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Commentary

Market Opinions and Topics of Interest

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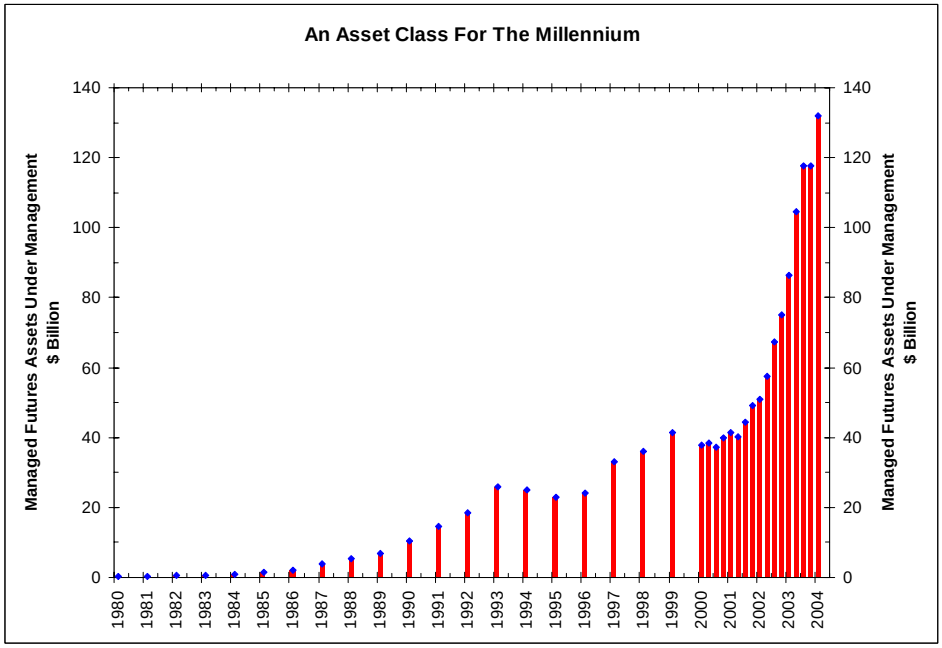
Does Commodity Indexation Distort Futures Markets?

A subtle reason why commodity prices may not be reflective only of individual supply/demand balances and inflationary expectations is the changing nature of commodity futures markets themselves.

Conventional investment assets such as equities, fixed-income or real estate all possess a natural return stream such as dividends, coupons or rents. Professional futures traders (Commodity Trading Advisors, or CTAs) came to the fore in the late 1970s not with the promise of managing a portfolio of diversified assets replete with a natural return stream, but rather of trading futures from both the long and short side, generally on a systematic basis. Razzle and dazzle would be employed on alternate days.

This type of CTA still exists and in many cases flourishes. But a new entrant into the market, the indexed long-only investor has arrived, and so has a flood of institutional money. According to data provided by Barclays Group and depicted below, CTA assets under management have more than tripled in less than three years.

The long-only index approach - and it matters not whether the underlying index is the Dow Jones-AIG, the Goldman Sachs or the Rogers index - is a new development in a set of markets not designed for this approach. Investors in this asset class tend to be stable institutions and not the shorter-term active traders we tend to associate with commodity futures.



Sources Of Return

The sources of return identified for the long-only index approach include the return on the collateral, any price appreciation and the cumulative convenience yield of each commodity future's forward curve.

