

Investing In Commodities

Moving Beyond the Curve

By Matthew Peterson, JD

Investors are confronting the implications of dynamic economic growth in developing countries. As these regions develop, they will consume vast amounts of natural resources and commodities, including oil, steel, wheat, copper, rubber, cement, and even water. The increase in demand creates significant opportunities for forward-thinking, long-term investors. Investing in commodities addresses the true enemy: inflation. Inflation, not volatility, is what erodes the long-term investor's real portfolio return. Commodity investments are a direct hedge against inflation, and they have a low correlation with other asset classes.

Many investors use commodity futures and commodity-index linked futures (CLF) products to gain exposure to commodities and natural resources. However, commodity futures and CLFs are not the only ways to capture commodity-related returns. This article explores how technical factors with futures markets may limit effectiveness during certain market cycles and how investors can access this sector using the equities of natural resource companies.

Futures Investing

Investors often use commodities and commodity futures interchangeably. This common blurring of terms occurs because it is practically impossible for investors to buy actual commodities such as cubic feet of natural gas, metric tons of steel, or bushels of wheat.¹ But many investors incorrectly assume that futures are the only commodities to invest in.

Futures are created when two parties agree to trade a resource at a specified price at a predetermined "delivery" time in the future. In practice, the commodity is almost never exchanged; instead, the contracts are "rolled" at the delivery date. A contract is rolled by closing the current position (typically when it is about to expire) and opening the same position with a futures contract that expires further in the future. As a futures contract approaches expiration, the price of the future and the current market (spot) price of the underlying resource converge. Unlike most financial transactions, no money is exchanged when a futures contract is opened; instead, the parties exchange money at the close that is equal to the difference between the contract price and the spot price.²

Multiple futures contracts exist for each commodity, and they are differentiated by the time until delivery. For major commodities, futures contracts expire monthly; an investor could buy a futures contract on oil for delivery in March 2011, or December 2013, or any month in between. CLFs typically

buy the contracts closest to expiration and roll them perpetually, either profitably or at a loss as expirations approach.

Futures as Investments

Historically, futures-based investing has provided returns superior to what one theoretically could have achieved by buying and storing resources. This performance has been thoroughly examined by a number of academics and practitioners. Gorton and Rouwenhorst (2006) found that passive investment returns in futures contracts were equally affected by the nature of the futures markets and price movements of the underlying commodities. In other words, investors in futures were benefiting from the "roll yield" (i.e., the return to the investor from rolling when the spot price is greater than the future price).

This condition—where the spot price is greater than the futures price—is "backwardation." The opposite—where the futures price is greater than the spot price—is "contango."

Figure 1 shows a price graph of a typical market in backwardation and in contango. The horizontal axis represents futures contracts of increasing duration. In a backwardated market, spot prices are greater than futures prices. Therefore, even if the spot price of the commodity does not change from the time the contract is entered into until the time it is rolled, investors still earn a return equal to this degree of backwardation. Gorton and Rouwenhorst (2006) note that this roll yield historically has been a significant source of return to futures investors.

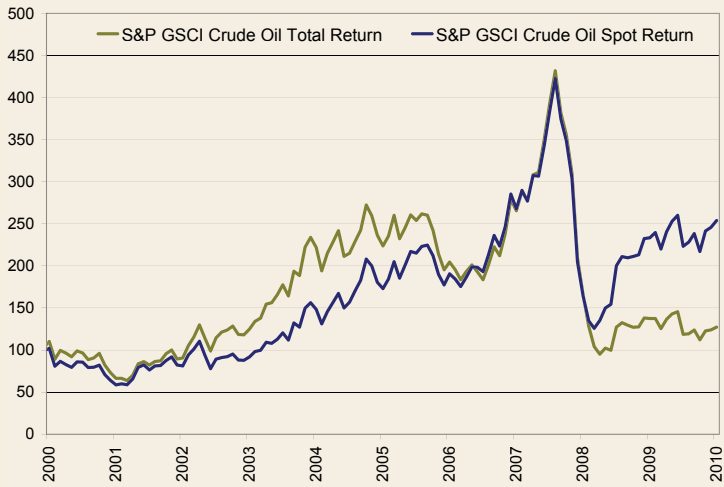
Figure 2 shows the practical effect of "positive roll" yield with a graph of the historical returns of the spot price of

FIGURE 1: BACKWARDATED AND CONTANGO MARKETS





FIGURE 2: CRUDE OIL SPOT VS. TOTAL RETURN



Source: Bloomberg

oil versus a rolling investment in oil futures.³ Note that for most of the history the only positive return to investors in oil futures came from this roll yield, not from a change in the actual price of oil.

