ASK THE INSTITUTE

What Are Commodities?

The basic building blocks for essentially everything, commodities are the raw materials grown on farms or pumped or mined out of the ground. In the investment world, commodities are a major asset class, similar to stocks or bonds.

Commodities come in three main categories: agriculture, energy, and metals. Here are some examples of each:

Agriculture

Cattle	Hogs
Cocoa	Milk
Coffee	Rice
Corn	Soybeans
Cotton	Sugar

Energy

- Coal
- Crude oil
- Ethanol
- Heating oil
- Natural gas

Metals

Aluminum	Nickel
Cobalt	Platinum
Copper	Silver
Gold	Tin
Lead	Zinc

How Can Commodities Help Diversify a Portfolio?

Key Takeaways

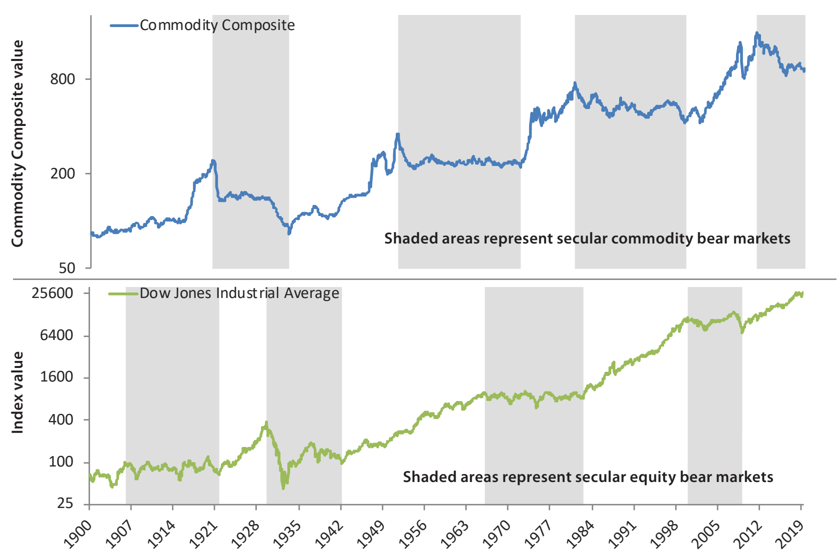
- Commodity prices generally have moved opposite stock markets, which can enhance an investment portfolio's diversification.
- The tactical use of commodities has the potential to increase both a portfolio's return and its risk profile.
- How much you should invest in commodities varies based on your long-term financial goals and the level of risk you are willing to accept.

Why Investors Choose Commodities

Investors typically choose commodities because they can add diversification benefits. Commodities often run counter to other major assets, especially stock markets—shown in the chart below. The top portion represents commodities and the bottom stocks. The shaded areas represent the bear markets for each. Note that the different shadings give the chart a "checkered" look. When commodities have been in a bear market, stocks have frequently been in a bull market, and vice versa. From a tactical standpoint, investment portfolios can benefit from such differences.

Why do commodities move opposite stock markets? Commodities are major input costs for companies, many of which trade on stock markets. When commodity prices rise, it can cost a company more to produce its products. This can weigh on the company's stock price. On the flip side, if commodity prices fall, that same company can probably produce its products more cheaply. This can be looked at favorably by stock investors.

Commodities & Stocks—Secular Bears



Sources: Bloomberg, *Prices* by G.F. Warren and F.A. Pearson, Bureau of Labor Statistics (BLS), Bureau of Economic Research (NBER), Wells Fargo Investment Institute.

Monthly Data: 01/31/1900–04/30/2019. Logarithmic scale.

Past performance is no guarantee of future results. An index is unmanaged and not available for direct investment. Please see the end of the report for index definitions and asset class risks.