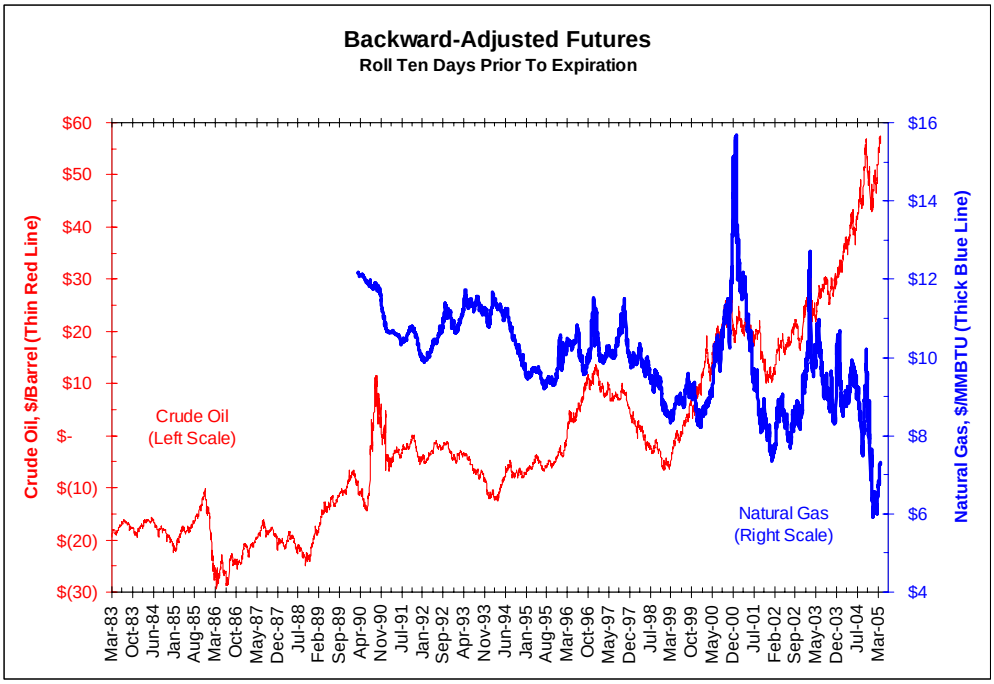
Price gains and losses and the interest earned on margin funds deposited are very straightforward concepts.

Convenience yield can be defined in two different ways. The first is the expected return a buyer of a deferred futures contract trading below "fair value," or the spot market price plus all financial and

physical costs of storage will realize if the contract is held to expiration and the spot price does not change. It is also the insurance premium a risk-averse seller is willing to pay by selling production forward at a price below that fair value.

This convenience yield is captured by buying a deferred contract, holding it until some period prior to expiration, and then rolling it forward into another contract month. If the forward curve remains backwardated (inverted), the seller of this roll will realize a profit. If, however, the deferred contract is priced over the spot contract at the time of the roll as it will often be for easily storable commodities such as grains, tropical softs or for commodities with pronounced seasonality such as natural gas or heating oil, the trade will lose money.

The results can be quite dramatic over long periods of time. Let's illustrate the cumulative effect of the convenience yield strategy over a long period of time for both crude oil (thin red line) and natural gas (thick blue line). In both cases, the front-month contract will be sold ten days prior to expiration and replaced with the second-month contract. Different roll horizons can be used.



Unholy Rollers

In the case of crude oil, the cumulative effects of harvesting the convenience yield enhance the returns over time. The opposite is the case for natural gas; results would be quite divergent for other commodities as well. **Backwardation is not a property intrinsic to any given market. No trader has a right to expect it as a reward for deciding to invest in a long-only commodity index.**

Why? First, the forward curve of any physical commodity is a function of several variables. These include the cost and availability of storage, interest rates, storage losses, short-term supply-demand imbalances and expectations for future price trends. All of these variables are dynamic, and any casual examination of the forward curve of any physical commodity over time will demonstrate how often its structure changes. Just as no bond trader would expect a constant yield curve over time or any stock investor would expect a constant price/earnings ratio over time, no futures trader should expect a constant forward curve structure over time.

Second, as discussed in the December Special Report, the pool of insurance created by sellers is finite. There is only so much crude oil or natural gas or wheat being produced in the world at any time. As the number of long-only indexers increases, this pool must be divided among an increasing number of competitors.

Patterns in markets work until they are recognized, which is usually pretty quickly. Counterparties to this trade are no more likely to provide a never-ending stream of trading gains to passive indexers than the IRS is to simply take your word for it. The temptation to front-run the indexers by engaging in a preemptive roll, selling the front month and buying the deferred month, prior to the arrival of the regular index rollers is extreme.

