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HOW TO INVEST IN MINING STOCKS

COMPREHENSIVE GUIDE

By Lisa Jacobs

The global mining industry is massive. In 2018, the 40 largest publicly traded mining companies hauled in $683 billion of revenue digging up, processing, and selling a variety of metals and minerals. Coal was the largest revenue-generating material mined that year, and it was used to generate about 38% of the electricity produced globally.

However, coal's dominant share of the commodities market is leveling off, and it is projected to plateau by 2023 due to the growing use of renewable energy. As coal begins to fade, another commodity will eventually take the top mined ore spot, likely related to the renewable energy sector's growth. Copper, for example, is a vital component in the solar, wind, and electric vehicle (EV) industries. Lithium is also an essential metal for the sector -- it's used to make batteries for EVs, as well as to store power generated by wind and solar.

Other industrial metals like iron ore and aluminum will remain in high demand since they're crucial to supporting the growth of the global economy. Similarly, precious metals like gold and silver will likely stay in favor with investors who turn to them as a safe haven in times of economic instability.

Because of the importance of metals and minerals to the future of the global economy, mining companies should find plenty of opportunities to grow their production and profitability. That makes the sector an intriguing one for investors to consider.

What is the mining industry?

The mining industry is made up of companies that search for, extract, process, and sell metals, minerals, and materials that are vital to everyday life in our modern economy. The sector groups itself into the following categories:

- ***Base metals***: These commonly found and inexpensive metals serve many industrial purposes. We use them as building materials and electrical components. The primary base metals mined are iron ore, nickel, lead, zinc, copper, aluminum, molybdenum, and cobalt.
- ***Precious metals***: These are rare, naturally occurring metals that have high economic value. Because of that, we often use them for jewelry and sometimes as a form of currency (e.g., silver coins and gold bars). The primary precious metals are gold, silver, platinum, and palladium.
- ***Energy materials***: Several materials are mined out of the earth and burned to create energy. The most common is coal. The mining industry also extracts uranium (used for nuclear power) and bitumen (a tar-like substance, found mainly in Canada, that's refined into crude oil).
- ***Minerals***: These are solid chemical compounds found in their pure form in nature. Examples of mined minerals include potash, talc, gypsum, calcite, quartz, diamonds, and salt.
- ***Construction materials***: These are rocks that have industrial uses in the construction industry. Common construction aggregate materials are limestone, trap rock, sand, and granite.

Base metals are essential in building the infrastructure of the global economy. Iron ore is the most-mined metal because it's a critical component for making steel, which companies need to construct such things as bridges, buildings, and pipeline systems. And aluminum is the second-most-mined metal due to its importance to the aerospace and automotive sectors. Copper rounds out the top three because of its ability to conduct electricity.

Given the importance of base metals to the global economy, it's no surprise to see that most of the world's biggest mining companies focus their efforts on at least one of those commodities. Here are the five largest players, as ranked by their market capitalisation (a company's total available shares multiplied by its stock price):

Global Mining Companies	Market Cap	Commodities Produced
1. BHP Group	$131.2 billion	Iron ore, copper, coal, oil, and natural gas
2. Rio Tinto	$92.7 billion	Iron ore, aluminum, copper, diamonds, and uranium
3. Vale	$62.3 billion	Iron ore, nickel, and copper
4. Glencore	$43.4 billion	Coal, copper, zinc, and nickel
5. China Shenhua Energy Company	$42.1 billion	Coal

Data source: PwC. Market capitalization as of Sept. 15, 2019.

What are some key mining stock metrics?

Investors who are interested in the mining sector need to learn several industry-specific financial metrics that companies use to measure their progress. These are the five most important ones to know:

All-in Sustaining Costs(AISC): Gold mining companies use this metric to show how much it costs them to produce an ounce of gold. It measures all the costs of maintaining a mine (such as mine-site purchase costs, royalties, production taxes, and refining expenses), as well as corporate costs such as general and administrative expenses and exploration costs. This metric gives investors a true picture of what it costs a company to produce an ounce of gold.

By-product credits: By-product costs are cash payments that mining companies receive for producing raw metals in association with their primary target. Instead of incurring the costs of processing these raw metals into finished products, miners will sell them to others for further processing, and use the payments to offset the costs of mining their primary target. For example, copper deposits often contain smaller quantities of zinc, silver, molybdenum, and gold that miners will sell to offset the costs of producing finished copper.

