



GLOBAL RESOURCES INVESTING

“Backwardation. Contango. Negative Roll...”

Backwardation. Contango. Negative Roll. These terms may or may not be familiar to investors, but they are factors vital to the performance of commodity based investments. Many investors use commodity futures and commodity-index linked futures (CLF) products to gain exposure to natural resources. However, using CLFs is not the only way to capture commodity related returns. This report explores the structure of the futures markets and how technical factors such as contango and backwardation may limit effectiveness during certain market cycles. We also discuss an additional way to invest in this sector using the equities of natural resource companies.

HOWS AND WHYS OF FUTURES INVESTING. Investors often use commodities and commodity futures as interchangeable terms. We prefer to use the term *natural resource (or resource)* to refer to the underlying physical product, and leave *commodity* to define the traded futures contracts¹. The common blurring of terms occurs because it is practically impossible for most investors to purchase physical natural resources. The notion that an investor would buy barrels of oil, cubic feet of natural gas or metric tons of copper and store them is extreme¹. Many assume that futures represent the only avenue available to natural resource investors.

Futures are instruments where two parties agree to trade a resource at a specified price at some predetermined time in the future. In practice, the resource is almost never exchanged; instead, the contracts are rolled at the delivery date. *Rolling* a contract means closing the current position (which

is typically about to expire) and opening the same position with a futures contract that expires farther 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 entered into; instead, the parties exchange money equal to the difference between the agreed upon contract price and the spot price².

There are multiple futures contracts for each resource, differentiated by the time to delivery. For the major resources, there are futures contracts that expire monthly. So one could buy oil for delivery in October 2007, or September 2013, or any month in between. CLFs typically buy the contract closest to expiration and roll them perpetually, either profitably or at a loss as expiration approaches.

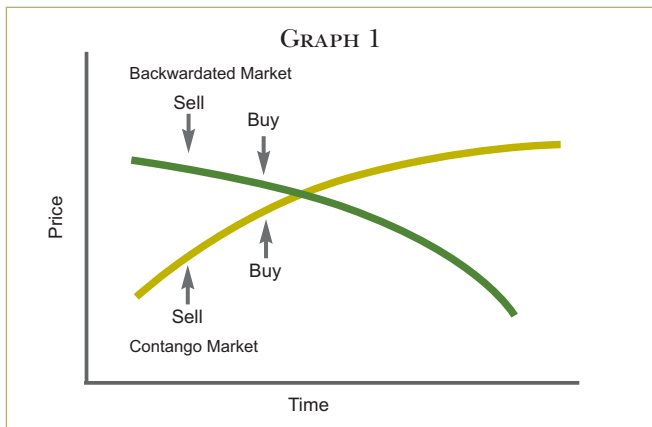
FUTURES AS INVESTMENTS. Historically, futures based investing has actually provided returns superior to what one could theoretically achieve simply by buying and storing resources. This performance has been thoroughly examined by a number of academics and practitioners, most recently by Gorton and Rouwenhorst³. These researchers found that the returns of passive investments in futures contracts were as affected by the nature of the futures market as they were by the price movements of the underlying commodities. At the risk of gross over-simplification, investors were benefiting from the *roll yield*, excess return earned from the rolling when spot prices are above futures prices.

¹ In fairness, some investors do hold gold coins for this reason. 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. But these are clearly the exceptions, not the norm. Gold is the only market where this practice is possible due to the high price of gold per ounce.

² The mechanics of settling futures contracts is somewhat more complicated than described here. However, the required transactions take place at the brokerage and clearing houses and are not material to this discussion.

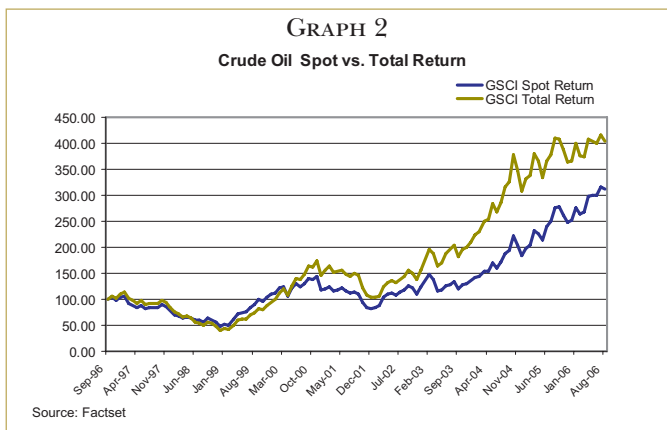
³ Gorton, Gary and K. Geert Rouwenhorst, “Facts and Fantasies about Commodities Futures,” *Financial Analysts Journal*, March/April 2006, pp. 47-68

The condition where futures prices are below that of the current spot price is called *backwardation*. The opposite condition is called *contango*. Graph 1 shows a price graph of a typical market in these states. The horizontal axis represents futures contracts of increasing duration. In a backwardated market, futures prices are below spot prices. Therefore, even if the spot price of the commodity does not change, investors will still earn a return equal to this degree of backwardation. Gorton and Rouwenhortst note this roll yield as a significant historical source of return to futures investing.



Graph 2 displays the practical effect of this positive *roll yield* by showing the historical returns of the spot price of oil versus a rolling investment in oil futures⁴. 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, creating positive return when there is no movement in the underlying commodity, contango produces



⁴ For convenience sake we used Goldman Sachs indices, but any method of showing the spot and near contract futures prices would look about the same.