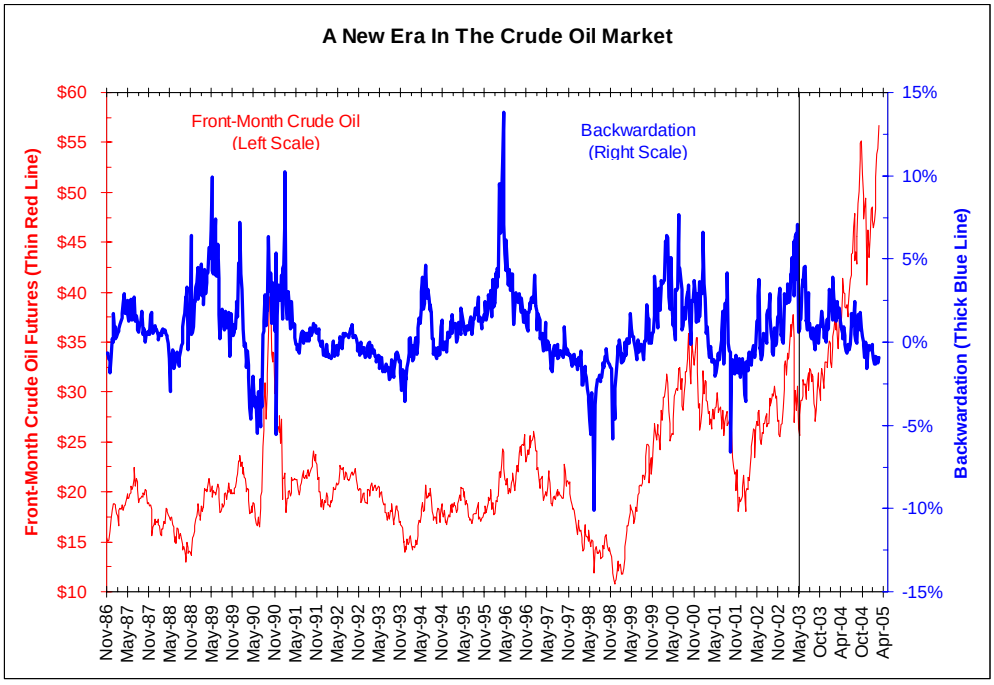
The net result of long-only indexed money coming into commodities markets and intersecting with financial strategists willing and able to take the other side of their trades is an inevitable distortion of the forward curve and quite possibly of price levels themselves. This is hardly a revolutionary

observation; who can doubt whether indexation affects the prices of individual stocks bought and sold as part of baskets without regard to their individual fundamentals?

The role of a price and of a forward curve or yield curve is to send signals back to both buyer and seller. If the trade dynamics alluded to above are in effect, the implication is both buyer and seller are going to be acting on erroneous signals. **And, returning to our purpose, monetary authorities will be receiving the same erroneous signals. Nothing good can come from bad information.**

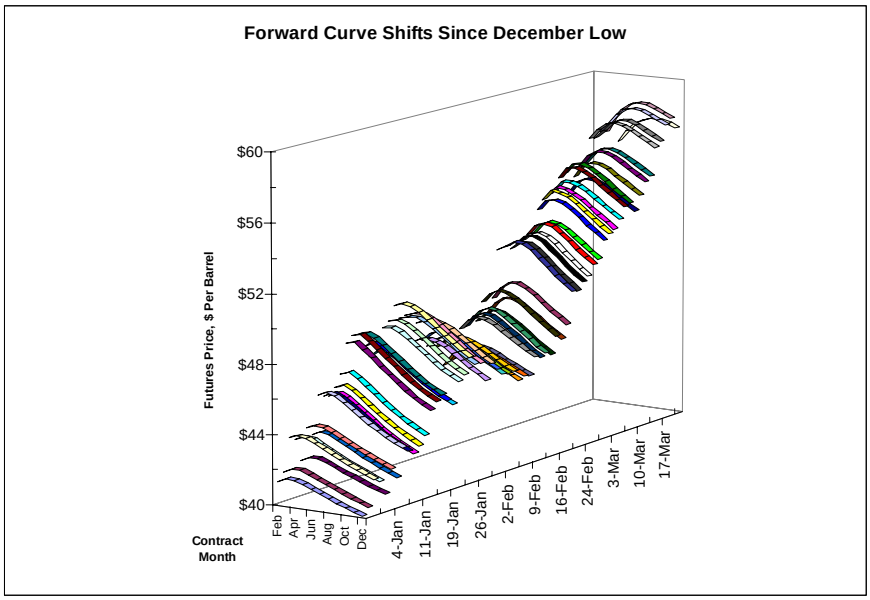
Let's take a quick illustration of how this may be operating in crude oil, most recently the subject of a Commentary in February. For various reasons, including logistical constraints within its supply chain and the comparative cheapness of storing the raw material in the ground, crude oil tends to exhibit a pattern of becoming more backwardated when its price rises and less backwardated when its price falls.

