under the radar report
BLUE CHIP

ISSUE Mining Special Report
03 JANUARY 2025

THE BIG (BONUS) MINING REPORT

Why invest in mining? It's simple! Big returns over long periods. Why? Because you are getting exposure to the big forces changing society now and in the future. Think how important iron ore is to the manufacture of steel, and nickel for that matter. Think about the critical minerals – lithium, copper, nickel, rare earths – necessary for the transition to low carbon emission energies. Think uranium for nuclear energy.

Really as an investor, the returns speak for themselves. Investing in **Fortescue Metals (FMG)** has been a tremendous investment over the past decade, returning 33% a year on average. But both **BHP Group (BHP)** and **Rio Tinto (RIO)** have also delivered, returning on average double-digit annual returns. You need to include these stocks in order to get the diversification benefits of access to what they call "global cyclical" forces. Banks are an example of domestic cyclicals. The world mostly grows, albeit at very different rates, and these stocks are big beneficiaries.

Timing is important, of course, but including them in your portfolios from the get-go is what we advise. This is where our recommendations come in.

How much should you invest, is the question. The total weighting of BHP & RIO (London shares included) is almost a quarter of the Australian market. The big banks represent close to 40%, to give context. This is too much in our view. Including big mining stocks as core holdings is important, which means up to 5% each in a well-diversified portfolio. In this special report, we highlight the big ones, **BHP**, **RIO**, as well as **FMG** and the diversified base metals producer **South32 (S32)**.

These will provide adequate diversification benefits, but you might also want to look at **BlueScope Steel (BSL)** and **Woodside Energy (WDS)**, which we also cover.

Mining companies might trade on low-PEs of 10 or below and higher than average dividend yields, but the reason is that their earnings are highly variable, being subject to commodity price movements. The diversified miners are good for your core portfolio because they have the advantage of scale, which is all important. The bigger you are, the more you can minimise unit costs.

But in most portfolios, we advocate owning a lower proportion of resources than non-resources because of the former's inherent volatility.

Richard Hemming
Editor

the issue

BHP Group (BHP)	BUY
Rio Tinto (RIO)	BUY
South32 (S32)	BUY
Fortescue Metals (FMG)	HOLD

Why invest in mining? 10-year returns: FMG 33% a year; BHP 12% a year; NST 28% a year; S&P/ASX 200 (XJO) 9% a year.

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Why invest in mining?

Here's three good reasons: BHP, FMG & NST

THE BIG AUSTRALIAN

BHP's share price over 30+ years

THE GOLDEN TOUCH

Northern Star Resources (NST) share price over 20 years

THE IRON DISRUPTOR

Fortescue Metal Group (FMG) share price over 30+ years

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Which miners should you invest in?

WHICH MINERS SHOULD YOU INVEST IN?

You need to pay close attention to our recommendations in both Blue Chip Value's Research Rundown and Under the Radar Report: Small Caps. But overall, as mentioned previously, mining is a scale came, hence risk is lower if the company is a large, diversified company with a production scale and a good track record.

Smaller companies with solid operations and good projects can also be attractive. However, for a small company with a single mine project, there are potential risks from delays or technical problems where the company does not have the financial resources to deal with them. This can lead to dilutionary share issues or even threaten the future of the company.

Sometimes the only way for an investor to gain a pure exposure to a particular commodity or project is through a small company. The risk appetite of investors will vary.

Bulk commodities versus Base Metals

Bulk commodities include coal and iron ore. Base Metals include copper, lead, zinc, nickel and aluminium.

Bulk projects generally require large deposits to justify the infrastructure needed (such as rail and port). Some deposits, particularly in iron ore, have been developed into large-scale, low-cost operations, which can be very profitable.

Discoveries of quality base metals deposits are infrequent, so it can be difficult for investors to get access to quality base metal assets outside the major producers. The large diversified companies such as **BHP** and **Rio Tinto (RIO)** have large copper operations which have long been established, principally through acquisitions. Both companies have added to their positions opportunistically.

Where does energy fit in?

Most of the major mining companies had coal divisions. BHP was unusual in that it also had an oil and gas division. This has now been sold to **Woodside Energy (WDS)**.

