The Mysterious Case of the Commodity Conundrum, Securitization of Commodities, and Systemic Concerns

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By Michael "Mack" Frankfurter

"The theories which I have expressed there, and which appear to you to be so chimerical, are really extremely practical—so practical that I depend upon them for my bread and cheese."
— Sherlock Holmes, A Study in Scarlet (1888)

The mysterious case of the commodity conundrum is sure to elicit passionate debate on either side of the equation—is the commodity boom due to speculation or fundamentals? By the time you read this, a battle in this dispute will have taken place on April 22, 2008 with the CFTC roundtable on agricultural markets.

Two recent articles, "*Commodities: Who's Behind the Boom?*" (Barrons) and "*High Commodity Prices? Blame Wall Street Before Speculators*" (Reuters), explore the potentially complicit role of "speculators" as villains. This is a red herring—these articles in truth are focused on concerns regarding the trespassing of Wall Street financial innovation into the commodity markets.

In the Reuters article I am accurately quoted as stating, "The ugly truth is that the securitization of commodities has eased the way for money flows to raise commodity prices beyond that which the current fundamentals of the global economy can sustain over the long term." Without proper context, this assertion is provocative, yet its crux is derived from our working paper.

I originally posted the draft of my speech to the IQPC Base Metals Investment Summit on March 19th, partly in order to raise attention to generally unnoticed issues surrounding the transformation of commodity futures from a hedging utility into financial investments. This speech contains the above quote, but my thinking was not isolated: Jeffrey Korzenik independently wrote a piece in Minyanville on March 24th, which was followed by Gene Epstein's article in Barrons on March 31st discussing the well-researched and autonomously developed ideas of Steve Briese.

The resulting brouhaha from various sides of the commodity bull market debate is predictable, but misses the point. To add to the confusion, at stake are significant economic and policy issues.

Besides the 1/23/08 and 2/5/08 press releases from the National Grain and Feed Association, the reader should also refer to the list of signees of a letter dated 10/25/07 to the U.S. Senate from the Energy Oversight Market Coalition. These memorandums raise legitimate concerns from bona fide hedgers.

It seems I am not alone in my alarm at the consequences resulting from securitized commodity products and its abettor over-the-counter (OTC) derivatives, which is represented by the International Swaps and Derivatives Association (ISDA). In addition to members of Congress, there is a growing list of commercial hedgers, reputable analysts, veteran futures traders, and futures exchanges who are concerned too.

All the same, laypersons and policymakers must realize that speculators are a natural and necessary feature of the commodity markets. Fear of the speculator's role in the economy when viewed objectively is irrational. (The following section illuminates why this is the case.)

Likewise, Wall Street, who has finally managed to get the commodity genie out of the bottle, must recognize it could kill another goose for the need of more golden eggs. Commodities are not securities, and regulated exchange-traded derivatives provide the proper forum for such trading.

Let me make clear here: I am a proponent of the speculators' role. The function of speculators is required to facilitate the hedging utility and price discovery mechanisms. In my humble opinion, *the career of commodity futures speculation is an honorable trade if practiced honorably*. And in that context, yes, a reflexively driven fundamental case can be made for rising commodity prices. However, we cannot be sure of this unless we have a level playing field of properly regulated markets.

Something systemic and possibly more insidious is afoot. Beyond questions of whether or not price distortions are a result of the development of securitized commodities vehicles, there is the political debate on "closing the Enron loophole." Those who are long commodities may arguably have good reason to be long, but there is no excuse for the opaque and unregulated OTC derivatives market.

As Schiller (2000) so eloquently stated in his book *Irrational Exuberance*, "We need to know confidently whether the increase that brought us here is indeed a speculative bubble—an unsustainable increase in prices brought on by investors' buying behavior rather than by genuine, fundamental information about value. In short, we need to know if the value investors have imputed to the market is not really there, so that we can readjust our planning and thinking."

These two matters, the securitization of commodities and OTC derivatives, are in fact corollaries. My contention is that the reflexive interaction between market structure, functionality and price action is systemic. That said, whether mine and others' concerns are right or wrong, will ultimately be determined by public debate, political will, and eventually by the markets and the economy.

Admittedly, we all talk our book: I am a long-time participant in the regulated and transparent futures industry which marks-to-market, while others profit from trading unregulated and non-transparent OTC derivatives which marks-to-model. Then there is the CFTC itself—a regulatory body whose 4/21/08 proclamation that there is no excessive speculation in commodity futures rings as hollow as Bush's praise of FEMA in response to Hurricane Katrina, "Brownie, you're doing a heck of a job."

Christopher Hausman, an Illinois farmer, provides a more open and frank assessment of the current situation in the commodity markets. He is quoted in a 4/22/08 New York Times article as bluntly saying, "I can't honestly sit here and tell you who is determining the price of grain. I've lost confidence in the Chicago Board of Trade." Caveat emptor… 'what the CFTC tells you is official, what he tells you is unofficial.'

So "before turning to those moral and mental aspects of the matter which present the greatest difficulties, let the inquirer begin by mastering more elementary problems."

Back to Futures Basics

Futures and forward contracts are intrinsically different instruments than securities which are derived from the capital markets (e.g., fixed income or equities). This is underappreciated.

Derivatives are risk management tools, a "zero-sum game," fundamentally different from the "rising tide raises all ships" concept of the capital formation markets. While, there is an established theoretical basis and considerable empirical evidence that link investment in capital market assets to positive expected returns over time, notwithstanding the recent surge in commodity prices, a legacy of academic *disagreement* supports the claim that, on an inflation-adjusted basis, the same cannot be said about commodities.

As noted by Greer (1997), the inherent problem is that commodities are not capital assets but instead consumable, transformable and perishable assets with unique attributes. Hence, speculative trading, by definition any commodity trading facilitated for financial rather than commercial reasons, likely results in "zero systematic risk."

The conundrum for financial "investors" is that for every buyer of a commodity futures contract there is a seller—*sine qua non*, there is no intrinsic value in futures/forward contracts—they are simply agreements which commit a seller to deliver an asset to a buyer at some place/point in time. Accordingly, the derivatives and securities markets require two different types of regulation.

For now, let's avoid any debate on the so-called roll yield, and focus instead on a more intuitive and economically meaningful explanation for potential sources of returns in the futures markets.

It is generally assumed that organized futures markets provide important economic benefits. This premise, that properly functioning futures markets serve a valuable economic purpose, is validated by government policy. The secondary benefit provided by the futures market is that it functions as a mechanism for transparent price discovery and liquidity, therefore mitigating price volatility.

The primary benefit provided by these markets, however, is that it allows commercial producers, distributors and consumers of an underlying cash commodity to hedge. Hedging reduces the risk of adverse price fluctuations that may impact business operations, which in turn theoretically results in increased capacity utilization. It is indispensable to the well-being of our financial system.

Commodity theory mainly focuses on the transference of a "risk premia" from risk-adverse hedgers to speculators. The insurance-like context was first proposed by Keynes (1930) in his theory of normal backwardation. Essentially, Keynes believed that hedgers have to pay speculators a risk premium to convince them to accept their risk. Spurgin (2000) explained it this way…

There are four types of participants in futures markets: short hedgers (producers), long hedgers (consumers), speculators and arbitrageurs.

Most transactions result in symmetric responses. Speculator versus speculator results in a symmetric response, as does a long hedger versus a short hedger. Arbitrageurs, who perform a different function, exist to ensure consistent pricing across different types of instruments (cash, futures, forwards, options, swaps, ETFs, etc.) of a particular underlying asset or relationships.

In addition, there are theoretically four asymmetric scenarios which produce excess return to speculators:

1) a rise in commodity price (beneficial to producers) generates more initiative from producer short hedgers to lock in higher prices, hence a net short hedging position is established;

2) a rise in commodity price (detrimental to consumers) causes consumers to be more concerned about guarding against margin pressure than producers are concerned about locking in higher prices, hence a net long hedging position is established;

3) a drop in commodity price (beneficial to consumers) generates more initiative from consumer long hedgers to lock in lower costs, hence a net long hedging position is established; or

4) a drop in commodity price (detrimental to producers) causes producers to be more concerned about guarding against margin pressure than consumers are concerned about locking in lower costs, hence a net short hedging position is established.