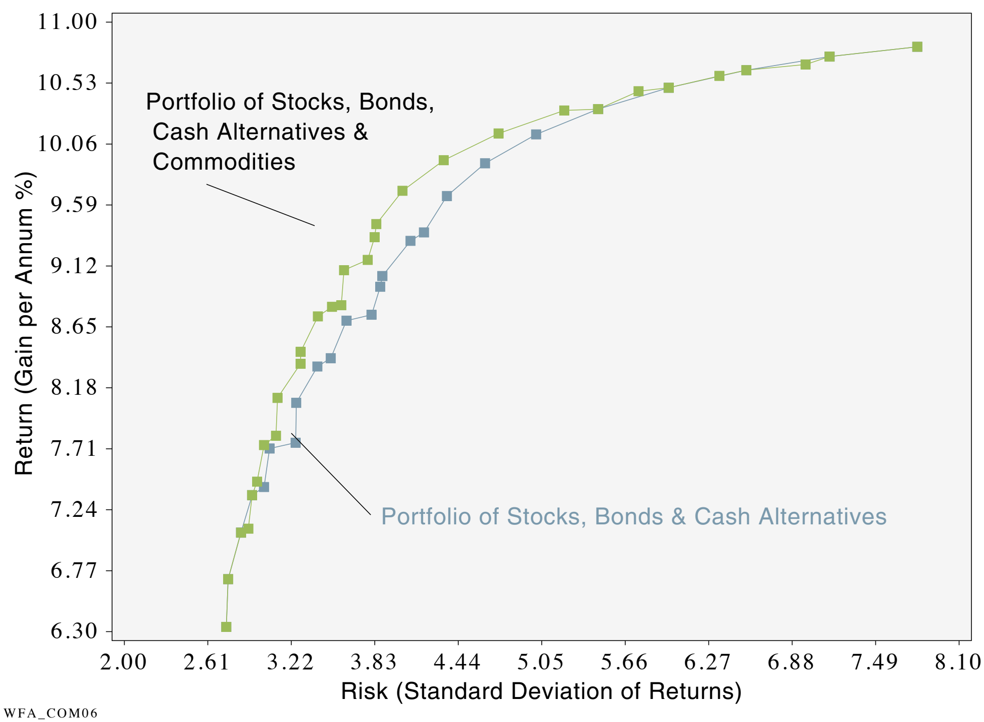
Increasing Returns—and Risk

There is no free lunch, of course. Adding commodities to portfolios does typically come with more risk. Investors, though, have historically been paid for the added risk through extra returns—as indicated by the chart below.

The chart highlights two different portfolios in a historical perspective called the "efficient frontier." The blue line represents a portfolio comprising stocks, bonds, and cash alternatives. The green line represents a portfolio including stocks, bonds, cash alternatives, plus commodities. Each dot represents the expected portfolio returns for a defined level of risk, based on historical performance. If a free lunch did exist (which it does not), it would sit in the upper left corner—lots of return with little risk.

Note that the line for the portfolio including commodities sits a little higher than the one for the portfolio without commodities. This shift indicates that mixing commodities into portfolios has historically increased returns, but with added risk.

Adding Commodities to Portfolios



Sources: Ned Davis Research, Wells Fargo Investment Institute, 09/20/17. Monthly data 1/31/75–8/31/17. The portfolio allocations correspond to the data points in both lines. Each data point is a different mix of stocks, bonds, cash alternatives, and commodities, based on the efficient frontier. Allocations are made in 10 percent point increments. The return axis is based on return percentage. Returns are calculated using a constant 5-year returns basis and reinvestment of dividends and other distributions. Risk is measured using standard deviation of returns. Stocks are represented by the S&P 500 Total Return Index, bonds by the Bloomberg Barclays US Long Government Float Adjusted Bond Index, cash alternatives by the 90-Day Treasury Bill Total Return Index, and commodities by the S&P Goldman Sachs Commodity Total Return Index. For data vendor disclaimers refer to ndr.com/vendorinfo/.

Past performance is no guarantee of future results. An index is unmanaged and not available for direct investment. Stocks offer long-term growth potential, but may fluctuate more and provide less current income than other investments. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity. Standard deviation is a measure of the volatility of returns. The higher the standard deviation, the greater volatility has been.

Gaining Exposure to Commodities

There are a variety of strategies for gaining exposure to commodities:

Futures

Commodities futures contracts are legal obligations to buy or sell a commodity at a date "in the future." The buyer agrees to purchase the commodity at a predetermined future date and price, and the seller agrees to deliver.

It's important to understand that the underlying commodity specified in the contract is seldom physically delivered to the buyer. For example, it's unlikely that a speculator in wheat actually wants to own any wheat. Instead, he or she wants to take advantage of the potential for wheat prices to increase. And the way that's traditionally been done is through buying wheat futures.