With concerns about carbon emissions, many mining companies have divested their coal operations. Both **Rio Tinto** and **South32 (S32)** have sold their thermal and metallurgical (used for steel making) operations. BHP is winding down its thermal coal activities and has sold lower-quality metallurgical coal mines but is retaining its higher-quality metallurgical operations.

Many major mining companies now have a focus on the energy transition and targeting copper because of its use in electrification. BHP now has the largest copper resources of any company, is the fourth largest global producer of uranium and also has nickel assets,. In addition to copper, Rio Tinto is also a major aluminium producer, a light metal, and targeting lithium, used in lithium-ion batteries. South32 is also targeting manganese, which has battery applications.

There is also an increasing requirement by end users, particularly in Europe, for energy transition materials to have a low carbon footprint. Mining companies are increasingly adopting renewable energy and electrification at mine sites and in some instances upgrading products to reduce the energy component of transport and shipping.

Iron Ore Analysis

The main ingredient to make steel has now become a core tradeable commodity in the past 30 years, the catalyst being the industrialisation of China earlier this century. Steel is a universal material used in all areas of construction and manufacturing which is infinitely recyclable. Rio Tinto, BHP and Fortescue, alongside the Brazilian group Vale, are the biggest and lowest cost producers, by quite some margin.

IRON STRENGTH

Iron ore price per tonne over the past 10 years in US$

The current price might seem high but is actually on trend and above where we believe a price support exists at US$90. Admittedly the price has been volatile, but if you smooth out the big jumps and falls, the trend has been up since the financial crisis of 2008-11.

SOURCE: Trading Economics

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Ongoing demand support

The key is urbanisation, which cannot occur without steel. Every building, every car, every railway line, every fridge contains steel. The market consensus is for as for as much steel to be made in the next 20 years as in the last 30 years.

We expect the iron ore price to broadly continue to trade in a US$120-US$90/tonne range, with price support at close to US$90/tonne, which we regard as close to an incentive price.

The big cost of maintaining production

Simply to maintain iron ore production at current levels requires huge investment spending. At least US$90 a tonne is needed to achieve positive margins for most China producers. Iron ore is extracted from large, scalable open-pit mining operations. Capital is required to develop new replacement mine capacity as earlier mines are depleted. Rio Tinto estimates that over 40% of current supply needs to be replaced.

Profitable, scalable industry with large barriers to entry

The iron ore industry has been attractive to major mining groups such as BHP, Rio Tinto, Vale and Fortescue because of the growth it has offered, the scalability of operations and infrastructure, its profitability and the large barriers to entry.

Conclusion: Go Big For Quality

BHP, **RIO**, **FMG** & **VALE** are in the box seat and this probably won't change. The industry is founded on high-grade ores from a limited number of large, globally significant, resources located in only a few countries including Australia and Brazil. Significant investment in rail and port infrastructure is usually required, for shipping of the ore to major steel-making destinations such as China, Japan and South Korea.

Copper Analysis

BHP and Rio Tinto have made big bets on copper, which augurs well for the future. But in the next few years, weighing on sentiment is the debt laden Chinese property industry. The outlook for copper remains positive, but we're not anticipating the price to go racing up.

STEADY AS SHE GOES

10 year copper price in US$ per pound

Many are bullish on the copper price, which has been relatively steady over long-periods of time. The demand for copper is heavily linked to China and specifically to the Chinese property market. This market has been under pressure, which probably won't change.

SOURCE: Trading Economics

Positive outlook, but caution required

In the short to medium term (one to three years) the copper price outlook is positive, but it may not the lofty expectations of some observers. In the current economic and political environment, there is also additional uncertainty, such as the tariffs in the US.

Longer term (three years plus) the outlook is solid with the energy transition & electrification.

China property weighs on sentiment

We can understand why major companies are targeting copper for long-term growth. However, the downturn in China property and construction, which is a heavy copper user, has put pressure on the price.

Demand is lobsided with almost three-quarters of global copper consumption in Asia, of which China represents the lion's share and over half of 55% of total global demand. Over a third of demand for copper in China comes from property.

China Peak copper demand around 2030?

China is a buyer of copper concentrate and has an interest in lower prices. The government researcher "Antaike" expects demand to at the end of this decade, predicated on a slowing economy and the copper intensity of renewables investment falling as industries seek alternative materials such as aluminium.