Ironically, just ten years ago, mainstream thinking about commodities was largely negative. Schneeweis and Spurgin (1996) stated at the time that the low level of investment in managed futures (then the only way to participate in professionally managed commodity investing) was due to the fact that investors required both a theoretical basis and supporting empirical results. In other words, historically, the prevailing wisdom in the investment community had mostly been against direct speculation in commodities.

This understanding was based on the premise that—if there were excess returns to speculative capital in futures trading, assuming there are participants such as risk averse hedgers willing to lose money over time, then since barriers to entry is low so much capital would flow to this area that returns would be driven to zero over time, and as a result returns would be spread so thinly that profits would not be possible.

Our working paper suggests that this supposition remains essentially correct. But due to a paradigm shift in supply-demand fundamentals from emerging markets, and increasing speculative capital inflows into commodities biased to the long side, the dominant sentiment began to change after the millennium...

"What one man can invent, another can discover."

Academic Mountebanks

Modern finance, or "market fundamentalism" as George Soros calls it, is based on a little known assumption called "rational expectations equilibrium," from which financial models are derived.

Admittedly, models are only an abstraction from reality. Expecting such models to be exactly right is unreasonable, and it is generally understood that neoclassical economic models have inherent limitations. Such systems are based on perfect competition, assume that the economy is stable, and that markets naturally return to equilibrium after a disturbance.

Hence, such models maximize utility and/or profits in a world of constraints based on the choices of "rational" economic agents. By definition then, these models relegate speculators to the role of that very agent which maintains equilibrium. Hence, markets are "informationally efficient."

Paradoxically, if historical market data is assumed to represent equilibrium and "the future is merely the statistical reflection of the past," then one could inversely argue that perfect competition minimizes these models' usefulness as a mechanism from which to make speculative decisions.

In other words, rational expectations compel such models to simply *validate* that market price data is equated to equilibrium; unless the opposite is true—that markets are in fact imperfect and rational expectations is untenable, which in turn undermines the veracity of these models.

This is where post-Keynesian ideas, including the theory of reflexivity and behavioral finance, originate. Such view takes the stance that markets are complex, messy and uncertain, and exhibit behavioral tendencies related to the "wisdom of crowds" and "madness of crowds." Further, economic fundamentals and market prices create a perpetual feedback loop, each influencing the other as well as market behavior.

Philosophically, the "rational expectationalists" believe the economy naturally reverts to equilibrium, and seek "beta" in the *wisdom of crowds*; while the "reflexive behavioralists" believe that the world persists in a state of fluctuating disequilibrium, and seek "alpha" opportunities in the *madness of crowds*.

This may be an oversimplification, but it sets the framework for the discussion that follows…

<u>Three Sources of Return…</u>

As noted in a June 2006 U.S. Senate Staff Report by the Permanent Subcommittee on Investigations titled, *The Role of Market Speculation in Rising Oil and Gas Prices: A Need to Put the Cop Back on the Beat*, "[r]ecent academic research indicating that commodity futures have performed as well as stocks and better than bonds, with less risk, also has boosted expenditures on energy commodity futures."

However, despite the proliferation of such academic studies, the buried truth is that the academic legacy of empirical tests using a variety of asset pricing models, including the CAPM, hedging-pressure hypothesis, or arbitrage pricing theory, have produced inconsistent conclusions as to whether there is, in fact, positive expected returns from speculating in the futures market. This legacy goes back to Keynes.

So what changed in the thinking of academics, or at least mainstream perception? The current mantra is that there are three, sometimes four, sources of return that come from "investment" in commodities.

First, there is the "collateral yield" which references the fixed income yield that emanates from the *de minimis* good faith deposit required to trade derivatives. Second, is the "spot return," which relates to the change in pricing of the underlying commodity—a straight forward concept. Third, is something called the "roll yield or return" which according to hardassetsinvestor.com is "*a bit more complicated to understand, but it is absolutely critical to your returns*." And occasionally there is reference to a fourth source, a "strategy return," related to "how one weights and rebalances the components of a commodity index."

Our working paper takes issue with the concept of the roll yield/return. To begin with, the roll yield is derived from a water-down definition of backwardation and contango, which is based on, what Hilary Till in her book "Intelligent Commodity Investing" describes as, the "term structure of the futures price curve." We are not alone; Erb and Harvey (2006) also debated this notion.

This current convention then became fodder for the fantasies of various papers including a much cited Yale University paper on commodity futures by Gorton and Rouwenhorst (2004), proponents of the roll yield. And because this paper is briefly mentioned by Jim Rogers in his book "Hot Commodities," a perpetuated myth evolved around this deficient theory into the investor mindset.

Now, if one takes a close look at the studies which underlie Gorton and Rouwenhorst's conclusion, it becomes obvious that the model they use supports a fictional trade that cannot be duplicated in real life. Rather than rolling the futures contract forward, they roll the futures contract backward to "prove" their thesis. This is facilitated with the idea that the expected future spot price is a pre-determined static constant, when in fact the "expected future spot price," which is the lynchpin to Keynes' theory of normal backwardation, is an unknown, to be discovered, in the future, at the time that the futures contract converges with the spot price.

Futures contracts unlike securities are instruments with a finite life, and terminate on pre-specified dates when the futures contract converges with the spot price. At that point delivery of the underlying cash commodity is made between commercial participants. A wheat futures contract, for example, has delivery contracts for March, May, July, September and December. For this reason, and as a matter of practice, most speculators do not allow their positions to enter the delivery period, and a perpetual long futures position will require a trader to "roll the contract" from one contract month to the next.

As a real world example, let's assume that a trader goes long a March futures contract at $100, then subsequently rolls that contract 60 days later by liquidating this contract at $120, while at the same time reentering the long position via a July futures contract at $121. Sixty days later the trader exits the position altogether and liquidates the July contract at $111.

The long March futures contract trade results in a $20 realized gain and the long July futures contract trade results in a $10 realized loss. Very simply, the net gain of $10 is then divided into the original investment amount of $100 for a 10% return. This is straightforward and logical.

On the other hand, the model for calculating the roll yield or roll return is not possible in the real world, but seeks to prove something on the basis of a fictional trade.

Again, let's say that a trader goes long a March futures contract at $100, and 60 days later liquidates the March contract at $120. The academics referred to this as the "spot return" and the net gain of $20 is then divided into the original investment of $100 for a 20% return.

At the same time the trader purchased the March futures contract, let us assume that the July futures contract was trading at $90. The roll return model then subtracts this $90 July futures contract price *in the past* from the current $120 March contract liquidation price (this is not possible to facilitate in the real world). The academics call this the "excess return" and the net gain of $30 is then divided into the $90 July contract price (why not the $100 denominator?) for a 33% return.

As a result, the "arithmetic" roll return is equal to 33% minus 20%, which equals 13%... Huh?

It is clear that the model aims to statistically identify an approximation of excess returns from historical price data, but even Till (2007) states "the convention of separating out futures-only return into spot return and roll return is solely for performance-attribution purposes." Till additionally states that roll returns "related to the term structure of each futures contract [is] meaningfully so only at *long* investment horizons."

Present-day proponents of the roll yield also conveniently forget to mention that Keynes et al. pointed out difficulties in empirically testing the theory of backwardation. "Since the expected future spot price is not observable, the signature of normal backwardation will be the tendency of the forward price to rise (more than the opportunity costs of holding the commodity would suggest) as the delivery date approaches."

Hypothetically, the roll return model ("simplified arbitrage theory"), which is based on the term structure of the futures price curve and conventionally used by present-day researchers, may *indicate* the possibility of backwardation and contango conditions. However, "classical arbitrage theory," as proposed by Keynes and his generation of researchers, related these concepts to the relationship between a specific futures contract price and *that specific contract's* "expected spot futures price," thereby invalidating the roll return model.

Furthermore, if one is familiar with the Black-Scholes option pricing model, roll yield/return proponents are in essence using a similar paradigm, but without acknowledging that that the expected future spot price is *not* a static constant (i.e., strike price), but rather an unknown, to be discovered, in the future, at the time that the futures contract converges with the spot price.

