The Case for Morningstar Global Upstream Natural Resources Index

This index may offer attractive diversification and inflation hedging benefits, with some advantages over commodity futures.

Morningstar Inc.
July 2022

Contents

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Executive Summary

Natural resource commodities are vital to the production of most physical goods. As key production inputs, commodity prices are cost drivers for most companies. However, these prices are revenue drivers for firms involved in the natural resources supply chain, particularly for upstream producers involved in the extraction of natural resource commodities.

The Morningstar Global Upstream Natural Resources Index enables equity-linked exposure to commodity prices by targeting upstream producers in the energy, metals, agriculture, water, and timber industries. This index portfolio may offer strong diversification benefits and a hedge against inflation, while offering advantages over commodity futures.

Key Takeaways

- Commodity prices are cost drivers for most companies. Investments that provide exposure to commodity prices can offer good diversification benefits and a hedge against inflation.
- There are two primary ways to get exposure to commodities: 1) commodity futures; and 2) shares of companies tied to the extraction or distribution of commodities.
- Natural resources stocks offer several advantages over commodity futures, including greater tax efficiency, more familiar risks, and potentially greater upside during periods of rising commodity prices.
- Upstream natural resources stocks—those involved in the extraction of commodities—should offer higher correlation with commodity prices, compared with firms further downstream in the supply chain.
- The Morningstar Global Upstream Natural Resources Index targets upstream natural resources stocks in the energy, metals, agriculture, water, and timber industries. It diversifies risk by capping exposure to each commodity category and focuses on the larger players within each industry. This index portfolio may offer good diversification benefits and a hedge against inflation.
- This index has tended to outperform the market during periods of high inflation.

Commodity prices are cost drivers for most companies. However, these prices are revenue drivers for firms involved in the natural resources supply chain, particularly for upstream producers involved in the extraction of natural resource commodities and provision of goods and services used in extraction. As such, these stocks may offer good diversification benefits.

The Morningstar Global Upstream Natural Resources Index aims to deliver equity-linked exposure to commodity prices by targeting upstream producers in the energy, metals, agriculture, water, and timber industries. This index portfolio may offer attractive diversification benefits and a hedge against inflation, while offering advantages over commodity futures.

Two Ways to Get Exposure to Commodities

Because it is difficult to store most commodities (aside from precious metals), investors have two primary options to get exposure to commodity prices: 1) invest in strategies that use commodity futures; or 2) invest in the shares of businesses tied to commodity prices. There is a tradeoff between the two approaches: Commodity futures are more highly (though not perfectly) correlated with commodity prices than natural resources stocks, but they carry distinctive risks and tend to be less tax-efficient. Additionally, not all commodities have futures contracts.

Commodity Futures

Commodity futures are contracts that obligate the purchase or sale of a set quantity of a commodity, at a set date and price in the future. Both producers and consumers of a given commodity may wish to use commodity futures to hedge their price risk. Investors may also use commodity futures to hedge against rising commodity prices or speculate on the direction of those prices.

However, commodity futures prices don’t move in tandem with spot (current market) prices. When spot prices rise, a long position in a futures contract tends to become more valuable, all else equal. But, in practice, all else is almost never equal. Futures prices incorporate expected movements in spot prices over the life of the contract when it is issued. If spot prices rise less than originally anticipated, the contract might lose value, while the underlying commodity becomes more expensive.

Roll yield risk is also an important consideration that can cause futures price returns to deviate from spot. As the contract approaches expiration, the investor must roll the position to a later-dated contract to maintain the exposure. However, the price of the next contract may be higher than the contract being exited. This can cause a futures investor to underperform the commodity spot price.

Interest rates have also historically been an important component of the total return on commodity futures, as futures contracts are usually fully collateralized, meaning the notional value of the contract is typically invested in treasuries. This is where much of the historical inflation hedge from commodity futures has come from, as rates tend to rise in an inflationary environment.

Commodity futures tend to be less tax-efficient than low-turnover equity portfolios. In the U.S., 60% of the gains on these contracts are taxed as long-term capital gains, while the remaining 40% are taxed as short-term gains at investors' (higher) ordinary rate, regardless of how long the positions are held. And most commodity futures funds are structured as limited partnerships, or LPs, which are required to distribute all their capital gains to investors each year. LPs also send out K-1 tax forms, which can add complexity to tax filing.