Annual copper demand, principally for semi-fabricated products (semis) like tubing, wire and rods, is currently 31m tonnes. About 23m tonnes a year of copper is mined with the balance supplied from scrap. This is predicted by some to more than double over the next 25 years, driven by renewable energy and vehicle electrification. However, this will not all flow through to greater mining demand because copper scrap recycling rates are projected to lift.

Operating mines always conduct ongoing exploration and development to extend operating lives. As a result, mine supply gaps could be smaller than some are forecasting.

Conclusion: Copper future assured but don't get carried away.

Buying big diversifieds like **BHP** and **Rio Tinto** is a sensible strategy to obtaining copper exposure. The best-known ASX-listed copper producer is **Sandfire Resources (SFR)** and is much higher risk. Another exposure is the gold producer **Evolution Mining (EVN)** – covered in our small caps publication.

BHP Group

BHP manages its asset base to focus on commodities that benefit from global megatrends, having sold its coal operations and its oil and gas portfolio. This has created stability, which offsets the volatility of commodity price moves. In the past eight years, BHP's gross profit margin has been higher than 50%, generating net operating cash flows of US$20bn a year.

The diversified miner is one of the world's biggest iron ore producers, with FY25 guidance at $260m tonnes; and is one of the lowest cost producers. The company is also one of the largest copper producers at close to 2 million tonnes.

The copper expansion has been recent, via the acquistion of Oz Minerals, which adds to Olympic Dam in South Australia. On top of this BHP owns 57.5% of the famed Eccondida mine in Chile, where there is further growth potential. At the Filo de Sol and Josemaria projects in Argentina and Chile, BHP is seeking to advance through a 50/50 joint venture with Lundin Mining, after the joint acquisition of Filo Corp. BHP believes this is one of the most significant discoveries in decades.

BHP is adding a new commodity to its portfolio, potash, a fertiliser. By decade end, BHP expects to be one of the leading players in the potash industry globally. Stage 1 of its Jansen project in Canada is more than halfway complete and ahead of the original schedule. Development of Stage 2 has just commenced. First potash production is two years away.

RADAR RATING: Iron ore the gold goose & copper leveraged to growth.

RADAR RATING: **BUY**

ASX CODE **BHP**

CURRENT PRICE **$39.80**

RADAR TARGET **$46.58**

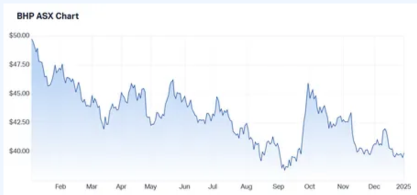
TARGET OPPORTUNITY **17%**

MARKET CAP $201.94BN

DIVIDEND YIELD 4.9%*

PE RATIO 11.0X

NET DEBT ($M) -US9.1BN (A$18.17BN)



**Forecast of $1.94*

Fortescue Metals

Fortescue is an Australian corporate success story, having started developing its first mine in the Pilbara, WA, in 2005 and then shipping iron ore to China three years later. The company is founder led by Andrew Forest. The share price is highly correlated to the iron ore price – see our note in this issue.

FMG now operates two hematite production hubs, Chichester and Solomon, plus produces magnetite concentrate – higher value – from Iron Bridge (FMG 69%). FY25 guidance is for shipments of 200m tonnes, which is about 40% below Rio Tinto's Pilbara production.

The company has low growth prospects in the next few years. Longer term, however, the minor owns the Belinga project in Gabon (Africa) which has potential. Outside of iron ore price appreciation, green energy could diversify earnings. Although FMG's initiatives have confused many into believing that funds were being diverted from the core iron ore operations. This is not the case but may have led to selling in the stock.

FMG's US$2.8bn green equipment partnership with Liebherr for zero mining solutions is expected to create the world's largest zero-emission mining fleets. This would replace about two-thirds of its current mining fleet, is progressive and tangible.

RADAR RATING: Low cost and innovative iron ore producer but fair value.