Accordingly, while the term structure of the futures price curve may indicate a potential roll return benefit or detriment, classical and simplified theory combined results in a complex series of "roll yield permutations."

Getting Back to the Classics…

There is, in fact, an inherent flaw in the roll return model. Accordingly, and as a direct challenge to other researchers who posit the existence of the roll return purported from empirical tests, we argue that such structural source of returns truly reflect *leveraged* returns as a function of the model itself!

So how does classical commodity pricing theory explain concepts of backwardation and contango? Some may dismiss the veracity of research performed by those from the early half of the 20th century, but we suggest that the researchers from this time, including Keynes (1930), Kaldor (1939), Hicks (1939, 1946), Working (1948) and Brennan (1958) were more in sync with commodity fundamentals given its relative importance in the economy at the time. Now the service industry economy predominates.

Expanding on Kaldor's (1939) ideas about "supply-of-storage," Working (1948) observed that since storage costs are normally higher the longer a commodity is stored, the futures price at increasingly distant delivery dates will ordinarily be higher than at earlier dates, and that the difference will be the cost of storage. As a

consequence, the natural slope of the term structure of the futures price curve *indicates* contango, such that the spot price is below subsequent futures prices.

This raises the question of why Keynes (1930) idea of "normal backwardation" is assumed to be the so-called prevalent constitution of the commodity futures market? Classical theory propositions that backwardation, which occurs when the futures contract is priced lower than the spot price, is a result of both "congenital weakness," the difficulty to short cash commodities, and of "convenience yield," an indicator of scarcity.

In combination, storage cost (which includes costs such financing, insurance, transportation, etc.) and convenience yield is expressed as the cost-of-carry, which is derived from Kaldor's (1939) equation: futures price minus spot price equals storage costs minus convenience yield [$F_t - S_0 = o - y$]. Conversely, convenience yield equals spot price minus futures price plus storage costs [$y = S_0 - F_t + o$]. As a result, the expected spot futures price should theoretically equal the current spot price plus the cost-of-carry [$E(S_t) = S_0 + o - y$].

The funny thing is that these formulas create a problem of circular logic. The conundrum is called "causal relativity." In order to calculate the model, one needs a constant as a reference, but the proposed constants—the futures price and the spot price—are actually variables, continually changing as a function of the price discovery process within the commodity markets.

In fact, there is no such thing as a singular spot price at settlement. There is a "band of spot prices" as a result of the economics (financing, storage costs, insurance, transportation, etc.) applicable to a specific delivery location and the grade of commodity delivered, as well as micro-economic constraints of the commercial players involved in the transaction.

The problem is made complicated for outright speculators because they cannot on a macro level truly know whether storage costs or convenience yield has increased or decreased due to a change in fundamentals, or whether an arbitrage opportunity exists because of anomaly in the cost-of-carry.

In other words, while the arbitrage model does eventually force convergence of the futures and spot prices upon settlement, the reflexivity of these relationships before settlement can also skew commodity price direction in one way or another based on the combined speculative behavior of market participants.

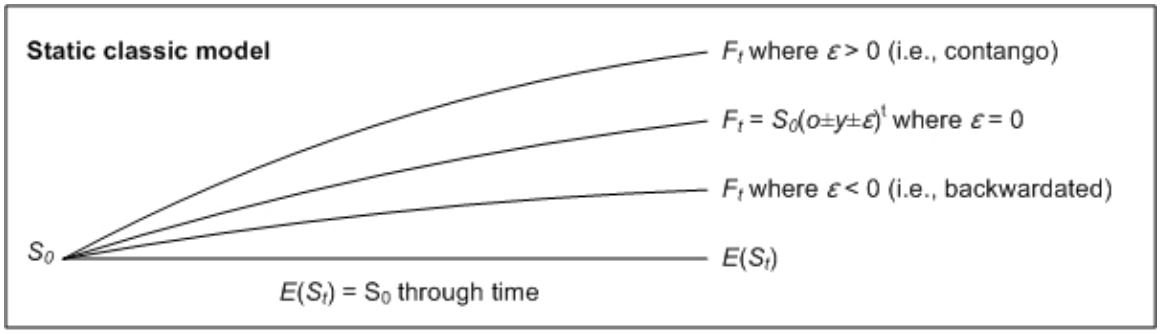
Classical commodity theory provides different variations on the formula used to calculate the futures, spot and convenience yield relationships. Our working paper, in order to better frame the circular logic conundrum suggests the use of an error term such that the formula looks like this:

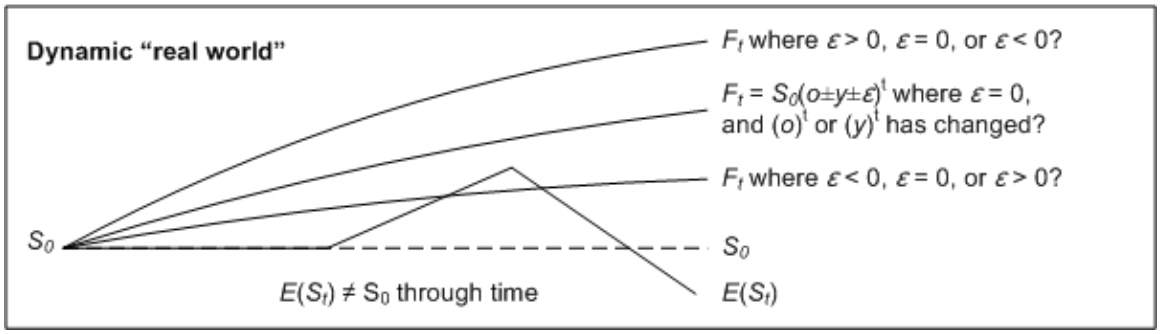
$F_t = S_0(o \pm y \pm \varepsilon)^t$, where F_t is the futures price, S_0 is the spot price, o is the storage outlay, $\pm y$ is the convenience yield or inconvenience yield (a term we introduced in our working paper), and where $\pm \varepsilon$ is a random error term with y determinable as a separately calculated variable; or

$F_t = S_0(o - y \cdot \varepsilon)^t$, where ε is a random error *factor* from which $-y$ can be inferred, but is only determinable as a function of whether ε is either ≥ 1, or ≤ 1, or whether ε equals 0, in which case the cost-of-carry consists of storage outlay only without any convenience yield attribute (this is a more accurate formula).

A picture is worth a thousand words and so we provide the following diagram to reveal the reflexive interaction and complexity of these concepts. (Note: for simplification the graphic below uses the first formula above, adding a new variable $E(S_t)$, where $E(S_t)$ equals the expected spot future price.)

The diagram illustrates how it is possible to have a positive sloping term structure of the futures price curve, which is usually referred to as contango market conditions, resolved to Working's (1948) empirical observations about the relationship between futures prices and storage costs, while at the same time also exhibit either backwardated or contango market conditions.





The central problem with forward pricing, as the diagrams reveal, is that it is difficult for any individual speculator, much less a crowd of speculators, to authoritatively state that the markets are backwardated or contango (which explains the reliance on term structure). Specifically, the Sonnenschein-Mantel-Debreu theorem raises the specter that generalized assumptions about the cost-of-carry may be inconsistent with the intrinsic operating context and micro-economic assumptions of an individual bona fide hedger.

In other words and as an example, ExxonMobil, because it is a bona fide hedger, *is* able to determine whether the futures market is contango relative to its *known* storage costs and customer requirements; likewise, Chevron-Texaco, which may have the same or different cost-of-carry economics, can at the same time be backwardated because the convenience yield it provides to its customers may require it to "carry stocks beyond known immediate needs and take [its] return in general customer satisfaction."

Hence, we posit that the conditions of backwardation and contango are actually revealed during the period of convergence when *cash commodity arbitrageurs*, such as grain elevators, take or make actual delivery against the futures contract. This activity occurs *after*, partly as a function of, investors "rolling the contract."

Beyond Academic Concerns

This technical discussion of what is driving commodity prices is of more than academic interest. The current viability of the futures markets, whose primary role historically has been to provide a reliable way for producers and consumers of commodities to manage future cash flows, is now in question.

