Iron ore's growing appeal

Rising volumes, improved transparency and a strong connection to China have led financial investors to flock to iron ore. Julien Hall and S&P Dow Jones Indices' Fiona Boal unpack a thriving and unique market

A familiar cast of actors consistently graces the commodities page of financial broadsheets: a handful of influential energy benchmarks, Chicago-traded grains, ICE-traded softs, LME base metals and a few other precious metals.

Grains in particular are likely to have been there for well over 100 years now. One may be forgiven for thinking that these tables of prices simply never change. But they do.

Once in a while, perhaps once every couple of decades, a new graduate joins that elite circle of globally-traded, globally-recognized commodities. After a decade of sharp market evolution, iron ore seems close to doing so.

The emergence of iron ore into broader recognition has been a rapid one by commodity market standards. Just 10 years ago, the magnetic red dirt was an opaque market with contract negotiations taking place annually in smoke-filled rooms in Japan and later China. The market now has not one but two liquid futures markets, on the Singapore Exchange (SGX) and Dalian Commodity Exchange (DCE), trading 1.2 times and 20 times seaborne market volumes, respectively.

But there appears to be a second wave of evolution on the horizon, as the commodity is increasingly talked about on the trading floors of global financial centers. So besides increased liquidity, what is driving this interest? What characteristics make iron ore appealing to investors who already have a broad suite of commodities in their portfolio? What is the iron ore physical market like, and what could its rapid financialization mean for existing players?

Investor lens: China proxy

Increasingly, there are opportunities for investors to utilize commodities in their portfolios as building blocks to express specific views of a particular market, event or risk factor. Single commodities, whether iron ore, gold or soybeans, can be useful to investors looking to express investment themes that are dependent on unique geopolitical, demographic, structural, climate and even health and disease factors.

The iron ore market has several characteristics that make it distinctive as an investable asset; supply is concentrated in a handful of geographic regions and held by a small number of players, and demand is dictated by one major end-user; China.

Both supply and demand are subject to shocks caused by geopolitical events, unforeseen natural disasters and policy decisions, as well as the actions of individual asset owners. With unique characteristics can come unique tactical investment opportunities for investors.

> Metals and mining equities are roughly flat while the S&P GSCI Iron Ore Index has more than tripled over the last seven years

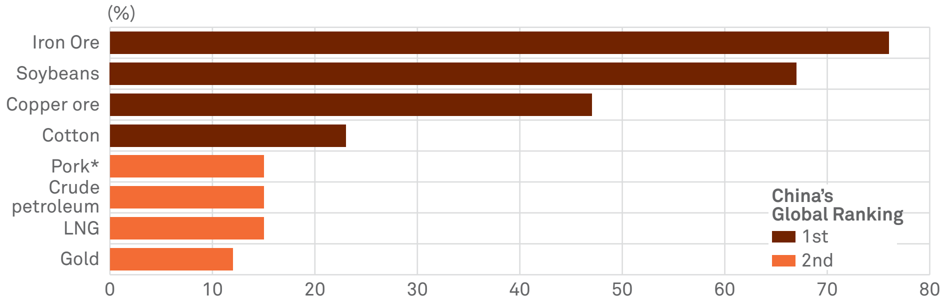
The concept of tactical investing is related to the idea of using individual commodities as building blocks. A tactical asset allocation could be based on commodity fundamentals, macroeconomic data and price trends, and executed in a fundamental or systematic manner. In the case of iron ore, few assets are as dependent on China.

This heady relationship can present opportunities to use iron ore as a liquid and easily accessible proxy for Chinese economic growth or, more specifically, the performance of the Chinese manufacturing and infrastructure sectors.

As with all commodities, it is often the supply side of the ledger that influences spot iron ore prices and the shape of the forward curve most notably over the short term.

However, over the long run, the supply and demand curves tend to be much smoother as market participants adjust their expectations and production levels.