Unfortunately, backwardated markets are not a given. Just as backwardation benefits investors by creating positive return when there is no movement in the price of the underlying commodity, contango produces the opposite effect. Contango also is known as “negative roll.”

Major commodity markets now are increasingly in contango or negative roll, i.e., futures prices are greater than spot prices. Table 1 shows the percentages of commodity markets in contango and the impact this has had on the major commodity indexes.⁴ More importantly, table 1 shows how contango has increased in the recent commodity bull market.

Yet a market in contango doesn’t mean that investors automatically lose money. It does mean, however, that the effect of the negative roll must be counteracted in order for the investor to profit. In other words, the price of the underlying commodity must rise by an amount greater than the degree of contango before expiration in order to gain on the futures position.

This is in stark contrast to the historical performance of futures investing, where spot prices were commonly higher than futures prices (backwardation) and investors could profit from a passive investment strategy even when the cash markets had flat or slightly negative returns.

Some markets are more predisposed to contango than others. For example, natural gas is frequently in contango because spot prices fluctuate greatly due to the use of gas for home heating. Figure 3 displays the difference between the spot

and futures return in natural gas. In the natural gas market, investors who buy the near-term contract and roll it have lost money over time, even as the spot price has increased. Despite this fact, natural gas has a significant weight in the major futures indexes (10.9 percent in the DJ-UBS, 3.2 percent in S&P Goldman Sachs as of January 31, 2011).

The Trouble with Indexes

Most investors try to capture the price movement of commodities through an instrument linked to a CLF product.⁵ The most common CLF products are the Dow Jones-UBS Commodity and the S&P Goldman Sachs Commodity indexes.⁶

Indexation, a popular and useful concept for equities, has become a popular but ineffective concept for commodities. Commodity indexes are constructed based on either production of the underlying commodity or on the trading volume of the commodity future. Indexes are designed to be representative of the futures market and do not necessarily reflect the reality in either the resource or the commodity markets.

If Company A has \$5 billion market capitalization and Company B has \$10 billion market capitalization, Company B should have twice the index weight of Company A. But this logic breaks down for commodity investing. For example, gasoline and heating oil combined represent 7 percent of the Dow Jones-UBS Commodity Index, yet crude oil, from which both gasoline and heating oil are derived, is 14 percent of the index. This suggests that refining an unusable product into two usable products destroys half the unusable product’s value. Soybeans and copper are both 8 percent of the index. Do they really have the same value? Is there any underlying investment rationale to these weightings? Despite the more than \$200 billion invested in commodity index products, however, few investors truly understand what they are purchasing.

TABLE 1: PERCENTAGES OF MARKETS IN CONTANGO AND BACKWARDATION

Commodity Indexes	December 31, 2010		August 31, 2006	
	Contango	Backwardation	Contango	Backwardation
DJ-UBS Commodity Index	78%	22%	73%	27%
S&P GSCI Commodity Index	83%	17%	88%	12%

Source: Bloomberg



Equities as an Alternative

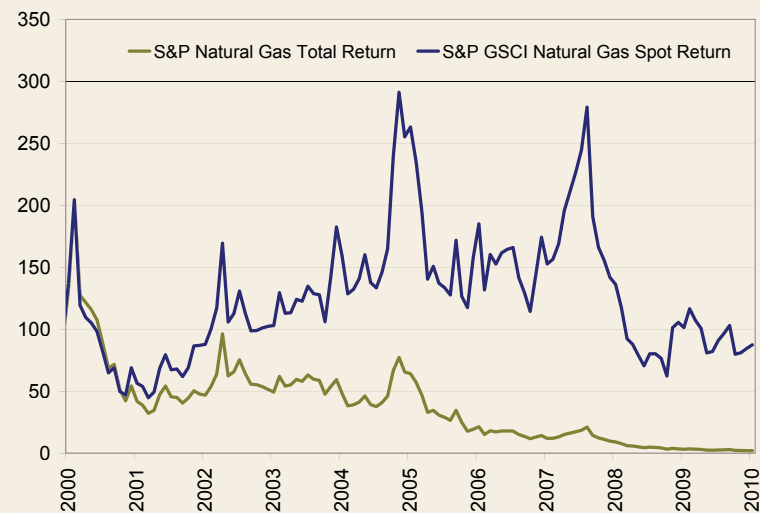
Owning equities in companies that produce commodities has several advantages over investing in futures and CLFs. Consider an ideal investment in commodities, all issues of practicality aside. An investor would buy commodities today, then sell them tomorrow—but only if the transaction was profitable. This is what companies that develop natural resources or generate commodities do. They acquire commodities and, after factoring in costs, sell them for a profit. Furthermore, these companies engage in a number of strategies that increase the likelihood of success, including the following:

- Hedging future production when prices are high to help ensure future profits
- Acquiring additional resources when prices appear attractive
- Adjusting production schedules based on supply and demand considerations in the markets
- Selling resources in bulk (e.g., selling the rights to drill in certain areas or selling land outright) when market conditions warrant

When trading futures contracts, the investor buys at today's price and hopes to roll at a higher price. This is the only way to profit. But investors in companies buy into operating entities that may have acquired the commodity in question at much lower prices. When these assets are sold, the company generates earnings and cash flow. This cash flow then can be returned to shareholders in the form of dividends or share repurchases. Table 2 shows investment returns for oil and natural gas markets, both futures and equities.