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For example, a futures trader might purchase a December wheat contract in September with the expectation the price of wheat will go up and increase the contract's value. If that occurs, the trader could then sell a December wheat contract. This relieves the trader from the obligation actually to buy wheat, and the trader enjoys a profit (minus commissions and other fees) off the transactions.

However, should the price of wheat go the other way, the trader would experience a loss.

This type of trading and investing is not for everyone. Futures are a form of derivatives trading. In other words, the value of the contract an investor purchases is based on (derived from) the price of the contract's underlying commodity.

The futures and commodities markets can be highly unpredictable. Prices often move dramatically. This can happen so quickly that you may not have time to "cover" or get out of your obligation, and you may lose your entire investment. In some cases, you may lose even more than you invested. There can be times when you can have trouble liquidating your futures contract, which may limit your access to cash.

You should know that using leverage can magnify any price movements and lead to extreme volatility. Prices may plummet and rise, making it extremely difficult to determine when to get out.

Stocks

Strategy for Commodities Bull Markets

Not all stocks are created equal. While stock markets generally move opposite commodity markets, **commodity-related stocks**, such as those noted below, tend to move with commodity markets.

- Mining companies
- Oil producers
- Agricultural firms

Commodities

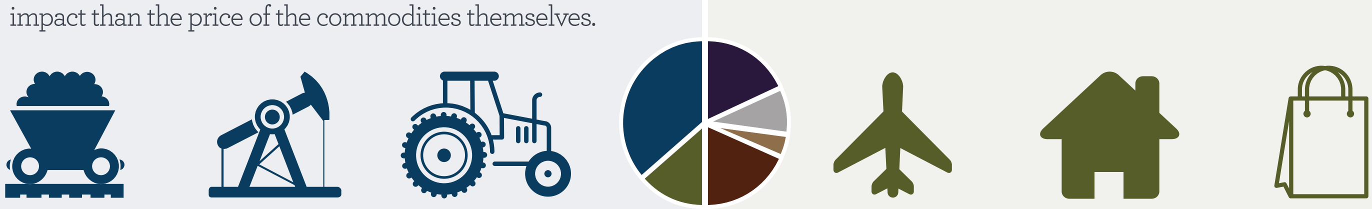
There are primarily two potential advantages to gaining commodity exposure by buying stocks of companies that produce. First, these stocks are easily accessible. Second, their performance tends to be highly correlated with commodity prices; however, this is not always the case. Sometimes factors affecting the share price of a commodity company, such as issues related to a specific mining operation, political risk, and labor disputes, can have greater impact than the price of the commodities themselves.

Strategy for Commodities Bear Markets

When commodity prices are falling, a potential portfolio strategy involves using **consumer-related stocks**, such as:

- Airlines
- Home builders
- Retailers

When commodity prices are falling, consumer-related stocks often benefit. A strategy of owning more consumer-related stocks when commodities are in bear markets has the potential to help portfolios. Of course, when commodity prices are rising, consumer-related stocks can be a drag on portfolio returns. Which consumer stock strategy to use, buying or selling, depends greatly on whether commodity prices are in a bull or bear market.



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Packaged and Professionally Managed Commodities Investments

Some investors may not want to buy individual futures or stocks to gain exposure to commodities markets. For those investors, there are other investment vehicles, such as exchange-traded funds (ETFs), mutual funds, or professional money management.

ETFs. An ETF is an investment company that typically tracks the yield and return of an index, such as the S&P 500. It holds a basket of securities and trades like a stock throughout the day on a national exchange.

A commodity ETF attempts to track the price of either:

- A single commodity and hold it in physical inventory or may
- Purchase futures contracts or track a futures index.

A commodity ETF may also attempt to track the performance of a particular commodity index, similar to a stock ETF that's designed to mimic the performance of the S&P 500. This type of commodity ETF may use a combination of physical commodity ownership and investing in futures.

Unlike a traditional ETF, most commodity ETFs are not registered as investment companies so they are not subject to the same regulatory requirements as mutual funds or ETFs that are registered.

Mutual Funds. For diversification, there are mutual funds available that invest in commodity-related company stocks. These funds may also use futures contracts to track an underlying commodity or commodity index.