A fundamental misunderstanding of commodity market functionality by long-only "investors" has pitted this new class of participants against "traditional" futures speculators and commercial hedgers.

We note that in addition to fundamental reasons, there are institutional pressures and profit incentives which lead to the invention and usage of benchmarks and passive indices, and that modeling provides justification for creating and bringing to market many innovative but untested "beta replication" products.

Securitized investment products based on traditional investments for the most part are justifiable since their underlying investments are capital assets. In addition, equity and fixed income proxies can serve a valuable purpose in measuring traditional portfolio risk and return on a relative basis. More importantly, why should an investor pay exorbitant fees for so-called "alpha" when that investor can obtain the same or similar asset exposure through an inexpensive "beta" vehicle?

Innovation should not be discouraged, and in response to research and market demand, financial institutions will continue with their efforts to securitize all identifiable combinations of assets and replicable strategies into "exotic beta" products, commodities included. But do these investments, often modeled on *hypothetical* regression analysis and employing a predefined *passive* methodology, always serve investors' best interest with respect to constructing well-diversified portfolios? And what about broader economic policy concerns?

We contend that securitized products based on long-only exposure to commodities will prove over time to *not* be the reliable and consistent source of positive expected returns as is proposed, much less a means to properly gauge the relative performance of speculative commodity trading. Ownership of hard assets does not generate a yield, but a cost-of-carry, as well as commissions to do so via forward contracts.

Commodities generally rise and fall in ranges, and the mere act of trying to isolate a persistent source of return vis-à-vis continual ownership but non-usage of the asset will eventually result in any previously *identified* source of return slipping away. This thesis is already proving itself in the form of generalized commodity inflation, hoarding, and declining margins/productivity by many of the smaller commercials.

The ironic twist is that the Wall Street paradigm of *multiple betas* has ported the *alpha* decision to the investors. If there is a persistent source of return at this stage in the commodity bull, it is likely now being paid by consumers (society) in the form of inflation. For this, the U.S. Treasury is not without blame.

And what if it is a zero-sum game? How do you know if/when you are not the greater fool? Wall Street has a bad habit of taking retail for the sucker. Come to think of it, these ideas are not mutually exclusive.

Our research indicates that commodity pricing models have inherent shortcomings in being able to pinpoint a definitive source of structural risk premium within the complexity of the real world global macro economy. Further, commodity pricing is observable materialization of behavioral finance, where risk, return, leverage and skill operate un-tethered from the anchor of *beta*, such as that which may be assumed by investors when "investing" in a commodity-linked ETF.

We hypothesize that the classic "arbitrage pricing theory" contains circular logic, and as a consequence, its natural state is disequilibrium, not equilibrium. We extend this hypothesis to suggest that the term structure of the futures price curve, while indicative of a potential roll return benefit or detriment, in fact implies a complex series of "roll yield permutations" as described by our working paper.

Similarly, the "hedging response function" elicits a behavioral risk management mechanism, and therefore, corroborates social reflexivity. All of these models are inter-related, and each reflects certain qualities and dynamics within the overall futures market paradigm.

In the final analysis, perhaps this commodity bull market may simply be a real world incarnation of the Thomas theorem: "If men define situations as real, they are real in their consequences."

"Life is infinitely stranger than anything which the mind of man could invent."

Perfect Storm and the Paradigm Shift

Rising prices and a widespread bull market in commodities should indicate that there is a growing scarcity of hard assets. However, traditional forces of supply and demand cannot fully account for recent prices.

To be precise, the normal price-inventory relationship has been altered. This is the assertion of an expanding list of bona fide hedgers, commodity professionals and economists. Specifically, *dynamics have changed because securitized commodity-linked instruments are now considered an investment rather than risk management tools*. Of late, this has been causing a self-perpetuating feedback loop of ever higher prices.

In a statement to the CFTC, Tom Buis, president of National Farmers Union, testified, "If [farmers] can't market their crops at these higher prices, we've got a train wreck coming that's going to be greater than anything we've ever seen in agriculture." Billy Dunavant, head of cotton merchant Dunavant Enterprises, was more blunt, "The market is broken, it's out of whack—someone has to step in and give some relief."

Even CFTC Commissioner Jill Sommers acknowledged charges that speculators are skewing the market, in an apparent turnaround from the CFTC statement of April 21st which implied that commodity markets are functioning properly. Nevertheless, the official CFTC stance is that speculative trading is not the primary culprit behind surging commodity prices, but other factors such as the declining dollar are contributors.

Yet, it is also undeniable that the physical delivery markets for grains, which require that the actual commodity be delivered against expiring futures contracts, are no longer converging. This is probably just the tip of the proverbial iceberg—it is arguable other hard assets are priced "out of whack" for any number of reasons.

Public policy plays a role in pricing issues too. For example, continuous accumulation of strategic oil reserves by multiple governments implies rising support levels. In that sense, speculative pressures can expose "bad" application of otherwise well-intentioned government policies, such as subsidies for ethanol production or programs which pay farmers to take erosion-able lands out of production. All the same, governments' counter-response to excessive speculation can be unhelpful, and shutdowns of free market activities are occurring.

The problem for the public is that theses issues can be complicated, and in a sound bite society which desires easy answers and easier solutions, the predominant view is currently biased to commodities as an investment hedge against inflation and speculators as an easy scapegoat for all the world's commodity woes.

Unfortunately, this thinking is a self-fulfilling prophecy which ultimately may feed into a negative economic cycle where legitimate commercials are squeezed out of business thereby reducing supply, protectionism gains traction, trade breaks down, hoarding ensues, riots occur and wars erupt over access.

This may sound alarmist, but industry insiders are not buying into the one-size fits all answer that emerging economies are the primary factor driving up prices from the demand side, reinforced by supply-side shocks and peak production fears. In a slowing global economy hit by a major credit crisis and reeling from a falling dollar, it is likely that money flows seeking safe haven in hard assets is *the* key driver of recent volatility.

Such analysis is not new and was made well before the April 22nd CFTC roundtable on agriculture markets. In fact, there is a growing chorus of statements by concerned executives and analysts going back several years:

"For the futures markets to fill their role in helping everyone discover the appropriate value of commodities, the cash and futures markets need to come together at the end of the day in some consistent fashion. Otherwise, the futures market are no different than Las Vegas and, frankly, don't serve a role for agriculture." Bob Stallman, president of the American Farm Bureau Federation, statement to the CFTC on April 22, 2008.

"Weak basis levels preceding and during delivery month reflect the fact that there is more demand for futures longs (via index funds) than there is for cash. And although there is not necessarily a shortage of cash grain for sale, there is a shortage of futures for sale amid an index fund business model for carrying long positions for extended periods. Wall Street money flows into the long side of market exceed influence of short hedgers by many multiples. There is not enough grain for sale to dent the investment demand, which effectively creates a shortage of futures but not cash grain. The International Star Tribune on 3/27/08 published an article entitled 'Mysterious Discrepancies in Grain Prices Baffle Experts.' The ANSWER to the "mystery" is that grain futures contracts for some have become investment securities—not hedging instruments that offset either cash inventories or future usage." Richard J. Feltes, Senior VP & Director of MF Global Research, April 3, 2008.

"Oil executives told Congress that speculation might be responsible for half the current cost of oil. Leaders from five top companies agreed that current supply and demand levels should place the price near $55 a barrel, instead of the roughly $100 a barrel in recent days." As reported by Lisa Desjardins, CNN Radio, April 3, 2008.

"All Americans feel the pain of $100-a-barrel oil, and it's not just at the pump. The situation is not sustainable. It's time to take urgent action." Peter Robertson, Vice Chairman of Chevron, Hearing Before the Senate Committee, April 1, 2008.

"[There are] major underlying concerns over the lack of consistent convergence (narrowing) between cash and futures prices, in delivery markets, during the futures delivery period, and the dramatic adverse impact it is having on grain elevators, feed mills and grain processors that traditionally have used futures markets to offset price risk inherent in cash markets." The National Grain and Feed Association, Press Release, February 5, 2008.

