



The Fundamental Elements of a Commodity Investment Process

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This digest article briefly covers how to combine structural sources of return in the commodity markets within a comprehensive investment process. This paper is especially relevant for investors in developing markets who are newly embracing the investment opportunities available in commodity futures markets.

Opportunity Set

The first step in designing a commodity program is to survey the commodity investment universe for opportunities. During times of price stability, the commodity markets that have historically had the highest returns all share one characteristic: they typically trade in backwardation, whereby the nearer month contract trades at a premium to the deferred delivery contracts. This is typically an indication of scarcity.

The Further Distillations of Returns

An active manager can attempt to further distill the returns in the commodity markets that typically trade in backwardation. The manager can do so through entry and exit rules, trade construction, and downside risk management. A primer on commodity risk management, in turn, is covered in Till (2016b), which follows this digest article.

Entry Rules

Once one has chosen the commodity markets to focus on, there are a number of ways to distill a market's returns. This includes through well-chosen entry rules, such as by entering positions based on:

- Positive curve dynamics, namely that the commodity's futures curve is in backwardation; or
- Favorable entry levels; or by entering positions during
- Times of seasonal strength.

Exit Rules

Another way of distilling a market's returns is through well-chosen exit rules.

This includes exiting positions based on:

- Reaching a price target;
- A time stop, which means that one only expects a trade to work over a specific timeframe; or if
- A worst-case loss is reached.



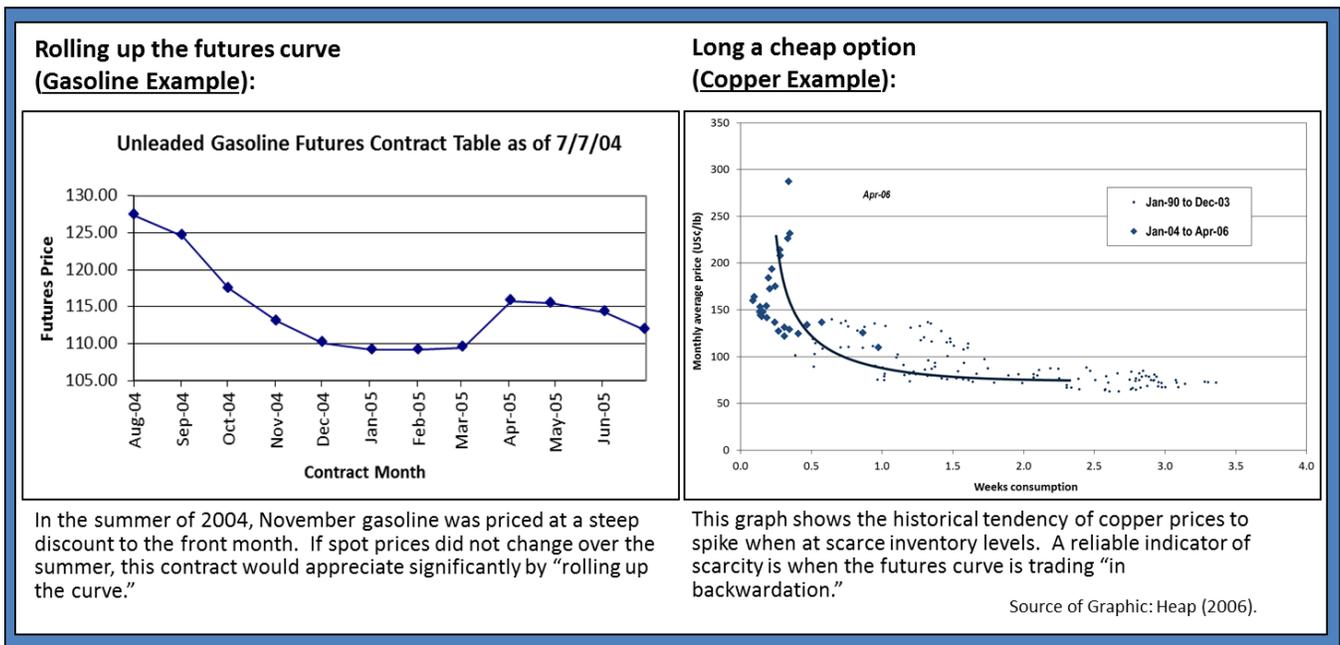
Trade Construction

An additional way to distill a market’s returns is via the judicious choice of trade construction. This includes whether to express a view on a market through outright, calendar spreads, intermarket spreads, or options.

Specific Examples: Gasoline and Copper

Two examples of strategies, which rely on periodic backwardation, follow. The first example is in the gasoline market. The left-hand-side of Figure 1 illustrates a gasoline futures curve during July 2004. The horizontal axis is the maturity of each futures contract while the vertical axis is the price level for each futures contract.

Figure 1



In July 2004, the gasoline contract that matured in November was priced at a steep discount to the front-month contract. If spot prices did not change over the summer, the November contract would appreciate significantly by “rolling up the curve.”

