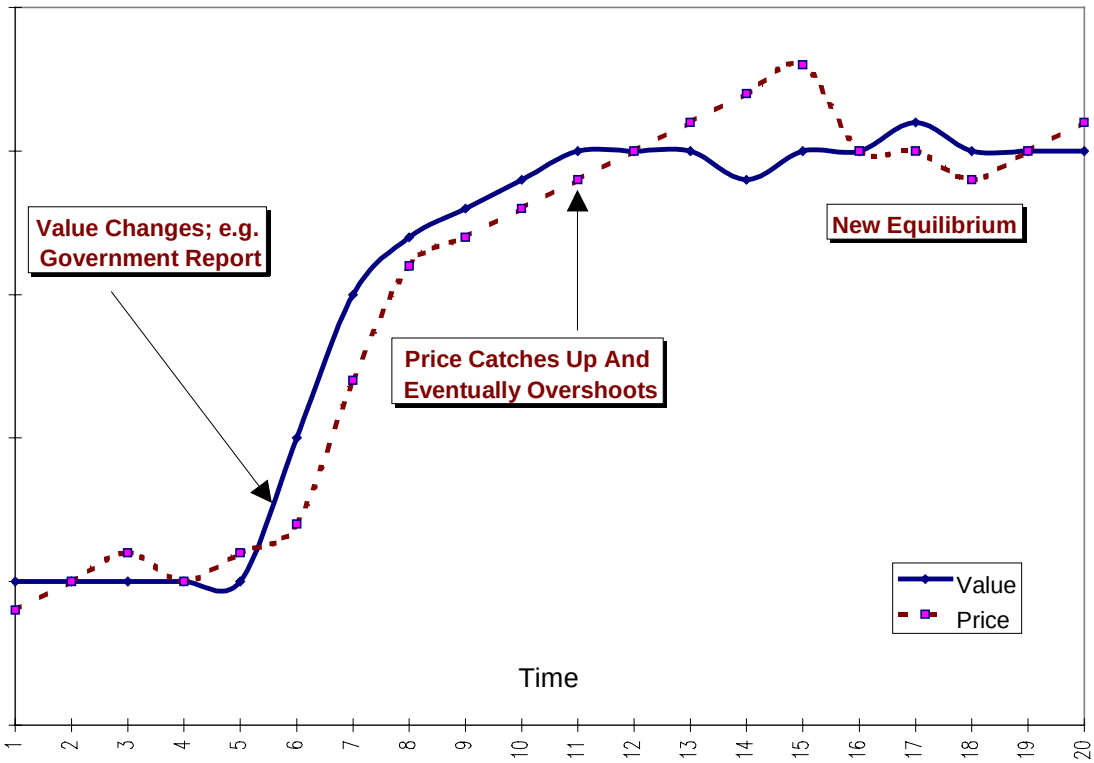
Making A Commitment

Few moments in a LaSalle Street firm's day are as exciting as the Return Of The Floor Traders. Tension builds and pulses quicken after the bell is rung, for soon these stalwart knights of the pits will return upstairs with their romantic tales of the eternal pas-de-deux between buyers and sellers. Of particular interest are those sentences which begin "The funds …"

Why would anyone care a whit about what commodity funds are alleged to have done on any particular day? This information would have value if funds, as a class, were either materially better than average traders or leading indicators of price. We can dismiss the former consideration out of hand: The composite Barclay CTA Index for 1997 produced a return, before fees, of 10.23%, or about twice the return on a Treasury Bill. The Barclay Agricultural Sub-index, closer to the subject of this article, lost 1.88% before fees. Comparable returns for bonds and stocks, as measured by the Lehman Brothers Treasury Index and the S&P 500 Total Return Index, respectively, were 14.87% and 33.36%.

We are left, therefore, with the question of whether commodity funds lead or lag price movements. Why is this important? Price is a convergent search process for an underlying economic value determined by fundamental factors (see "Adapting Moving Averages For Changing Markets," *Futures*, May 1994). Since changes in price depend upon changes in value in all but the shortest time frames, price cannot lead value. Rather, it must react to value. This process produces the price trends we all know and love. If commodity funds as a class relied upon either fundamental analysis or mechanical trading systems dominated by counter-trend methodologies, they would have a chance of being price leaders, of buying low and selling high. However, the dominant technical methodologies are variations of trend-following, which condemns performance to not only lagging changes in value, but changes in price as well: Trend followers will buy price over value and sell price below value at the end of a trend, as illustrated below.



Case Study: CBOT Wheat

Is there any way to tell whether this late-to-the-party model describes actual fund behavior? In words seldom heard, "thanks to the CFTC," the answer may be "yes". Ever since 1986, the CFTC has been publishing a Commitments of Traders Report. This report breaks down positions in each market by class of trader. Of particular interest to us are the relative positions of large commercial and non-commercial traders; these represent, imperfectly, the reportable positions of "commercials," those in the industry, and "non-commercials," such as commodity funds, respectively. We will use the CFTC commitment data for the CBOT wheat contract.