"In this environment, the marketplace is ill-equipped to efficiently absorb more investment capital, and perform its core function of serving as an efficient tool for business, hedging physical grain purchases, particularly when virtually all of that investment capital is long-only and a large share of open interest essentially is 'not for sale' for long periods of time." The National Grain and Feed Association, Press Release, February 5, 2008.

"Oil prices are inflated big time. In my view they are inflated by as much as 65 to 100 percent." Fadel Gheit, Senior Energy Analyst at Oppenheimer & Co., Special Session on Alaskan Oil Tax, Nov. 10, 2007.

"There is a growing recognition by the American public that the dramatic rise in energy prices may not be caused exclusively by supply and demand, but rather by speculative trading conducted on unregulated energy commodity markets, or "dark markets," where a majority of energy trades now occur. As financial speculators engage in wanton abuse of these opaque markets for personal profit, there is a growing lack of consumer confidence in the market's ability to set a price for energy based on economic fundamentals. To restore public confidence, all energy commodity markets must be fair, orderly and transparent so the prices paid by consumers reflect supply and demand forces; and are not the result of excessive speculation, manipulation, fraud or other abusive conduct now allowed by the 'Enron Loophole.'" Energy Market Oversight Coalition, Letter to United States Senate, October 25, 2007.

"There has been no shortage and inventories of crude oil and products have continued to rise. The increase in prices has not been driven by supply and demand." Lord Browne, Group Chief Executive of BP, The Daily Telegraph, May 6, 2006.

"We believe the hike in speculative positions has been a key driver for the latest surge in commodity prices." Citigroup report on prices of U.S. commodities, May 5, 2006.

"Senator, the facts are—and I've said this publicly for a long time—that oil prices have been moving steadily up for the last two years. And I think I have been very clear in saying that I don't think that the fundamentals of supply and demand—at least as we have traditionally looked at it—have supported the price structure that's there." Lee Raymond, Chairman and CEO, ExxonMobil, Joint Hearing Before the Senate Committee, November 9, 2005.

"Our analysis indicates that speculative money does have some impact on natural gas prices and the shape of the forward curve." Goldman Sachs, in a report on the natural gas markets issued in late 2004.

As summed up by Tim Evans, Senior Analyst at IFR Energy Services, "What you have on the financial side is a bunch of money being thrown at the energy futures market. It's just pulling in more and more cash. That's the side of the market where we have runaway demand, not the physical side."

Even if one accepts all the arguments that there is an economic shift in fundamentals which has resulted in rising commodity demand in emerging economies, as well as arguments that there are supply-side constraints bottle-necking commodity production, it is imprudent to deny that this perfect storm has been accompanied by a paradigm shift in how the commodity markets have historically operated.

Déjà vu All Over Again…

We've been here before… Economic problems related to OTC derivatives first occurred n 1994 which included the bankruptcy of Orange County, in 1998 with the collapse of Long-Term Capital Management, then during the California electricity crisis of 2000 and 2001 due to market manipulation by Enron, and most recently the credit crisis as a result of mortgage securitization repackaged into complex derivatives.

This history should not be misconstrued, however. Derivative products in themselves are not necessarily the problem. Rather, it is the unregulated environment in which such instruments are traded, and the lack of a cohesive infrastructure to manage the trading, clearing and mark-to-market pricing of such instruments. The regulated futures industry, on the other hand, provides a robust alternative model for trading derivatives.

Unfortunately, futures markets are often painted with the same paintbrush, even though current problems in commodity markets are directly related to loopholes "inserted at the behest of Enron and other large energy traders into the Commodity Futures Modernization Act of 2000 (CFMA) in the waning hours of the 106th Congress." This law exempted from CFTC oversight the trading of commodities in "synthetic" futures via OTC electronic exchanges—an institutionalized redux of early 1900s bucket shops.

According to the U.S. Senate Staff Report, "the impact on market oversight has been substantial." Effectively, this legislation, which also has positive aspects, changed the playing field such that traditional, regulated futures market participants were at a disadvantage to those who operated in the unregulated environment. At the same time, it allowed the securities industry to backdoor their way into the commodity markets, which previously was reserved for CFTC registrants and members of the National Futures Association (NFA).

First, it is necessary to understand that a key responsibility of the CFTC is to ensure that prices on the futures market reflect the laws of supply and demand rather than manipulative practices or excessive speculation. This core mandate is based on the Commodity Exchange Act (CEA) of 1936 that replaced the Grain Futures Act of 1922, which was legislated as a result of commodity market manipulation.

Unfortunately, the most important tool of the CFTC to monitor potential market manipulation and excessive speculation, the Commitment of Traders (COT) report, was materially impacted by the CFMA. In fact, this cornerstone of market surveillance has been so severely damaged as to make reliance on it nearly useless, and those who cite COT as justification for a balance between speculators and hedgers, not credible.

The way it works is as follows… Historically, the COT report is divided into large trader positions held by commercials (hedgers) and non-commercials (speculators). The categorization of such participation can be difficult, but is now aggravated by the fact that OTC swap dealers are often designated as commercials. They are designated as commercials because the futures contracts they trade "hedge" the synthetic futures contracts they market to commodity speculators in the unregulated side of the business.

Further, "in contrast to trades conducted on regulated futures exchanges, there is no limit in the number of contracts a speculator may hold on an unregulated OTC electronic exchange. Additionally, there is no monitoring of trading by the exchange itself, and no reporting of the amount of outstanding contracts ("open interest") at the end of each day." In order words, the CEA has been undermined. But it gets worse…

The CFTC's ability to monitor the commodity markets was further eroded when the CFTC permitted the Intercontinental Exchange (ICE) to use its trading terminals in the United States for the trading of U.S. commodity futures contracts on the ICE futures exchange in London. Subsequently, ICE Futures allowed traders in the United States to use ICE terminals in the United States to trade its synthetic futures contracts on the ICE Futures London exchange. This allowed unregistered funds to effectively bypass registration.

According to the U.S. Senate Staff Report, "Despite the use by U.S. traders of trading terminals within the United States to trade U.S. oil, gasoline, and heating oil futures contracts, the CFTC has not asserted any jurisdiction over the trading of these contracts. Persons within the United States seeking to trade key U.S. energy commodities… now can avoid all U.S. market oversight or reporting requirements by routing their trades through the ICE Futures exchange in London instead of the NYMEX in New York."

This situation skews the true nature of speculative positions. In other words, a trader may take a position on an unregulated electronic exchange that is either in addition to or opposite from the positions the trader has taken on a regulated exchange, thereby avoiding regulation and distorting the large trader reporting system.

The U.S. Senate Staff Report concludes, "The absence of large trader information from electronic exchanges makes it more difficult for the CFTC to monitor speculative activity and to detect and prevent price manipulation. The absence of this information not only obscures the CFTC's view of that portion of the energy commodity markets, but it also degrades the quality of information reported… Not only can the CFTC be misled by these trading practices, but these trading practices could render the CFTC weekly publication of energy market trading data, intended to be used by the public, as incomplete and misleading."

Not so surprisingly, while the securities side of the securities side of the financial services community is fighting regulations on OTC derivatives, the futures industry has not hindered such efforts because to date it has benefited from a substantial increase in transactional business.

All this has not gone unnoticed by the commercial businesses which rely on hedging to protect operating margins. Tom Buis, president of the National Farmers Union commented, "I have doubts whether the CFTC is the place to rectify the problem—it may warrant Congressional intervention. When regulators say a problem doesn't exist, despite the fact farmers cannot market their commodities—that sounds an alarm."

This alarm is now spreading to the rest of American main street business. Farmers are being joined by NATSO, an organization representing truckers, who plan to converge on Congress to rein in excess speculation by commodity traders because of lack of adequate funding for CFTC oversight.

A Matter of Semantics…

The preceding illuminates a core concern that was raised by agricultural representatives at the April 22nd CFTC hearing. But it also raises the question of what constitutes market manipulation in commodities.

As an example, the term "insider trading" designates an illegal activity in the securities world, but in the commodities world it is actually desirable to have people with inside industry knowledge actively trading the marketplace—this ensures that commodity prices are "correctly" discovered via convergence.