If we map the price of front-month crude oil futures (thin red line) against a simple backwardation premium defined as [$Month_1$ – $Month_2$]/$Month_2$ (thick blue line), we see how the present era is unique. At no other time does backwardation decline while the price is surging higher. While we have offered in the past how this in conjunction with other indicators is a sign of the market's acceptance of higher prices, and that still may be true. It also may be a sign of a changed pattern of trade in the market.

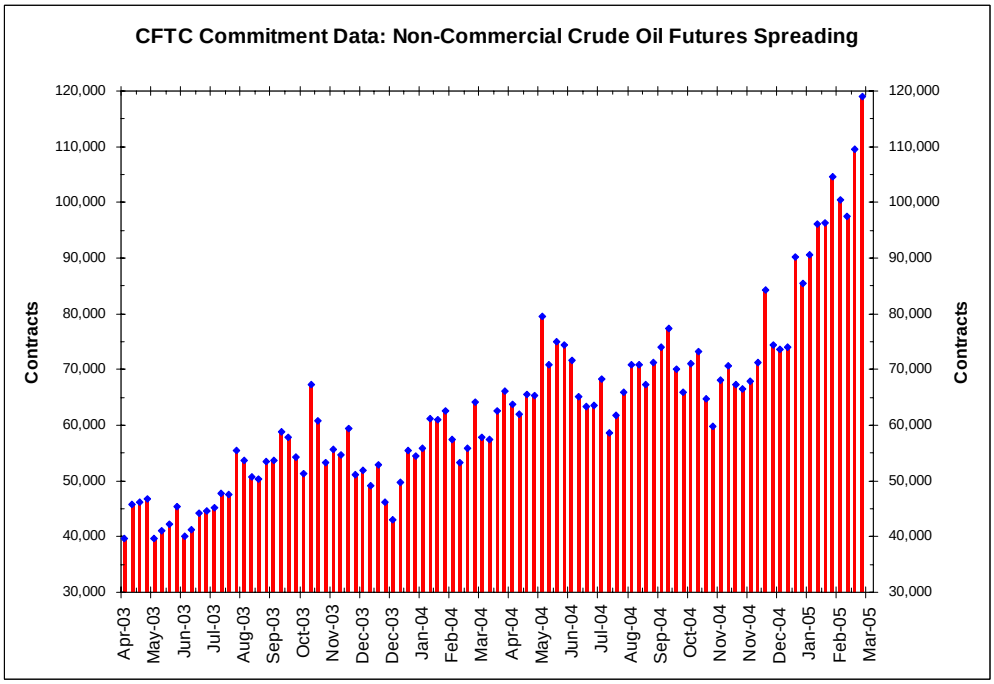


Front-Running

The conjecture of change can be illustrated, albeit complexly, by mapping the daily forward curves of the February-December 2005 crude oil futures contracts since the December 27, 2004 low. As we begin the exercise with prices in the low $40 per barrel range, the front-month contracts (left-hand side of each ribbon, following page) generally are higher in price than are the back-month contracts (right-hand side of the ribbon, following page). As prices rise over time, note the pattern in the ribbons as they move rightward. As price rises, more and more of the front-months are trading for less than the back months. This shift in the price/backwardation relationship is difficult to reconcile with decades of history and known theories of what the forward curve of futures should look like in a bull market unless we accept that large numbers of futures traders are now engaged in spreading transactions: The aforementioned front-running of the long-only indexers.



Once again we should seek confirmation whether such activity is taking place. The Commodity Futures Trading Commission includes spread traders in its weekly Commitment of Traders report. The number of reported spread positions by Non-Commercial traders, those not in the energy business, jumped after the start of 2005. This is the exact time period in which the character of the forward curve for crude oil changed. While this does not prove traders are getting in front of long-only indexers, it is consistent with such a hypothesis.



Conclusion

The best hope for lower commodity prices might be from these very same long-only index funds that now might be pushing the price higher. If you want to stimulate new supply and reduce demand, high prices work. Of course, the long-term results of this investment will be to create lower prices in the future and reduce the long-only indexers' returns. They can bask in the afterglow of their positive social externalities.

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