Since price is known continually while the CFTC commitments are known weekly, we need a measure of price with some degree of memory of recent events, such as the Adaptive Moving Average trend oscillator (see "Great Expectations," *Futures*, April 1997), defined as

$$Trend \equiv \frac{\left(\frac{(P - MA)}{Vol}\right)}{P},$$

where **P** is the current price, **MA** is the Adaptive Moving Average, and **Vol** is the high-low-close volatility. This trend oscillator will become the dependent variable against the independent variables of the CFTC commitments data.

The results of a simple correlation between the percentages of both long and short open interest held by commercial and non-commercial traders tend to confirm the notion of traders reacting to price changes, as shown in the table below. In all cases, open interest is a very weak leading indicator of price trend, as seen in the "One-week Lead" column, but price changes are much stronger leading indicators of open interest, especially at a lag of one week. Interestingly enough, non-commercial traders have both a slightly stronger leading relationship to price trend as well as a more persistent reaction to price. The correlation of commercial and non-commercial open interest is negative since one group must take the opposite position of the other.

Rememberance Of Things Past

	One-Week Lead	Current	One-Week Lag	Two-Week Lag
Commercial Long, %	-0.1986	-0.3762	-0.3565	-0.3016
Non-commercial Long, %	0.2974	0.4509	0.4212	0.3864
Commercial Short, %	0.2047	0.4275	0.4156	0.3444
Non-commercial Short, %	-0.2395	-0.4544	-0.4652	-0.3902

One could argue that percentages are meaningless, that it is the absolute change in open interest that will pressure prices higher or lower. If we correlate the absolute changes in open interest against the trend, other interesting observations emerge, as shown in the table below. First, while the change from two weeks prior to one week prior has a nearly equal and opposite effect for both commercial and non-commercial traders with long positions, the effect over the same period for short positions is significantly weaker. Second, the change in non-commercial open interest from one week prior to the present has nearly equal and opposite effects for short positions, the effect is much stronger in long positions for non-commercial traders. Finally, lagging changes in open interest, those occurring between the present and the next week, have no effect for either short positions or non-commercial long positions, but the lagging correlation for commercial long positions flips in direction.

What accounts for this puzzling combination of relationships? Most markets display asymmetric anxiety; equity traders fear (or at least used to fear) a crash more than a bull market, or crude oil traders fear supply disruption more than an impending glut. The asymmetric fear in the wheat market appears to be of scarcity, hence the speed with which non-commercial traders acquire long positions as opposed to short positions. Finally, commercial traders appear to have an aversion to remaining long unnecessarily, hence the flip in sign at the end of a move.