On the other hand, the influx of vast sums of money to accumulate long positions in the commodity markets is representative of hoarding and may constitute the making of a "market corner." This is effectively what the Pimco Commodity Real Return Strategy Fund (PCRAX) and other long-only index funds like it are doing.

Inadvertently, each time retail or institutional investors invest in a long-only commodity-linked vehicle, they have actually created additional demand for that commodity, driving up the price of that commodity to be delivered in the future, in the same manner that additional demand for the immediate delivery of the physical commodity drives up the price on the spot market.

How? As far as the market is concerned, the demand for the physical commodity that results from the purchase of a futures contract by a speculator is just as real as the demand for the physical commodity that results from the purchase of a futures contract by a commercial buyer or other user of the commodity.

As a result, the commingled aggregate capitalization of long-only public commodity funds now far exceeds the financing available to farmers for meeting margin calls on hedged positions. This has created a situation where a "very solid" grain elevator in Kansas that lined up a $15 million line of credit needing $80 million in credit for this season. Farmer-banker relationships are good, but in the midst of a tight credit market, there is heightened concern as to whether banks will be able to finance grain elevators.

Compare this to the estimated $200 billion in commodity index funds invested 90% or more in fixed income securities as collateral to finance "commodity investing." It is all out of scale and proportion.

This accounts for why grain elevators are offering a spot price lower than the futures price during delivery period. Because of the increased volatility in crop prices, banks in the region are reassessing their exposure to commodity loans. The situation is distressing because farmers would like to lock in these high prices but no one is "able to forward contract this year's crop because of price volatility and the threat of punishing margin calls," according to the Jim Byrum of the Michigan Agri-Business Council.

Agricultural businesses beholden to operating costs have therefore disconnected the grain spot price from the prices implied by the futures market. At some point, "basis," the difference between the spot price and the futures price, will ultimately force a bad choice onto funds. In order to roll out of the nearby contract into a backdated contract, commodity funds will either need to take a material loss and face the wrath of unhappy investors, or take actual delivery of commodities and face the wrath of the SEC for transgressing the 1940 Investment Company Act. This had Robert Greer, product manager for Pimco on the defensive.

Talk about contango! This is the real thing, but it also raises the questions of where are the arbitrageurs? Arbitrageurs rank as the crème le crème of speculators, but for systemic reasons are not stepping in here.

In addition to the issue of index funds accumulating long positions and thereby imputing an upward bias to commodities, there is another opportunity for market manipulation with respect to the construction and rebalancing of prominent commodity benchmarks such as the Goldman Sachs Commodity Index (GSCI).

As reported by the New York Times on September 30, 2006 Goldman Sachs significantly readjusted in August of that year the GSCI's gasoline weighting. Index products tracking the GSCI, and representing an estimated $60 billion in institutional investor funds, were forced to rebalance their portfolios resulting in an unwinding of positions. Originally, unleaded gasoline made up 8.75 percent of the GSCI as of 6/30/2006, but this was changed to just 2.3 percent, representing a sell-off of more than $6 billion in futures contracts.

As a result, gasoline fell 82 cent in the wholesale market over a four-week period, an unprecedented move; and crude oil, which in July 2006 traded over $79 per barrel for August delivery—at the time an all-time record—subsequently fell to around $56 by January 2007.

Many at the time argued that these moves were due to fundamentals, but… it should also be noted that the U.S. was in the midst of mid-term elections with Republicans facing a major fight to retain control over both Houses. According to a Gallup poll at the time, 42% of respondents thought that the Bush administration "deliberately manipulated the price of gasoline so that it would decrease before the elections."

While the notion of a president single-handedly having the power to muscle a global market is highly questionable, the downturn in prices was welcome news for the then ruling party. Subsequently, Goldman Sachs sold its index business to Standard & Poor's including the GSCI commodity index family.

Unsurprisingly, the visibility of the GSCI brought Goldman Sachs unwelcome attention, especially given the coincidence of its former chairman's appointment as Secretary of Treasury, and an unscheduled GSCI rebalancing that forced a dramatic sell-off in the gasoline and crude oil futures market.

Fortunately for Goldman Sachs, it is one of major players in the OTC derivatives market.

Securitization of Commodities…

When StreetTracks Gold Shares (GLD) began trading in November 2004 gold futures were priced around $450. Now gold is trading around $900 just below its $1,000 plus peak. Notwithstanding the question of cause and effect, the securitization of this commodity—in which access to changes in its price previously could only be facilitated through physical possession or gold futures—has been beneficial to investors who desired a more efficient method for exposure to this asset… Just call your securities broker.

There is an issue, however, as to the appropriate regulatory characterization of this investment vehicle: are they securities, are they commodity futures, or are they cash market transactions? The CFTC's conclusion was that this ETF is "most appropriately viewed neither as futures nor as securities, but rather as cash market transaction, with the resulting regulatory ramifications that flow from such a determination."

This is not an untrue analysis, and the World Gold Council recently reported that the StreetTracks GLD owned approximately 628 metric tons of gold, and that all eight gold ETFs held 834 metric tons of gold through November 2007. For comparison, the Chinese central bank holds approximately 600 metric tons as does the European Central Bank, while the U.S. holds approximately 8,500 metric tons.

Gold has always served two purposes: that of a commodity and that of a store of value. Our perspective is that gold is now predominantly a currency proxy. As one blogger commented, "that commodity has absolutely no industrial or economic function and serves as a perfect sponge for those retail commodity dollars to keep them away from the really valuable stuff, like corn. Go ahead, buy all the GLD you want…"

There are, however, three concerns as a result of the securitization of gold, which can also be applied to commodity-linked ETFs generally:

The first is that increasing gold prices act reflexively upon investor sentiment as an indicator of inflationary pressures, therefore resulting in more gold accumulation and dollar dumping—a vicious feedback loop.

The second concern, while an indirect case in point, is that the securitization of gold bullion demonstrates how easy it is for a cash commodity to be hoarded, effectively taking the supply of that hard asset off the market. Theoretically, forward contracting by investors is causing the perception of inadequate supply due to perceived increase in demand. A visceral case in point is Sam's Club limiting the amount of rice per customer.

Third, the StreetTracks gold ETF broke the mold and open the floodgates for additional securitizations of commodities in the U.S. Characterization of securitized commodities is anything but insignificant as it relates directly as to the regulatory jurisdiction under which such instruments trade. From our perspective, it seems that these vehicles ended up doing an end-run around the CFTC by exploiting the loopholes in the CFMA.

For example, the PowerShares series of commodity ETFs are "excluded" from the definition of commodity pool operators under CFTC Rule 4.5 because of its registration as an investment company under the Investment Company Act of 1940. Only problem is that this loophole now circumvents the CFTC from fulfilling its mandate under the CEA, although other rules still remain applicable in allowing some oversight.

The rule which permits continued CFTC oversight is position limits in commodities. On February 25, 2008, the PowerShares DB Agriculture Fund (Symbol: DBA) filed a Form 8-K with the SEC notifying the public that because DBA was approaching or had reached position limits, it commenced trading in other futures contracts as well as in "synthetic" OTC derivative contracts, effectively circumventing position limits.

It is interesting to note that DBA added nearly $1 billion in assets in February alone, reaching a total of $2.8 billion assets under management by March 2008; but it is even more interesting to look at the DBA chart the day after it reached limits. Theoretically, the "greater fool theory" was in play as this ETF hit the ceiling.

But more importantly, commodity-linked ETFs are not "look-alike" futures contracts representing a contract with a defined delivery of an underlying commodity at some future delivery date, but rather commodity pools which accumulate, like commodity index funds, futures and OTC swaps in underlying commodities.

Accordingly, shorting an ETF does not result in a reduction of open interest in the futures market, since when one shorts a security they are actually borrowing the security. Rather, the ETF remains long the underlying position. This represents a major distortion in how risk management markets are *suppose* to work.

Other distortions also occur in how such vehicles are structured. For example, MacroMarkets LLC launched two commodity ETFs linked to crude oil. The first, MacroShares Oil Up (UCR) makes money when oil prices rise, while MacroShares Oil Down (DCR) profits when crude oil falls. Together, the funds were interlocked and worked like a teeter-totter. However, due to crude oil's price surge, DCR ran out of assets to pledge to its "up" sibling and a termination process has been triggered.