Natural Resources Stocks

Getting exposure to commodity prices through the shares of natural resources-focused businesses offers some key advantages over commodity futures, including:

- greater tax efficiency, as buy-and-hold investors can defer capital gains and take advantage of long-term rates;
- more familiar risks, so performance may be easier to explain to end investors;
- allows investors to get exposure to commodities that don't have futures contracts;
- potentially greater upside when commodity prices rise, owing to operating leverage, where fixed costs allow profit margins to increase faster than commodity prices; and
- potentially higher expected returns over the long term by giving investors exposure to the equity risk premium and potential cash flow growth.

There are also some tradeoffs to consider. Commodity prices certainly influence the revenue and profits of businesses focused on natural resources, but few firms are pure-play commodity producers. Even those that are don't move in tandem with commodity prices, as costs, operational risk, financial leverage, net share issuance, and the performance of the broader stock market, can all affect the prices of these stocks. Many commodity suppliers use commodity futures to hedge some of their short-term commodity price risk and some sell goods and services used in the production of commodity rather than the commodity itself.

These factors tend to make natural resources stock prices less correlated with commodity prices than commodities futures are. Still, they can offer significant diversification benefits to a traditional stock/bond portfolio, but portfolio construction matters. Upstream producers, those directly involved in extracting or harvesting natural resources tend to have higher correlations with commodity prices than downstream producers that use commodities as a production input.

Morningstar Global Upstream Natural Resources Index

Portfolio Construction

The Morningstar Global Upstream Natural Resources Index is designed to represent diversified exposure to large companies around the world that have upstream operations in the energy, agriculture, metals, timber, and water industries. To do this, it selects stocks from the Morningstar Global Markets Index[1] in the industries shown in Exhibit 1, giving priority to stocks in higher ranked industries, which tend to be further up the supply chain. This should give the index cleaner exposure to commodity prices than it would get from industries further downstream, like steel, where commodities are a production input.

Exhibit 1 Target Industries

Category	Constituent limit	Industry	Priority
Energy	30	Oil and gas integrated	1
		Oil and gas exploration and production	1
		Oil and gas refining and marketing	2
		Coal	2
Metals	30	Industrial metals and minerals	1
		Copper	1
		Aluminum	1
		Gold	1
		Silver	1
		Steel	2
Agriculture	30	Agricultural inputs	1
		Farm products	1
		Farm and construction equipment	2
		Chemicals	2
		Specialty chemical	2
Timber	15	Lumber and wood production	1
		REIT – specialty (Lumber)	2
		Paper and paper products	2
		REIT - diversified	3
Water	15	Utilities - regulated water	1
		Waste management	2
		Utilities – Diversifies	3

Source: Morningstar Indexes. Data as of Jun. 30, 2022.

Within each category, all stocks in the same priority tier industries are ranked on their float-adjusted market capitalization and the largest names are targeted for inclusion until the target constituent count is reached. Larger firms are more likely to be cost leaders than their smaller competitors, which should

1 This is an all cap index inclusive of stocks listed in developed and emerging markets.

help reduce volatility. Within each natural resources category, stocks are weighted in proportion to their float-adjusted market capitalization, further pulling the index toward the largest players in each segment. To improve diversification, the weighting caps listed in Exhibit 2 are applied when the portfolio is rebalanced. The index is reconstituted semiannually in June and December and rebalanced quarterly.

Exhibit 2 Weighting Constraints

		% Weight limit
Category	Energy	30
	Metals	30
	Agriculture	30
	Timber	5
	Water	5
Region	Emerging market	20
	United States	40
Other	Individual security	5

Source: Morningstar Indexes. Data as of Jun. 30, 2022.

The category weighting constraints give the index balanced exposure to the major categories of natural resources and significantly improves diversification. Without these constraints, the portfolio would tilt heavily toward energy stocks. Timber and water receive lower target weightings than energy, metals, and agriculture because they tend to have a smaller financial impact on the economy. However, even a modest allocation to these areas can provide diversification benefits.