Investors in passive strategies can allocate across only the relatively limited universe of resources for which liquid futures contracts exist. Many important natural resources, including iron ore, coal, fertilizers, uranium, and rare earth metals, are not investable through futures. Active equity investors have a wider range of options and they can

FIGURE 3: NATURAL GAS SPOT VS. TOTAL RETURN



Source: Bloomberg

TABLE 2: RETURN COMPARISONS

Future, Spot, Equity	5-Year	10-Year
Oil Futures	-10.20	4.41
Oil Spot	8.39	13.04
Oil Equities (XOI)	7.06	11.42
Natural Gas Futures	-48.50	-36.82
Natural Gas Spot	-14.96	-8.61
Natural Gas Equities (XNG)	10.52	10.46

Source: Bloomberg; returns are annualized as of 12/31/2010

take advantage of weaknesses in certain markets, rotating to resources where the fundamental supply and demand characteristics are more compelling.

Commodity equities are not monolithic. Companies have varying sensitivities to the performance of the underlying commodities. This variation may be the result of factors inherent to the company, such as the location of the natural resource, the relative ease of extraction, or the quality of the underlying commodity. The variation also may be a result of deliberate decisions of company management, such as hedging or longer-term sales contracts. In contrast, CLFs always purchase the most nearby futures contract, providing unvarying exposure to the underlying commodity.

The final characteristic of equity

investing is the difference in valuations among companies within the same industry. Companies have different valuations relative to their earnings, book values, cash flows, and other metrics. Differences in valuation also may be caused by the companies' countries of origin and the exchanges on which shares are traded.


These characteristics are outside the scope of CLFs, which cannot easily alter either the resource mix or the timing of the underlying investment strategy. Futures investors simply buy the nearby contract and hope for the best. Equity investors have the choice of hundreds of companies, each with unique valuation and sensitivity to the underlying resource. This provides equity investors with greater flexibility to manage assets.

Continued on page 56

Peterson

Continued from page 52

Conclusion

Commodity equities represent a broadly diversified investment in global growth, especially growth due to emerging markets. They do not require continued increases in commodity prices to be profitable. Natural resource equities won't enhance returns over a commodity futures index or be correlated to the index. Rather, commodity equities are moved by the same factors as underlying commodity prices but represent a nuanced, diversified way of benefiting from supply-demand imbalances. 

Matthew Peterson, JD, is a principal and portfolio manager at Newgate Capital Management LLC in Greenwich, CT. He earned a BA cum laude from the University of Connecticut, an MBA from the Tepper School of Business at Carnegie Mellon University, and a JD with specialized study in corporate securities, banking, and tax law from the

University of Pittsburgh. Contact him at matthew.peterson@newgatecapital.com.

Endnotes

- 1 Some investors do hold gold coins, and undoubtedly somewhere, someone is holding a gold bar or two in a safe deposit box. In some countries, notably India, people use gold jewelry as a form of savings. Gold is the only market where this practice is possible due to its high price per ounce.
- 2 The mechanics of settling futures contracts is more complicated than described here. However, the required transactions take place at the brokerage and clearing houses and are not material to this discussion.
- 3 Goldman Sachs indexes were used here, but any method of showing the spot and near-contract futures prices would look about the same.
- 4 Some markets show an undulating pattern. Because CLFs typically invest in the near-term futures contract, contango is defined here based on such near-term relationships,

even if the markets revert to backwardation in the more distant future.

- 5 This could be a mutual fund, an exchange-traded fund, or a structured note.
- 6 Dow Jones-UBS Commodity (DJ-UBS) Index is designed to be a highly liquid and diversified benchmark for the commodity futures market; it comprises futures contracts on 19 physical commodities. The S&P Goldman Sachs Commodity Index (GSCI) contains as many commodities as possible, with rules excluding certain commodities to maintain liquidity and investability in the underlying futures markets. The GSCI comprises 24 commodities including energy products, industrial metals, agricultural products, livestock products, and precious metals.

References

- Gorton, Gary, and K. Geert Rouwenhorst. 2006. Facts and Fantasies about Commodities Futures. *Financial Analysts Journal* 62, no. 2 (March/April): 47–68.