This is a good example of the type of financial engineering which has been taking place for some time within investment banks. Commodity-linked structured notes have, since the passing of the CFMA, taken advantage of the OTC derivatives market to structure and sell securitized commodities.

The unasked question then is the legality of securitized commodities sold by the securities professionals.

Consider the following CFTC regulations: while there are exclusions and exemptions, any "individual or organization which, for compensation or profit, advises others as to the value of or the advisability of buying or selling futures contracts or commodity options" must be registered with the CFTC.

Securities professionals are now regularly holding themselves out as commodity professionals, and marketing commodity products without risk disclosures that are standard in the futures industry. Further, they are compensated for selling commodities despite regulations which disallow such compensation.

For example, Pimco's Commodity Real Return Strategy (PCRAX) is an A-share mutual fund which pays sales loads to securities brokers without Series 3 registrations, while simultaneously engaging in activities related to futures trading. Then there are the commissions which result from trading commodity ETFs.

In effect, the CFMA's "Enron loopholes" opened the door for Wall Street to trespass into the commodity business and undermine long-standing commodities regulation. Strangely, the CFTC has turned a blind eye to unregulated market participants, creating what can only be described as a free-for-all, while continuing to impose strict rules on registered and regulated participants, including hedgers.

Now we're paying the piper… No wonder the agricultural industry was seething on April 22nd.

A Silver Lining…

For all the hand-wringing, there are positives which have come as a result of high commodity prices.

Emerging markets are now marketing their commodities at higher prices which have been, for the most part, a boon to those economies. However, we note that input/production costs have also soared, and emerging countries' populations have suffered too as food costs have risen.

Questions have also been raised about the appropriate allocation of resources, as well as the cost-benefit of government policies: ethanol and farm subsidies being two areas of long-standing contention. There has even been a spontaneous reallocation of poppy agriculture in Afghanistan to wheat crops due to prices.

With respect to high oil and gas costs, there is increased investment in alternative energies and substitute resources, as well as increased investment in developing solutions for energy conservation. Arguably, high commodity prices are the best motivator for organically developing (pardon the pun) "green" solutions.

For these reasons, one could argue that there is wisdom in the madness of commodity speculation. But a more cynical mind would point to potentially Machiavellian political motivations.

The Bush administration has made no bones about the fact that it wants to develop oil and gas exploration in the Arctic National Wildlife Refuge's (ARWR) and allow companies to drill in Alaska's Northern Slope. Likewise, the administration has sought to end farm subsidies. High commodity prices serve these efforts.

I'll leave readers to arrive at their own conclusions about the influence of politics into the situation. Truth is—there is not one specific reason for high commodity prices. To call it a perfect storm is no exaggeration.

This storm, however, supports our working paper thesis—that commodity markets are complicated, messy and uncertain. Models may provide insight, but they can never fully explain the vagaries of human behavior.

"Education never ends Watson. It is a series of lessons with the greatest for the last."

Eliminate the Enron Loophole

The genie is out of the bottle and it is not going to be put back. But the financial services industry also needs to acknowledge the imbalances it has wrought in the commodity markets.

The percentage of open interest in futures contracts relative to crop size is out of proportion. For some crops, only 10,000 contracts are needed by bona fide hedgers. For comparison, the year-to-date volume of wheat contracts traded through March 2008 is 5.7 million contracts. Meanwhile, the CFTC requires hedgers to provide large trader reporting, but unregulated participants have no such requirements. Further, there are systemic issues with big moves happening overnight and taking place off-exchange.

Unfortunately, issues are made more complicated because of the variety of different participants with varying agendas. Even within the realm of speculators there are different types: traditional futures traders, long-bias asset allocation investors (both institutional and retail) who "invest" in commodities via index

funds and commodity-linked ETFs, OTC derivative swap dealers and their customers, excluded and exempt funds, etc. Likewise, some securitized products are long bias, others trade long and short.

Then there are the fundament supply-demand arguments, which evolve into a confusing tapestry of economic dynamics that is better described by the most recent IMF report. The understated concern is that while rising commodity prices benefit producers, such businesses only benefit to the extent that their margins increase. For many commercial producers, input and production costs are also increasing resulting in decreased margins and reduced productivity. This only exacerbates the commodity supply problem.

As a CFTC registrant and participant in the managed futures industry, I am baffled at our lack of representation regarding the "Enron loophole" issue. Managed futures represent a class of regulated speculators who have traditionally provided liquidity to the bona fide hedgers. Our role is indispensible to the proper balance to commodity trading because we go both long and short commodities. However, if we do not ensure our place at the table, we may lose our rights if not the viability of our industry.

Fortunately, awareness is now building, and investors are beginning to question where the source of return in commodities comes from. They are slowly recognizing that it is being sourced in the form of self-created inflation. In so many ways, we only have ourselves to blame. But can we repair what has been wrought?

In effect, the "securitization of commodities," a difficult topic in itself to analyze given the proliferation of different types of securitized commodity instruments, has led to an undermining of the prime economic purpose of the commodity futures market. The primary benefit provided by futures markets is that it allows commercial producers, distributors and consumers of an underlying cash commodity to hedge.

Investors must recognize that risk management markets exist primarily for the benefit of bona fide hedgers. Securitized commodity products are not structured to serve that purpose. Rather, this innovation has allowed money flows to distort price discovery, while at the same time undermine the all-important hedging utility. Further, they are sold as *investments*, when in fact these products are *speculative*.

It should be apparent now that the "Enron loopholes" within the CFMA have served to undermine the authority of the CFTC, and put the futures industry as well as the economy at risk. It is time to rein in excessive market speculation which is occurring on the "dark exchanges' and support the transition of unregulated commodity speculation back into the domain of the regulated futures industry.

The Close the Enron Loophole Act (S.2058), introduced by Senator Carl Levin of Michigan, would rearm the CFTC with the tools needed to subject "dark markets" to the same oversight as traditional futures exchanges. Exempt commodity exchanges would be made subject to the same standards as traditional contract markets regarding position limits, large trader reporting and transparency requirements. The proposed Act would also require large-trader reporting for domestic trades on foreign exchanges.

If a facility for trading commodities looks like a futures exchange and acts like a futures exchange, then it should be regulated like a futures exchange.

At the same time, securitized commodity products should come under regulations similar to that which has been imposed on single-stock futures. Recent events reveal that long-bias commodity index funds and commodity-linked ETFs may systemically represent a form of market manipulation.

If investors are interested in investing in commodities on an unleveraged basis, then the futures exchanges should develop "fully-funded" non-leveraged instruments, similar to mini-futures, for investors to trade.

Further, Series 7 securities representatives should be disallowed from marketing commodity-related investment products without also having a Series 3 license and registration as associated persons.

Additionally, commodity-related securities products should be subject to NFA 4-29 marketing rules as is imposed on futures industry registrants. For example, hypothetical concepts such as the roll return should have attendant hypothetical disclosures as would be required of futures professionals.

As to the institutionalization of financial investments in long-biased commodity positions, index funds need to accordingly recognize their inherent responsibility in financing credit lines to utilities which facilitate physical deliveries of commodities. Admittedly, this may be difficult under current law.

These concerns raise a key question for the futures industry, managed futures, and bona fide hedgers. Why are securities professionals allowed to hold themselves out as commodity professionals? The debasing of this core rule has led to confusion in the public's mind and threatens the futures industry profession, thereby undermining the CFTC's authority as granted by the CEA.

Has there been an abrogation of responsibility by the CFTC? Is this regulatory body now beholden to interests other than the constituents it is suppose to serve and regulate?

A key responsibility of the CFTC is to ensure that prices on the futures market reflect the laws of supply and demand rather than manipulative practices or excessive speculation.