Performance

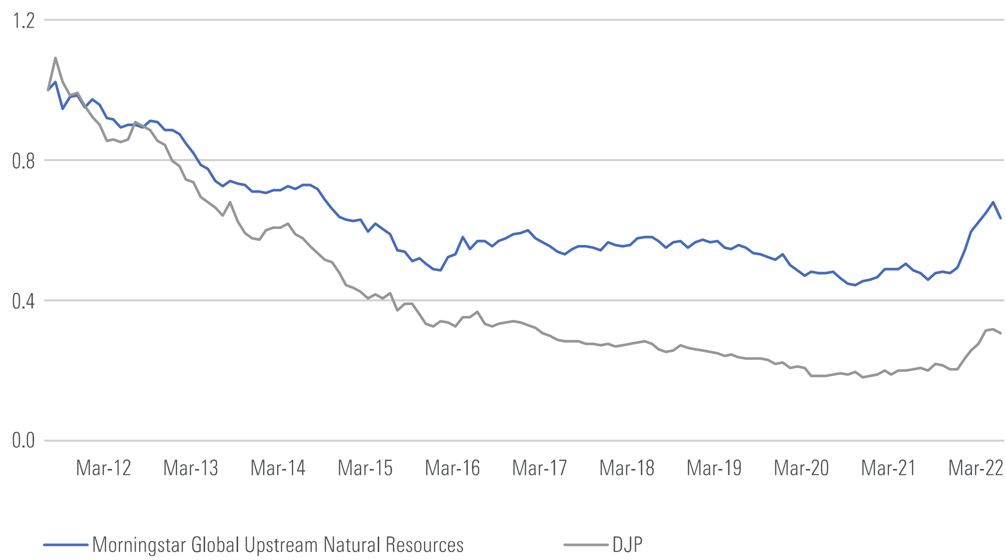
Morningstar Global Upstream Natural Resources Index's performance is heavily influenced by commodity prices. . As commodity prices languished from August 2011 (the first full month after the index's live inception) through December 2021, it lagged the Morningstar Global Markets Index by percentage points annualized. However, rising inflation and commodity prices boosted the index’s performance in the first six months of 2022, helping it beat the market benchmark by an eyepopping 23.3 percentage points, providing much needed gains during a market selloff. Performance is summarized in Exhibits 3 and 4.

Exhibit 3 Performance Summary (Aug. 2011-Jun. 2022)

Name	Return Aug. 2011-Jun. 2022	Return Aug. 2011-Dec. 2021	Return Jan. 2022-Jun. 2022	Std Dev	Down Capture Ratio	Up Capture Ratio	Beta	Sharpe Ratio
Morningstar Global Upstream Natural Resources	3.54	3.41	3.13	19.43	113.66	91.02	1.12	0.25
iPath Bloomberg Commodity Index Total Return ETN DJP	-3.15	-5.02	20.70	16.62	83.71	41.35	0.60	-0.14
Morningstar Global Markets	7.95	10.72	-20.18	14.44	100.00	100.00	1.00	0.56

Source: Morningstar Direct. Data as of Jun. 30, 2022. Standard Deviation is a measure of volatility. Beta is an additional measure of risk, indicating how sensitive an investment is relative to a benchmark. A value of 1.0 indicates that a 1% move in the benchmark is associated with a 1% move in the investment. Down and Up Capture Ratios indicate how an investment has tended to perform relative to a benchmark in down and up periods, respectively. A value greater than 100 indicates the investment tends to have greater upside or downside than the benchmark. Sharpe ratio is a measure of risk-adjusted performance, calculated as returns above the risk-free rate divided by standard deviation.
Past performance is no guarantee of future results.

Exhibit 4 Relative Wealth Against Morningstar Global Markets Index (Aug. 2011-Jun. 2022)



Source: Morningstar Direct. Data as of Jun. 30,2022.

Notably, the Morningstar Global Upstream Natural Resource Index exhibited strong performance relative to commodity futures, as measured by iPath Bloomberg Commodity Index Total Return ETN DJP. From August 2011 through June 2022, the Morningstar Global Upstream Natural Resources Index outperformed by 6.7 percentage points annualized.

Selecting upstream natural resources companies helped the Index in a few ways as follows: 1) Operating and financial leverage helped these companies deliver greater upside than commodity futures from rising commodity prices; 2) Dividend payments added about 3 percentage points to the index's return over the full period; and 3) Investors were compensated for bearing equity risk.

In contrast, DJP, which hold commodity futures, likely underperformed due to a negative roll yield and low interest rates, which depressed returns on collateralized assets.

Inflation Hedge

As expected, Morningstar Global Upstream Natural Resources Index was more highly correlated with inflation than the broad equity market and it tended to outperform in inflationary periods, as illustrated in Exhibits 5 and 6. Exhibit 5 shows the correlation between the annual returns on each portfolio and the year-over-year changes in the consumer price index, or CPI, and the producer price index, or PPI. Exhibit 6 shows the average annual return during the rolling 12-month periods from August 2011 through June 2022 in the periods of high, medium, and low inflation (where each of the rolling 12-month windows were ranked on year-over-year changes in CPI and the top third was defined as high inflation, and the bottom third, low inflation).