The right-hand-side of Figure 1 provides a copper market example. The horizontal axis is the amount of copper inventories in weeks of consumption while the vertical axis is the price of copper. This graph shows the historical tendency of copper prices to spike when at scarce inventory levels.



The Monitoring of Fundamental Drivers

One job of an active manager is to monitor whether the fundamental drivers for his or her strategies are still intact. In the two examples provided above, one needs to monitor whether each commodity sector’s inventories are expected to remain structurally low.

Portfolio Construction

Now when constructing a commodity portfolio, the goal is have at least 4 to 7 largely uncorrelated strategies at any one time. At times, one can find strategies that normally have correlations amongst each other of -20% to +20%. With such low correlations, portfolio volatility is quite dampened as one adds each of these strategies to a portfolio. But then the portfolio manager has to be careful with eventful correlations, as discussed in Till (2016b).

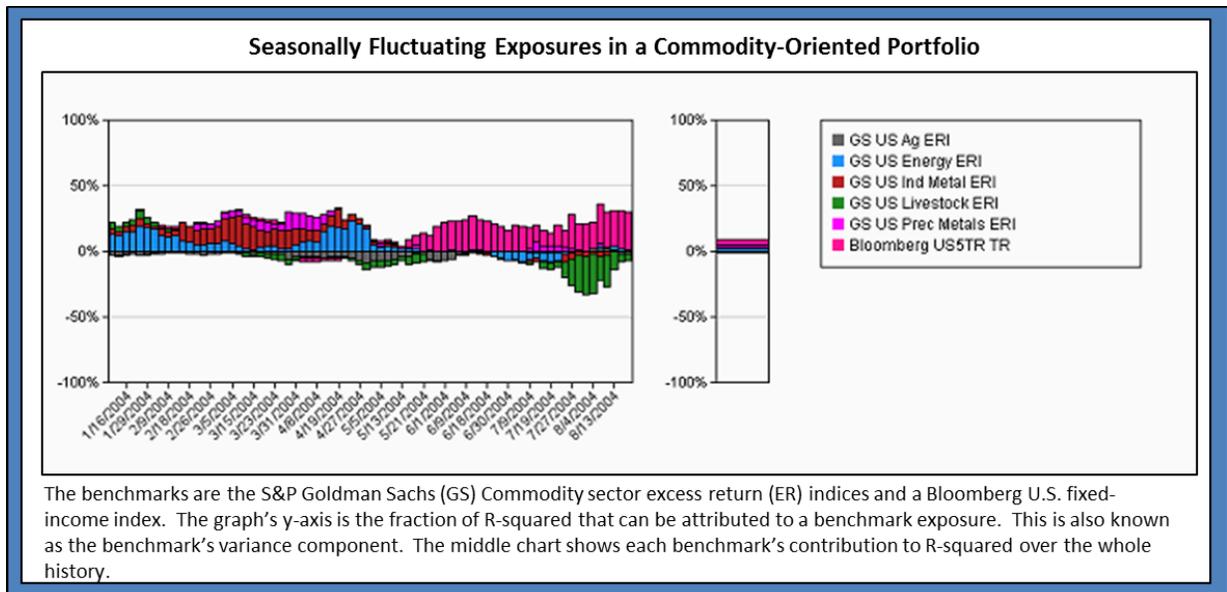
Systematic Risk Hedging

A long-biased commodity program will have systematic risk to severe shocks to the business cycle. Therefore, a commodity manager will have a tendency to include long fixed-income positions in the portfolio as a natural hedge to this systematic risk.

Dynamic Exposures to Commodity Sectors

An active commodity program will have fluctuating exposures to various commodity sectors. Figure 2 shows a returns-based analysis of a commodity portfolio from the Fall of 2004.

Figure 2



Source: Prism Analytics.



Using daily data, this returns-based analysis determined which sectors best explained this active program's returns over time. In particular, Figure 2 shows dynamic exposures to energies, metals, U.S. fixed income, livestock, and the agricultural markets in an actively traded commodity-oriented portfolio.

Conclusion

After isolating the commodity markets where there are structural opportunities, a commodity manager can choose to further distill returns in those markets through the use of well-chosen entry and exit rules, trade construction, and downside risk management. The manager must then ensure that the factors that have led to the portfolio's trading opportunities are still intact. A commodity manager will then endeavor to ensure that each additional strategy added to his or her portfolio is not highly correlated to strategies that are already included in the portfolio. If a commodity portfolio has a tendency to have long commodity positions, then it will be exposed to a sharp shock to business confidence, for which a fixed-income hedge would be a natural hedge for this portfolio. Finally, an actively managed commodity portfolio will have dynamic exposures to various commodity sectors, given the seasonal nature of various commodity-market opportunities.

GCARD readers whom are interested in a more in-depth discussion on commodity-futures-program design considerations are encouraged to review the longer essay in Till (2016a).

Endnotes

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Keywords

Commodity program, futures contract