The 2006 U.S. Senate Staff Report by the Permanent Subcommittee on Investigations concludes as follows:

> "It is critical for U.S. policy makers, analysts, regulators, investors and the public to understand the true reasons for skyrocketing energy prices. If price increases are due to supply and demand imbalances, economic policies can be developed to encourage investments in new energy sources and conservation of existing supplies. If price increases are due to geopolitical factors in producer countries, foreign policies can be developed to mitigate these factors. If price increases are due to hurricane damage, investment s to protect producing and refining facilities from natural disasters may become a priority. To the extent that energy prices are the result of market manipulation or excess speculation, a cop on the beat with both oversight and enforcement authority will be effective."

Ironically, we've been here before... The Commodity Exchange Act of 1936 repeats the same in a more concise fashion, "Excessive speculation in any commodity under contracts of sale of such commodity for future delivery… causing sudden or unreasonable fluctuations or unwarranted changes in the price of such commodity, is an undue and unnecessary burden on interstate commerce in such commodity."

The more things change, the more things stay the same. "Eliminate all other factors, and the one which remains must be the truth." Perhaps, we can take heart from Sherlock Holmes in "His Last Bow."

"Good old Watson! You are the one fixed point in a changing age. There's an east wind coming all the same, such a wind as never blew on England yet. It will be cold and bitter, Watson, and a good many of us may wither before its blast. But it's God's own wind none the less, and a cleaner, better, stronger land will lie in the sunshine when the storm has cleared. Start her up, Watson, for it's time that we were on our way. I have a check for five hundred pounds which should be cashed early, for the drawer is quite capable of stopping it if he can."

References

Brennan, M. (1958). “The Supply of Storage” American Economic Review, 47(1), pp. 50-72.

Cootner, P. (1960). “Returns to Speculators: Telser vs. Keynes” Journal of Political Economy, 68, August, pp. 396-404.

Cootner, P. (1967). “Speculation and Hedging” Food Research Institute Studies, Supplement 7, pp. 65-106.

Davidson, Paul (1982). “Is Probability Theory Relevant for Uncertainty? A Post Keynesian Perspective” The Journal of Economic Perspectives, Vol. 5, No. 1 (Winter, 1991), pp. 129-143.

Debreu, G. (1974). "Excess Demand Functions" Journal of Mathematical Economics 1: 15-21.

Dusak, K. (1973). “Futures Trading and Investor Returns: An Investigation of Commodity Market Risk Premiums” Journal of Political Economy 81, pp. 1387-1406.

Ebrahim, M. Shahid; Rahman, Shafiqur (2004). “The Futures Pricing Puzzle” Portland State University, School of Business Administration.

Energy Market Oversight Coalition (October 25, 2007). Memorandum to United States Senate, “Time to Rein in Excessive Energy Market Speculation and Close the Door to Manipulation.”

Erb, Claude B.; Harvey, Campbell R. (2006). “The Tactical and Strategic Value of Commodity Futures” Working Paper. Duke University, National Bureau of Economic Research.

Frankfurter, George M.; McGoun, Elton G. (2002). “Resistance is Futile: The Assimilation of Behavioral Finance” Bucknell University, Department of Management.

Frankfurter, Michael “Mack” and Accomazzo, Davide, "Is Managed Futures an Asset Class? The Search for the Beta of Commodity Futures" (December 31, 2007). Available at SSRN: http://ssrn.com/abstract=1029243

Greer, Robert J. (1997). “What is an Asset Class, Anyway?” Journal of Portfolio Management, Winter, pp. 86-91.

Gorton, G.; Rouwenhorst, K.G. (2006). “Facts and Fantasies about Commodities Futures” Financial Analysts Journal, 62(2), pp. 47-68.

Hicks, John R. (1939, 1946). “Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory” Oxford: Clarendon Press, 1939, and revised second edition, 1946.

Holt, Ric. “What is Post Keynesian Economics?” http://cc.shu.edu.tw/~tsungwu/holt.htm

Jagannathan, Ravi; McGrattan, Ellen R. (1995). “The CAPM Debate” Federal Reserve Bank of Minneapolis Quarterly Review, Vol. 19, No. 4, Fall 1995, pp. 2-17.

Jagannathan, Ravi; Wang, Zhenyu (1993). “The CAPM is Alive and Well” Research Department Staff Report 165. Federal Reserve Bank of Minneapolis.

Jagannathan, Ravi; Wang, Zhenyu (1996). “The Conditional CAPM and the Cross-section of Expected Returns” Journal of Finance, Vol. 51, No. 1, March, pp. 3-53.

Janssen, Maarten C.W. (1993) "Microfoundations: A Critical Inquiry". Routledge.

Kaldor, Nicholas (1939). “Speculation and Economic Stability” Review of Economic Studies 7, No. 1, October 1939, pp. 1-27.

Keynes, John Maynard (1923). “Some Aspects of Commodity Markets” Manchester Guardian.

Keynes, John Maynard (1930). “A Treatise on Money, Volume II: The Applied Theory of Money” London: Macmillan, 1930, pp. 142-147.

Keynes, John Maynard (1937). “The General Theory of Employment” The Quarterly Journal of Economics, Vol. 51, No. 2 (Feb., 1937), pp. 209-223.

Kolb, R. W. (1992). “Is Normal Backwardation Normal?” Journal of Futures Markets 12, pp. 75-91.

Lavoie, Marc (1992b), "Foundations of Post-Keynesian Economic Analysis" Aldershot: Edward Elgar.

Lewis, Michael (2007). "Structural Shifts in Commodity-Index Investing" in "Intelligent Commodity Investing," (Till, and Eagleeye, Eds.), Published by Risk Books, pp. 207-231.

Mantel, R. (1974). "On the Characterization of Aggregate Excess Demand" Journal of Economic Theory 7: 348-353.

Muth, John F. (1961) "Rational Expectations and the Theory of Price Movements" reprinted in "The New Classical Macroeconomics" Volume 1. (1992): pp. 3-23.

Ritter, Elizabeth L. (2005) "The Securitization of Commodities: Crossing a Gold (or Silver) Line in the Sand" Business Law Brief, Fall 2005)

Reuben Jeffery III, Chairman U.S. Commodity Futures Trading Commission. Testimony on November 2, 2005 before the Committee on Energy and Commerce United States House of Representatives.

Rubenstein, Mark (2006). "A History of the Theory of Investments" Publisher: *Wiley Finance*, pp. 52-54.

Schneeweis, Thomas; Spurgin, Richard (1996). "Multi-Factor Models in Managed Futures, Hedge Fund and Mutual Fund Return Estimation" University of Massachusetts, School of Management

Sheffrin, S.M. (1996). "Rational Expectations" Cambridge University Press, pp. 1-21, 99-127.

Shimko, D.; Masters, B. (1994). "The JPMCI – A Commodity Benchmark" J.P. Morgan Securities Inc. Commodities Derivatives Research, 20 September.

Sonnenschein, H. (1973). "Do Walras' Identity and Continuity Characterize the Class of Community Excess Demand Functions?" Journal of Economic Theory 6: 345-354.

Sonnenschein, H. (1974). "Excess Demand Functions" Econometrica 40: 549-563.

Spurgin, Richard (2000). "Some Thoughts on the Source of Return to Managed Futures" Draft Article. Clark University and CISDM.

Telser, L.G. (1958). "Futures Trading and the Storage of Cotton and Wheat" Journal of Political Economy 66, pp. 223-255.

Till, Hilary; Gunzberg, Jodie (2005). "Absolute Returns in Commodity (Natural Resource) Futures Investments" EDHEC Risk and Asset Management Research Centre.

Till, Hilary (2007). "Part I of A Long-Term Perspective on Commodity Futures Returns: Review of the Historical Literature" from "Intelligent Commodity Investing," (Till, and Eagleeye, Ed.), Published by Risk Books, a Division of Incisive Financial Publishing, Ltd., pp. 39-82.

United States Senate, Permanent Subcommittee on Investigations Staff Report (June 27, 2006). "The Role of Market Speculation in Rising Oil and Gas Prices: A Need to Put the Cop Back on the Beat."

Working, Holbrook (1948). "Theory of the Inverse Carrying Charge in Futures Markets" Journal of Farm Economics, 30(1), pp. 1-28.

Working, Holbrook (1949). "The Theory of Price of Storage" American Economic Review 39, No. 6, December 1949, pp. 1254-1262.