Exhibit 5 Correlation of Annual Returns With Inflation (Aug. 2011-Jun. 2022)

	Morningstar Global Upstream Natural Resources	DJP	Morningstar Global Markets
Correlation with Consumer Inflation	0.65	0.86	0.20
Correlation with Producer Inflation	0.79	0.94	0.44

Source: Morningstar Direct, Federal Reserve Bank of St. Louis. Data as of Jun. 30,2022.

Exhibit 6 Average Rolling 12-Month Return (%) by Inflationary Environment (Aug. 2011-Jun. 2022)

Inflationary Environment	Morningstar Global Upstream Natural Resources	DJP	Morningstar Global Markets
High	23.15	19.70	17.68
Mid	5.43	-4.97	10.72
Low	-8.87	-17.52	5.16
Full Period	6.57	-0.93	11.19

Source: Morningstar Direct, Federal Reserve Bank of St. Louis. Data as of Jun. 30, 2022.

This data suggests the Morningstar Global Upstream Natural Resources Index has tended to offer decent inflation hedging benefits and attractive upside. While the Morningstar Global Upstream Natural Resources Index wasn't as highly correlated with inflation as DJP, it tended to provide higher returns in periods of high inflation. It underperformed the market most significantly during periods of low inflation. That said, it fared better than DJP in periods of low inflation.

A returns-based regression analysis corroborates this evidence of the Morningstar Global Upstream Natural Resources Index's potential inflation hedging benefits. After controlling for market performance, a one percentage point increase in consumer inflation was associated with a 5.1 percentage point increase in the annual return for the natural resources index from August 2011 through June 2022.

Portfolio Diversification Benefits

The Morningstar Global Upstream Natural Resources Index may be attractive not only for its inflation hedging benefits but also for its potential to improve portfolio diversification. This index looks and behaves quite differently from the broad global equity market. Over its live performance history, the correlation between the rolling 12-month returns on the index and the market benchmark was 0.72. This is largely because rising commodity prices tend to help the stocks in this index but create a headwind for firms in most other industries, while the opposite is true when commodity prices fall.

It is difficult to predict commodity prices, but a small allocation to natural resources stocks may be prudent to better manage commodity price risk. Exhibit 7 illustrates the performance of a hypothetical portfolio with a 10% allocation to the natural resources index, a 50% allocation to a broad global equity index, and 40% to U.S. investment-grade bonds. While the adjusted portfolio lagged during much of this period, largely due to weak commodity price performance, the allocation to the natural resources index helped considerably during the first half of 2022.

Exhibit 7 Impact of a 10% Allocation to Morningstar Global Upstream Natural Resources Index (Aug. 2011-Jun. 2022)

Name	Return Aug. 2011-Jun. 2022	Return Aug. 2011-Dec. 2021	Return Jan. 2022-Jun. 2022	Std Dev	Down Capture Ratio	Up Capture Ratio	Beta	Sharpe Ratio
Adjusted Portfolio	5.38	7.17	-13.87	8.97	59.67	61.97	0.61	0.56
Basic 60/40 Portfolio	5.74	7.83	-16.20	8.80	58.76	62.83	0.60	0.61
Morningstar Global Upstream Natural Resources	3.54	3.41	3.13	19.43	113.66	91.02	1.12	0.25
Morningstar Global Markets	7.95	10.72	-20.18	14.44	100.00	100.00	1.00	0.56
Morningstar US Core Bond	1.90	3.05	-10.23	3.32	-2.24	6.64	0.03	0.41

Source: Morningstar Direct. Data as of Jun. 30, 2022.

Natural Resources Stocks Have an Important Role to Play

Diversification is always a good idea, regardless of the direction of commodity prices or the market. The Morningstar Global Upstream Natural Resources Index can offer strong diversification benefits relative to traditional broad asset classes by targeting businesses involved in the upstream portion of the natural resources supply chain. These companies are well-positioned to benefit from rising commodity prices and may provide a hedge against inflation. The index's balanced exposure to energy, metals, agriculture, water, and timber should prevent any single commodity group from dominating performance. As an added benefit, it offers tax advantages and more familiar risks than portfolios based on commodity futures, with potentially greater upside.

About Morningstar Indexes

Morningstar Indexes was built to keep up with the evolving needs of investors—and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers and advisors in navigating investment opportunities across major asset classes, styles and strategies. From traditional benchmarks and unique IP-driven indexes, to index design, calculation and distribution services, our solutions span an investment landscape as diverse as investors themselves.

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