RADAR RATING: **HOLD**

ASX CODE **FMG**

CURRENT PRICE **$18.69**

RADAR TARGET **$18.93**

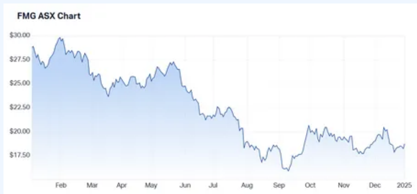
TARGET OPPORTUNITY **1.3%**

MARKET CAP $57.55BN

DIVIDEND YIELD 5.6%*

PE RATIO 10.0X

NET DEBT ($M) -US$0.50BN (A$0.72BN)



**Forecast of $1.05*

Rio Tinto

Over a number of years the mining giant has sold non-core assets such as coal and now has a core of energy transition-related mining assets on top of being one of the world's biggest iron ore producer.

The key to Rio Tinto remains iron ore – see our note in this issue. The miner projects demand for steel grow 20% over the next 25 years. For copper and aluminium, RIO estimates demand will climb by 80%. RIO expects lithium demand to rise six-fold from the current low base of 1m tonnes.

At its Pilbara iron ore operations, WA, the plan is to increase production by 15m tonnes over the next three years to 330m. The high-grade Simandou iron ore project in Guinea, West Africa remains on track for first ore in 2025.

In copper, production of just under 700m is forecast to rise to 1m by the end of the decade due to Oyu Tolgoi, Mongolia. While aluminium is forecast to benefit from technology improvements lowering carbon emissions, and improving profit margins. In lithium, the Rincon 3000 in Argentina has started producing and expansion plans have been approved.

RIO's technology includes Direct Lithium Extraction for lithium, its Jadar lithium flowsheet and its bioleach Nuton technology to unlock copper from hard-to-process ores with high recoveries.

RADAR RATING: Iron ore and copper are big earners, but aluminium represents growth.

RADAR RATING: **BUY**

ASX CODE **RIO**

CURRENT PRICE **$118.01**

RADAR TARGET **$133.24**

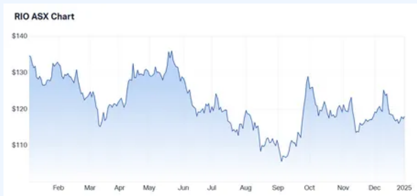
TARGET OPPORTUNITY **12.9%**

MARKET CAP $43.81BN

DIVIDEND YIELD 5.6%*

PE RATIO 11.1X

NET DEBT ($M) -US$3,626M (A$5,545.2M)



**Forecast of $6.57*

South32

South32 was created through the 2015 sale of BHP's "non-core" assets, principally coal and base metals, zinc, manganese, aluminium, lead & silver. It notably excluded copper, subsequently addressed in 2022, with the acquisition of 45% of the Siera Gordon mine in Northern Chile. In addition, the company has copper exploration potential at its Peake prospect in the US via the system connecting Peake and Taylor zinc-lead-silver deposits.

We like the company because it is financially disciplined. S32's focus is commodities that benefit from the energy transition, coal being a very low component of earnings. On the cost front, the company is competitive, though not lowest quartile. S32 is conservatively run and concentrates on shareholder returns.

The Taylor deposit is part of the Hermosa project which was acquired in 2018 through a $1.9bn acquisition of Arizona Mining and first production is anticipated in the next three years, with potential to be a top 10 zinc producer, where we have a positive view due to increasing demand and limited supply. S32 is already a major lead, silver and zinc producer through its Cannington mine, in Queensland.

The Clark manganese deposit (Hermosa) is due to produce battery-grade manganese and has been selected for a US$166m award from the US Department of Energy to support a production facility.

RADAR RATING: Increasing copper and zinc production. Solid balance sheet, cash flow, pays dividends.

RADAR RATING: **BUY**

ASX CODE **S32**

CURRENT PRICE **$3.46**

RADAR TARGET **$3.93**

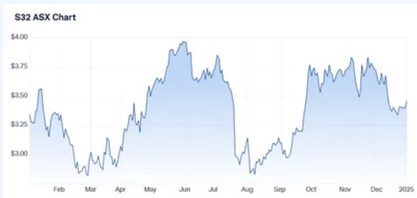
TARGET OPPORTUNITY **13.7%**

MARKET CAP $15.61BN

DIVIDEND YIELD 3.6%*

PE RATIO 12.1X

NET DEBT ($M) -US$762M (A$1,130M **)



**Forecast of $0.13*

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99% of all financial news relates to the 40 to 50 biggest companies.
So what about the rest? They're Under the Radar.

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