TABLE 1

Commodity Indexes	8/31/2006		12/31/2003	
	Contango	Backwardation	Contango	Backwardation
DJAIG Commodity Index	73%	27%	49%	51%
GSCI Commodity Index	88%	12%	28%	72%

Source: Bloomberg

the opposite effect, referred to as a *negative roll*. Increasingly, the major commodity markets are now in contango. Table 1 shows the percentage of the underlying contracts in each index that are in contango⁵ versus backwardation. More importantly, the table shows that the contango effect has grown in the recent commodity bull market.

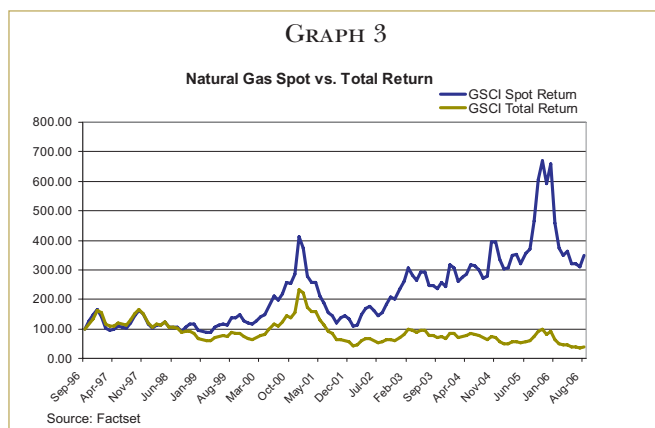
A market in contango does not mean that investors will automatically lose money. It does mean, however, that the effect of the *negative roll* must be counteracted before profits are realized. There must be an increase in the underlying resource price to have a gain on the futures position. This is in stark contrast to the historical performance of futures investing, where the effect of backwardation meant that investors could profit from a passive investment strategy even when the underlying cash markets had flat or slightly negative returns.

THE TROUBLE WITH CLFs. Most investors attempt to capture the price movement of natural resources through some instrument linked to a CLF product⁶. The most common of these are the Dow Jones-AIG Commodity and the Goldman Sachs Commodity indices. It is not known precisely how much money is tied to these indices, but it is believed to be well over \$100 billion.

Commodity indices are constructed based on either production of the underlying resource or on the trading volume of the commodity. They are designed to be representative of the futures market and do not necessarily reflect the reality in either the resource or the commodity markets. Some markets are more predisposed to contango than others. For example, natural gas is frequently in contango as spot prices peak in winter months due to the use of gas for home heating. Graph 3 shows the difference between the spot and futures return in natural gas. In the natural gas market, investors who simply 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 indices (9.7% in the DJ-AIG, 6.7% in Goldman Sachs Index).

⁵ Some markets show an undulating pattern. Since CLFs typically invest in the near term futures contract, we have defined contango based on nearby relationships, even if the markets revert to backwardation in the more distant future.

⁶ This could be a mutual fund, an ETF, or a structured note.



EQUITIES AS AN ALTERNATIVE. One possible solution to the contango problem is to own the equities of natural resource companies. Consider what an ideal investment in natural resources would be if there were no issues of practicality. One would buy resources today and sell them tomorrow, *only if the transaction were profitable*. This is what natural resource companies do. They acquire resources, and after factoring in costs, attempt to sell them for a profit. Furthermore, companies can engage in a number of strategies that increase the likelihood of success, including:

- 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 natural resource markets.
- Selling resources in bulk (for example, by selling the rights to drill in certain areas, or even selling land outright) when market conditions warrant.

Cash flow to shareholders is another important difference between holding a futures contract and holding equities of resource companies. When one buys a futures contract, the investor buys at today's price and hopes to roll at a higher price later. There is no other way to profit. However, investors in companies are buying into operating pools, and ones that may have acquired the resource in question years ago at much lower prices. When these assets are sold, the company generates earnings and cash flow. This cash flow can then be returned to shareholders in the form of dividends or share repurchases.

Investors in passive strategies also have fixed allocations across various commodities, since the basis for the CLF strategies changes incrementally.

Active investors, including active equity-based investors, have the ability to examine the fundamentals of both the resource and the equity markets in order to determine efficient asset allocation. Equity investors can take advantage of weaknesses in certain markets, rotating to resources where the fundamental supply and demand characteristics are more compelling.

Natural resource equities are also not monolithic. Companies have varying sensitivities to the performance of the underlying resources. This variation may be the result of factors inherent to the company, such as the location of the resource, the relative ease of extraction, or the quality of the underlying resource. The variation may also be due to 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 resource.

The final characteristic of equity investing is the difference in valuation among companies within the same industry. Companies have different valuations relative to their earnings, book values, cash flows and other metrics. Differences in valuation may also be caused by the country of origin of each company and the exchanges on which each company's shares trade.

While these may seem like basic concepts, they 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.

CONCLUSION. Investors interested in natural resources markets have been flocking to CLFs as the preferred method of access, too often without a thorough knowledge of the complexity of the futures market. While the strategy has obvious merits, other strategies are worth considering. In this first report, we have illustrated one of the aspects of the futures market (contango) that may encourage investors to seek alternatives. At Newgate, we believe that there is great opportunity in the natural resource markets and that an equity based approach to investing provides more flexibility, broader exposure and greater diversification. ♦