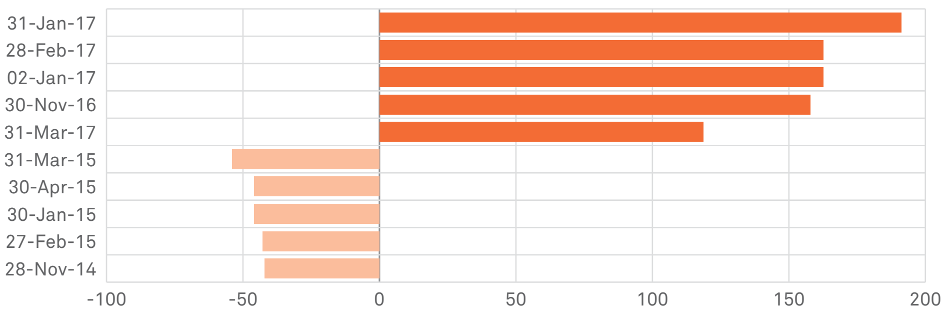
Few raw materials are as dependent on China as iron ore



Data from 2016-2018 depending on commodity. USD trade value. Table is provided for illustrative purposes and reflects hypothetical historical performance.
Source: The Observatory of Economic Complexity

* Excludes intra European trade

Biggest 12-month rolling returns in iron ore (%)



Data from May 2013 to Feb 2020. Past performance is no guarantee of future results. Graph is provided for illustrative purposes.
Source: S&P Dow Jones Indices LLC

Another important characteristic of iron ore returns is that they exhibit positive asymmetry, which can prove a highly prized feature of investment instruments. Commodity prices have a tendency to rise quickly and in such magnitude that investors do not have sufficient time to "chase the rally."

Historically, most market participants gained exposure to iron ore through buying the stock of metals and mining companies. There are some difficulties that arise by taking this path. Only a few companies are focused on iron ore due to the high costs associated with producing it. These companies are not pure-play iron ore equities, with the percentage dedicated to iron ranging from 30% to 60% of their businesses.

On top of that, there is equity market beta to consider, the geographic concentration and, increasingly, the fact that mining companies hedge their iron ore price exposure.

These realities add levels of uncertainty to an investment thesis that may be based exclusively on any investor's view of the underlying ferrous component.

Investing in iron ore directly was restricted to only a few groups prior to the development of a number of iron ore futures contracts, such as the SGX TSI Iron Ore CFR China (62% Fe Fines) Index Futures, and subsequent launch of the S&P GSCI Iron Ore.

The creation of these futures and the S&P GSCI single commodity index has fostered an environment of solid liquidity and improved price transparency. It has also allowed market participants to gain the direct exposure to iron ore they were previously unable to obtain.

Iron ore has also outperformed equity proxies over the last seven years. Metals and mining equities are roughly flat while the S&P GSCI Iron Ore Index has more than tripled over the last seven years. Utilizing the direct exposure as opposed to buying equities has proved quite lucrative over this time, as can be seen in the chart below.

Interestingly, iron ore has been one of the least volatile commodities of 2020 to date, outperforming industrial metals and energy-related commodities.

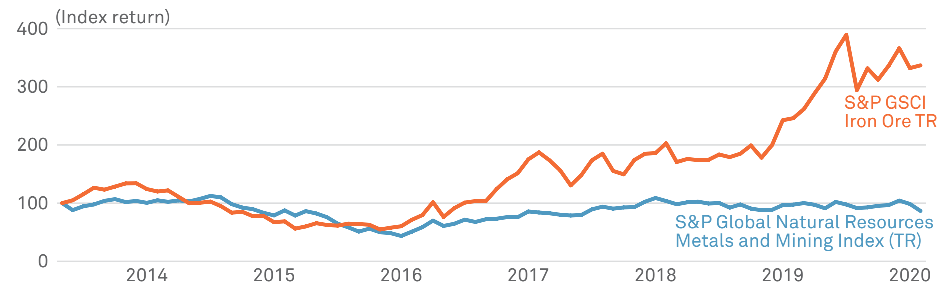
"Widely regarded by many as the second most important commodity behind oil, iron ore's evolution has mirrored the transformation of China – awaking from its slumber as a sleepy, annually negotiated contract to a lofty prominence as a leading macro barometer of Chinese economic health," said William Chin, head of commodities at SGX.

"Financial participation in iron ore derivatives has grown strongly over the years, representing close to 40% of the market in 2019. With strong interest from funds and the asset management industry to gain exposure to iron ore as the backbone of global infrastructure, iron ore is firmly entrenched as Asia's first truly global commodity product."

