU	Shaurya Visen
	Vulcan Steel Limited	XVSTF	VSL NZ	Shaurya Visen

iQmethodSM Measures Definitions

Business Performance

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

iQmethodSM is 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.

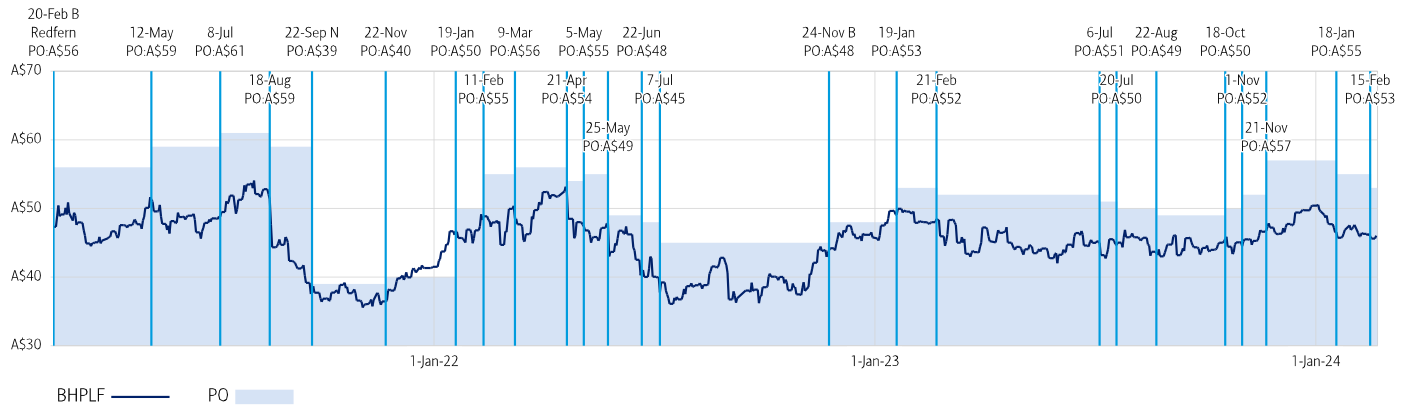
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Disclosures

Important Disclosures

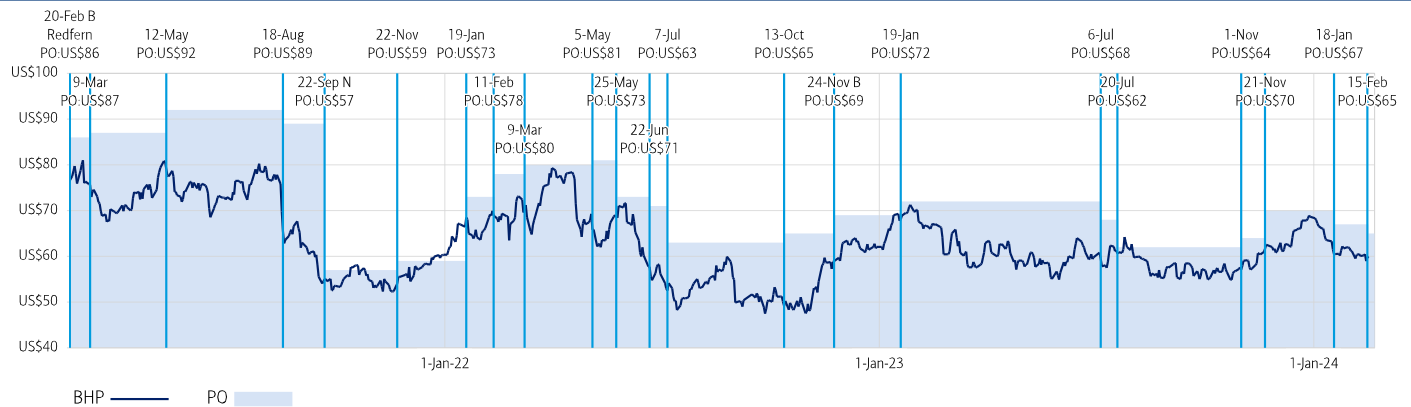
BHP Group Limited (BHPLF) Price Chart



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.

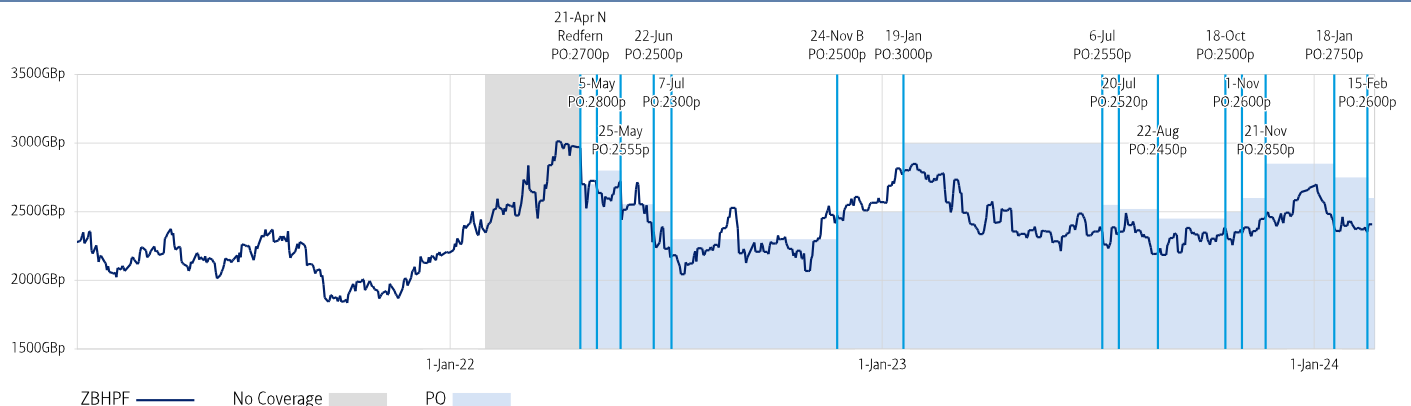
BHP Group-ADR (BHP) Price Chart



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

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BHP Group Limited (ZBHFP) Price Chart



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

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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%

^{R2} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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