Cash costs: Mining companies will also report their total cash costs, which are the actual costs of producing a metal like copper or gold. This metric differs from AISC or costs minus by-product credits because it accounts only for mine-related expenses. As such, it gives investors a glimpse into the performance of a company's mining operations by stripping out corporate-level expenses, as well as the credits received for selling by-products.

EBITDA: This acronym stands for earnings before interest, taxes, depreciation and , amortization. It's a non-GAAP metric that miners use to give investors a better picture of their underlying earnings. They use it because they often record large depreciation expenses as they deplete a mine's reserves, which reduces their reported net income. Because of that, miners often appear as if they're making less money than their mines actually generate.

Ore grades: Metal deposits typically contain more rock than valuable metal. A commercial copper deposit, for example, often only contains between 0.5% and 1% of that metal. Miners use ore grades to measure how much metal is in a recent discovery or a section that they're currently mining. Often miners will report fluctuating production numbers from quarter to quarter due to variations in ore grades.

What are some headwinds facing mining stocks?

The nature of its business means the mining industry is susceptible to changes in the global economy. A slowdown in growth or, worse yet, a recession can significantly impact demand for base metals like iron ore, copper, and aluminum. As a result, commodity prices can plunge, which can cut into the profitability of mining companies.

Another major headwind facing many mining companies is the declining use of coal as utilities switch over to cleaner energy sources like natural gas and renewables as part of efforts to combat climate change. According to a 2018 outlook from the International Energy Agency, coal will account for 25% of the world's total energy mix in 2023, down from 27% in 2017. That decline could accelerate if the cost of renewables continues coming down, which would put even more pressure on coal prices.

The decline of the coal market is leading many mining companies to sell off their coal mining assets. Rio Tinto, for example, sold its remaining coal assets in 2018 to Glencore and a consortium of other investors. BHP Group concluded in 2019 that exiting coal would be in its best long-term interest. Given the sector's decline and the exit of these major miners, investors should strongly consider avoiding mining stocks with significant exposure to the coal industry.

Growing climate change concerns are shining a spotlight on the impact mining companies have on the environment. Mining companies, unfortunately, have a poor track record in that regard. For example, many companies in their mining process use tailing ponds to hold the mixture of water and the waste materials left over from mining. These areas pose a significant environmental threat because toxic chemicals such as arsenic and mercury could get released into the broader environment if a dam holding the tailing pond in place failed. Because of risks like this, local communities are increasingly resistant to the construction of new mines.

Mining companies are also facing a growing scarcity of fresh water. They use lots of water to process the ores they dig out of the ground. However, due to population growth and the increasing impact of climate change, mining companies are finding less available fresh water and must find ways to reduce their freshwater usage. Their options to address the issue often include building water recycling facilities or desalination plants, which adds to their production costs.

What are some tailwinds that could bolster mining stocks?

Aside from an expanding global economy, one of the mining sector's biggest growth drivers is renewable energy. That's because the industry uses lots of metals and materials. Production of a single 3-megawatt (MW) wind turbine, for example, requires 335 tons of steel, 4.7 tons of copper, 3 tons of aluminum, and more than 700 pounds of rare earth minerals, as well as other metals and materials like aggregates, zinc, and molybdenum. For comparison, a conventional power plant uses about 1 ton of cooper to produce 1 MW of sustained power. Because renewables require more metals, the sector's growth will drive accelerated demand for these commodities.

Producing electric vehicles, likewise, uses a significant amount of mined materials. For example, while gas-fueled cars require between 18 and 49 pounds of copper, battery-powered EVs need 183 pounds of that metal. Given the accelerated adoption of EVs, the copper sector will need to produce an additional 1,700 kilotons of copper yearly by 2027. For comparison's sake, the world's largest copper mine -- BHP's Escondida mine in Chile -- produced 1,270 kilotons in 2017, which accounted for 5% of the world's supply.

Another major tailwind for the mining sector is the effect that population growth is having on demand for food. While consumption is increasing, less arable land is available for farming due to climate change, the shift in land use related to increased housing development, and other issues. Because of that, farmers need to produce more food per acre. One way they do that is with mined minerals like potash, which is used as a fertilizer to help improve crop yield. The demand for these minerals should increase in the coming years.

What are the opportunities for mining stocks?

As mentioned earlier, copper is a vital metal to the renewable energy sector. The world's largest copper miners should therefore have the opportunity to expand their output to meet this rising demand.