Professional Money Management. Rather than trading futures directly, many investors turn to managed futures funds, which employ professional money managers, known as Commodity Trading Advisors, that specialize in futures trading. Managed futures are an alternative investment strategy which aims to profit from trading in financial futures, commodity futures and foreign exchange markets. These types of investments are not suitable for all investors.

All investing involves some degree of risk, whether it is associated with market volatility, purchasing power or a specific security. There is no assurance any investment strategy will be successful or that a fund will meet its investment objectives. An investment in a mutual fund or exchange-traded fund (ETF) will fluctuate and shares, when sold, may be worth more or less than their original cost. ETFs are subject to risks similar to those of stocks and may yield investment results that, before expenses, generally correspond to the price and yield of a particular index. There is no assurance that the price and yield performance of the index can be fully matched.

Trading in futures contracts on physical commodities including trading in the index components is speculative and can be extremely volatile and are not suitable for all investors. ETFs that are linked to an index composed of futures contracts on a single commodity or in only one commodity sector are less diversified than other ETFs. These funds can therefore experience greater volatility than other funds or investments. Investments in commodity-related companies may subject an investment to greater share price volatility than investments in traditional equity and debt securities. The commodity markets are considered speculative, carry substantial risks, and have experienced periods of extreme volatility. Investing in a volatile and uncertain commodities market may cause a portfolio to rapidly increase or decrease in value which may result in greater share price volatility.

An index is unmanaged and not available for direct investment.

Dow Jones Industrial Average is a price-weighted average of 30 of the largest companies traded on the New York Stock Exchange and NASDAQ.

S&P 500 Index is a market capitalization-weighted index composed of 500 widely held common stocks that is generally considered representative of the U.S. stock market.

S&P Goldman Sachs Commodity Index is a composite index of commodity sector returns representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities. The returns are calculated on a fully collateralized basis with full reinvestment. The combination of these attributes provides investors with a representative and realistic picture of realizable returns attainable in the commodities markets.

Commodity Composite Measures a basket of commodity prices as well as inflation. It blends the historical commodity index introduced by George F. Warren & Frank A. Pearson, former academics at Cornell, collected and published commodity price data in their book, Prices, and the producer price index for commodities (PPI-Commodities), and the National Bureau of Economic Research (NBER) Index of Wholesale Prices of 15 Commodities and the Reuters Continuous Commodity Index. The index components and weightings, from Warren and Pearson's Prices, change over time but the 11 commodity groups used from 1786-1932 are: Farm Products, Foods, Hides and Leather products, Textile Products, Fuel and Lighting, Metals and Metal Products, Building Materials, Chemicals and drugs, Spirits (stopped tracking 1890), House furnishing Goods, and Miscellaneous. The PPI-Commodities is compiled by the Bureau of Labor Statistics and shows the average price change from the previous month for commodities such as energy, coal, crude oil and the steel scrap. The NBER Index of Wholesale Prices of 15 Commodities is a measure of price movements of 15 sensitive basic commodities whose markets are presumed to be among the first to be influenced by changes in economic conditions. The Reuters Continuous Commodity Index comprises 17 commodity futures that are continuously rebalanced: cocoa, coffee, copper, corn, cotton, crude oil, gold, heating oil, live cattle, Live hogs, natural gas, orange juice, platinum, silver, soybeans, sugar no. 11, and wheat. The Commodity Composite connects the aforementioned components at the following years: Warren and Pearson- Prices: 1720-1932, BLS PPI-Commodities: 1933-1946, NBER: 1946-1956, Reuters Continuous Commodity Index: 1956-Current.

US Treasury Bill 90 days Index measures the performance of direct obligations of the U.S. Treasury. The returns shown are compiled from the yields available from the weekly auction of Treasury Bills with a maturity of 90 days.

Bloomberg Barclays US Long Government Float Adjusted Bond Index is a float adjusted version of the US Government Bond Index, which tracks the market for US dollar-denominated, fixed-rate, nominal US Treasuries and US agency debentures (securities issued by US government owned or government sponsored entities, and debt explicitly guaranteed by the US government). The index uses the same eligibility criteria as the US Government Index, but excludes US agency debentures held in the Federal Reserve SOMA account (both the flagship US Government Index and the float adjusted version also exclude Federal Reserve holdings of US Treasuries). To be included in the US Long Government Float Adjusted Index, securities must have at least ten years to final maturity.

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