Physical lens: macroeconomics and rumors

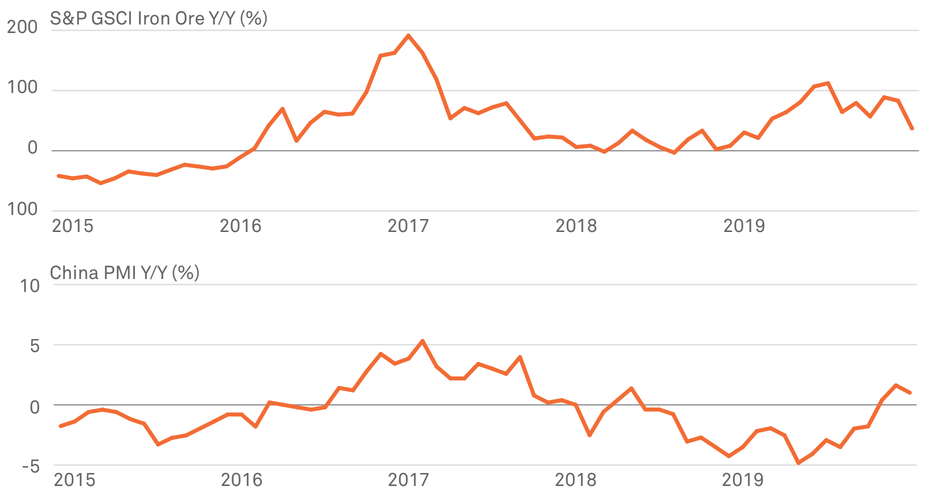
So how would one characterize the physical iron ore market?

Iron ore futures performance vs metals and mining equities



Data from May 2013 to Februry 2020. Past performance is no guarantee of future results.
Chart is provided for illustrative purposes.
Source: S&P Dow Jones Indices LLC.

Relationship between iron ore and Chinese manufacturing PMI



Monthly data from December 2014 to December 2019. Past performance is no guarantee of future results.
Chart is provided for illustrative purposes.
Source: S&P Dow Jones Indices LLC.

Well, it clearly has a personality. Its prices often buck the trend of other global commodities, perhaps reflecting its uniquely strong exposure to China or the widespread consumption of Chinese news among its traders.

This has been especially true in the thick of the COVID-19 pandemic, with iron ore showing a rare resilience in the face of the major impact threatened to global industries.

"Traders tend to look at Chinese macroeconomic indicators, including GDP, FDI, construction activity and housing starts. Obviously, these are important for many commodities, but especially so for iron ore," said an executive at an iron ore producer on condition of anonymity.

"Iron ore is heavily influenced by Chinese speculative activity, and this means sentiment plays a big role, particularly on the front months. We'll occasionally see local rumors, including on Chinese policy, initiating price moves," he said, adding these policies could be trade- or environment-related, for example.

On a day-to-day basis between 9 am and 3 pm Beijing/Singapore time, these trends tend to play out on DCE's iron ore futures, while also having an undeniable impact on the sentiment of physical iron ore traders.

Price formation towards the end of the day tends to be driven by the reporting of physical transactions, bids and offers by publishers such as Platts and by trading on the SGX.

Though it still arguably has some way to go, the physical iron ore market has become increasingly transparent over recent years, and a large ecosystem of brokers and information providers has flourished around it. Spot market activity is deep, with transactions accounting for 12%-15% of total market size, according to Platts price reporting data.

This, together with ever higher transparency of information available, has tightened bid-offer spreads in the physical market and facilitated increasingly precise price assessments.

In the first quarter of 2020 for example, the typical bid-offer gap in the physical market for mainstream brands of iron ore was probably around 50 cents at the

Source:

time of assessment. Granted however, it isn't yet at the 1 cent/barrel typically seen at the close of the Platts Market on Close assessment process for Dated Brent or Dubai crude or the 5-10 cents usually seen in many other oil markets.

Physical lens: evolving market

The iron ore market has seen tremendous change in the last decade, but in several ways, it remains a very traditional physical supply chain, both in its inherent setup and attitudes.

The length of trading chains, often seen as a barometer of commoditization and market maturity, is still rather short in iron ore, with most cargoes only changing hands once or twice, compared with up to 15 times in some energy markets.

"It is a supply chain that inherently has less optionality than energy markets," the iron ore producer said. "It is very much a unidirectional trade flow, with limited reloading and blending infrastructure."