Copper, however, is far from the only growth opportunity in the mining sector. Other important metals for renewables are cobalt, nickel, lithium, platinum, silver, and several rare earth elements. Lithium and cobalt, for example, are crucial to making batteries. Miners focused on those metals should benefit from the accelerated adoption of EVs and the construction of more wind- and solar-generating facilities. That's because battery storage will become increasingly crucial to help bridge the gap when the wind isn't blowing and the sun isn't shining.

Lithium demand is on pace to exceed the current production rate of mining companies by 2022. By 2050, analysts forecast that consumption could be as much as 170% above the currently known lithium reserves, assuming no changes in technology. As a result, miners need to ramp up their exploration efforts to find new lithium resources. Similarly, mining companies need to explore for and develop new mines that supply the other metals and materials required by the renewable energy sector to meet future growth in demand.

What are the risks facing mining stocks?

The mining sector can be a risky one for investors. One of the biggest issues is that metal prices can be quite volatile. Slumping prices negatively impact the profitability of mining companies, which then weighs on their share prices.

Two factors cause commodity prices to fall: too much supply and not enough demand. The industry can have an overabundance of supply if companies invest in building lots of new mines, which they tend to do during boom times. If those new mines all come online around the same time and significantly boost supply, it can cause commodity prices to fall. Demand for metals, on the other hand, tends to decline as the global economy or a metal-intensive sector like construction slows. Because metal prices can fluctuate, investors should seek out mining companies that have low production costs. That way, they should still be able to make money even if prices fall.

Another major issue that has plagued the mining sector over the years is poor capital allocation. Mining companies often spend heavily during boom times to build second-tier mines or make high-priced acquisitions because they have the financial flexibility to make those moves. However, these investments can do more harm than good. That's because lower-quality mines have higher production costs, while the pricey acquisitions can burden a company's balance sheet. If commodity prices decline, which happens frequently, these investments won't pay off.

Governments also pose a risk to mining companies. They regulate the industry to ensure that it doesn't harm the environment or the communities adjacent to the mines. Those regulations can at times become overly burdensome, which can make it harder for mining companies to operate and/or make a profit. Governments can also make moves to protect their national interests, which can also have a negative impact on miners. For example, Rio Tinto was a minority investor in the massive Grasberg Copper-gold mine in Indonesia. That government, however, wanted the mine under local control because it was such an important strategic resource. As a result, Rio Tinto had to sell its stake in Grasberg to Indonesia's state mining company. Given the vital role governments play in regulating the industry, investors should take the time to look at where companies operate.

What are some ways to invest in mining stocks?

The mining sector can be a challenging one for investors. Because of fluctuations in the global economy, metal prices can be quite volatile. Add in the industry's other risks and headwinds, and many investors might want to avoid mining altogether.

Yet mining is vital to the growth of not only the global economy but also the renewable energy sector. Demand for mined metals should grow at a healthy pace in the coming years. That should enable mining companies to increase their production and profitability, which has the potential to boost their stock prices. That upside makes it an appealing sector for growth-focused investors.

Those who are interested in investing in the sector have three main options. First, they could buy an exchange traded fund (ETF) or invest in a mutual fundthat focuses on the mining industry. The **iShares MSCI Global Metals & Mining Producers ETF**, for example, holds shares of roughly 200 mining companies. Thus, it offers investors broad exposure to the entire sector, which helps reduce risk.

A similar way to invest in the industry is to buy shares of a diversified mining company like BHP Group, Rio Tinto, or Glencore. Any of those options would provide investors with broad exposure to the sector. That diversification helps offset some of the risk. However, investing in a single company opens investors up to company-specific issues, which could drive underperformance. Glencore's biggest moneymaker, for example, is coal, which is in decline. That's why investors should carefully consider a company's portfolio, balance sheet, and management team before buying shares.

Another way to invest in mining is through a company focused on a specific segment of the market. Many companies, for example, focus on mining gold, making them ideal options for investors seeking that market's potential. Meanwhile, several others focus on key metals for the renewable energy sector like copper and lithium. They would be options for investors who want to focus on those growing segments of the mining industry. Investors who do choose a focused miner, however, should pay very close attention to its balance sheet and cost structure, as weakness in either area could cause a mining company to underperform its peers and miss out on the sector's gains.

Why investors should consider mining stocks

The mining sector isn't for every investor. But because it's crucial to our modern economy, it appears poised to keep growing in the coming years. That growth should enable mining companies to dig up a lot of value for their investors as long as they operate wisely by focusing on the right commodities while also maintaining a strong diversified financial profile. That upside potential makes the sector worthy of further exploration.


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