Evolution towards a more liquid, fungible market may have also been stifled by certain commercial practices, including the fact that producers have been reluctant to openly bid for material. This hesitancy is said to stem from fears of an outcry from steelmakers claiming this could in some way amount to abuse by the miners. It is worth noting that Chinese steelmakers routinely sell in the open market.

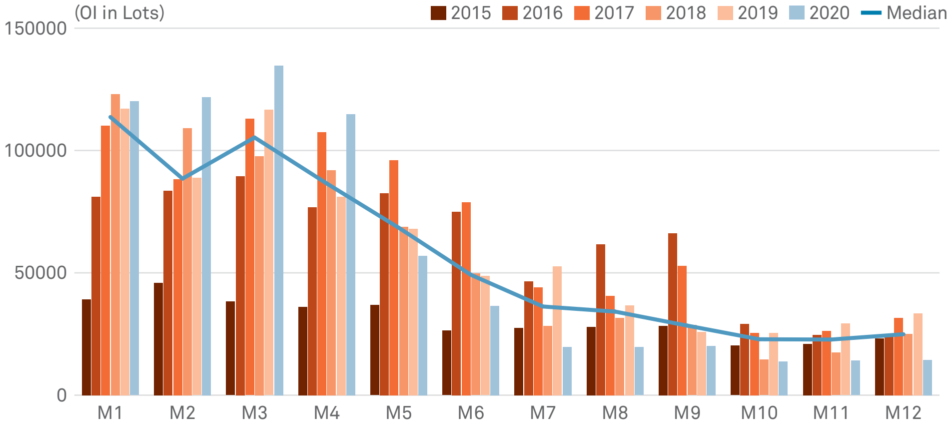
Another odd feature of the iron ore market is that aside from rare occasions, its derivative forward curve is almost always backwardated. The producer source believes this reflects the rapid scalability of potential additional supply.

"Given the speed to market for new supply, traders are assuming that upward price moves would be met with offers rapidly; [unlike other commodities] the cheapest way to store iron ore is in the ground."

Trading and book optimization are only just emerging in iron ore. Of the miners, Anglo American has been the most experimental, purchasing and blending third-party ores and trading paper to create fixed/floating pricing optionality for its customers.

A key benefit of financialization for physical market participants has been the ability to better manage short- and long-term risks through hedging, a practice that is gradually becoming more prevalent in the ferrous supply chain. While iron ore traders routinely hedge their cargoes, steelmakers and miners have remained more tentative in their forays into derivative markets.

Iron ore futures: open interest by month



Source: SGX

Steelmaking raw materials can move in different directions and by hedging iron ore alone and leaving metallurgical coal, steel or scrap unhedged, market participants have pointed out that steelmakers can in some cases create even more risk for themselves.

Meanwhile large mining companies tend to prefer to keep their iron ore unhedged, giving their equity investors an opportunity to trade their share price as a proxy for the daily market price, a practice first deployed at BHP under former CEO Marius Kloppers.

With the continued growth in iron ore futures volumes, it will be interesting to see whether investors opt for a "cleaner" proxy by trading iron ore directly instead.

It is worth remembering that under Kloppers, BHP was also instrumental in setting the iron ore market on its path of evolution, being one of the initial players providing liquidity to the iron ore derivatives market during its infancy. The goal was helping the market get to a stage where there is enough liquidity such that steel mills can hedge and do not need to default on term contracts as a first resort, as seen during the Lehman crisis.

Credit Suisse and Deutsche Bank had announced the launch of OTC swaps for iron ore in May 2008, less than a year before SGX launched its clearing contract.

Over the last decade, the growth in iron ore derivatives has also made it easier to raise financing for new mining projects.

"Having a hedge in place is one of the criteria for mine financing and you can now get almost any volume of hedge done, though it can take longer for bigger volumes," the producer said.

In commodity markets the role of financial participants is to provide liquidity and warehouse risk. There is little academic research to support the premise that financial participants in commodity markets adversely impact the price discovery mechanism in major commodity markets.

As investors increasingly look to incorporate commodities in their systematic investment strategies, the iron ore market will undoubtedly attract more attention from financial players. On the whole, this attention should be welcome. ■

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This article is an extract from *Magnetic attraction: Investors and physical hedgers flock to iron ore,* a special report by S&P Global Platts and S&P Dow Jones Indices. Read more: **spglobal.com/iron-ore-finance**

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