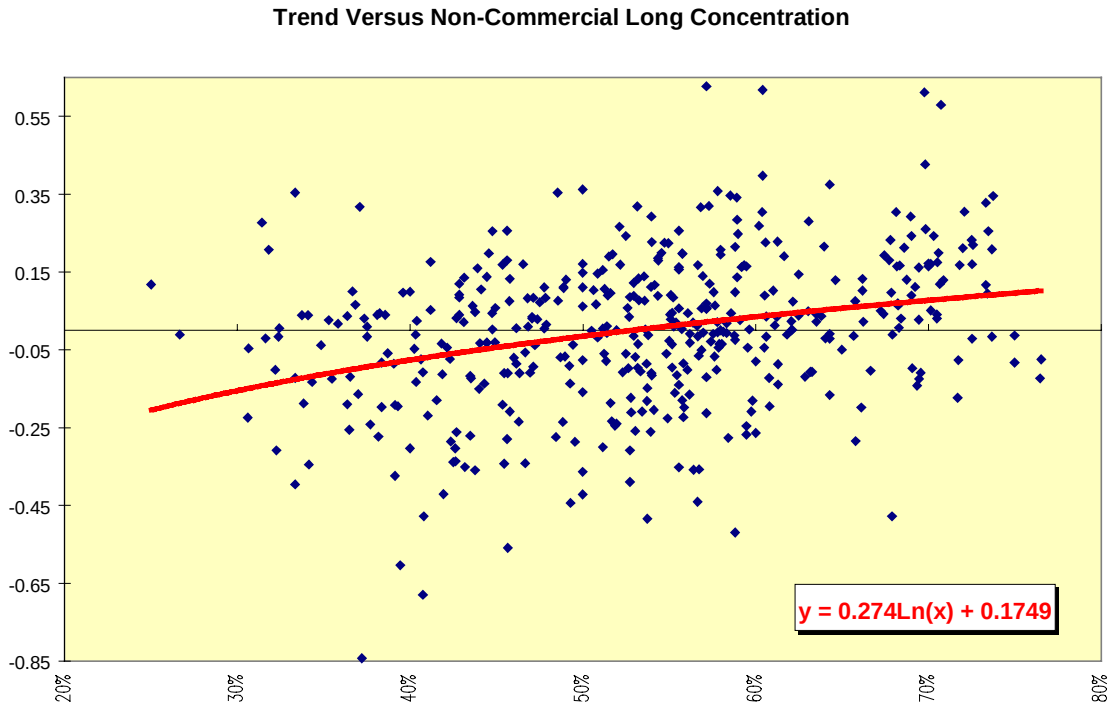
A Leading Role

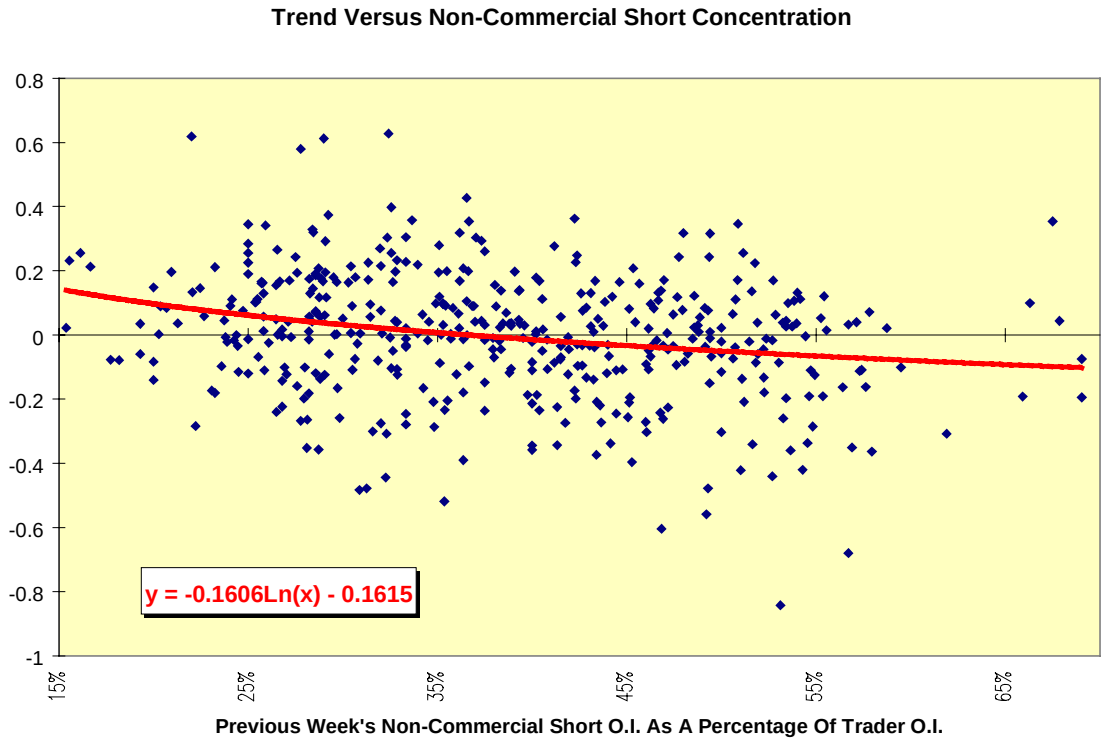
	WK_{T-1} - WK_{T-2}	WK_{T0} - WK_{T-1}	WK_{T1} - WK_{T0}
Commercial Long, Chg. In OI	-0.1281	-0.1949	0.1948
Non-commercial Long, Chg. In OI	0.1005	0.2877	-0.0010
Commercial Short, Chg. In OI	0.1196	0.3105	-0.0076
Non-commercial Short, Chg In OI	-0.0595	-0.2700	0.0131

Success With Excess?

An argument in favor of following fund positions is that the funds are not interested in making or taking delivery, and therefore their excessive positions in one direction create a subsequent inexorable force in the other. Many analysts watch the Commitments of Traders Report to glean just this sort of insight on excessive speculative concentration. The argument carries a good deal of intuitive validity in a commodity such as wheat, which has significant costs associated with its storage and movement.

We can look at the speculative concentration by taking the ratio of non-commercial trader positions to total trader positions and seeing if they have any predictive power for the trend. Neither long nor short non-commercial concentration is a very useful predictive variable for subsequent price movement, not even as a negative indicator, as seen in the graphs below. Not surprisingly, and not shown, price movement tends to be a stronger predictor of non-commercial concentration.





The So-What Theory

Market analysts debate endlessly and unproductively over two questions:

1. Are markets efficient?

2. Should one trade technically or fundamentally?

Neither issue will be resolved in full here or anywhere else. The strong form of the efficient market theory holds that prices reflect fully all information, public or otherwise, available to the market. A cruel joke to those of us who have been steamrolled on occasion by fast markets or who have seen exquisitely-calculated stops hit mysteriously. The strong form both precludes any gains from fundamental analysis and mocks technical analysis as a form of witchcraft.

We submit that markets always tend toward an efficient equilibrium just as an object held over the ground tends to fall downward. Any disruption in this process, including massive commodity fund trading, can distort the move toward efficient equilibrium temporarily, and that disruption will become information available to the market, which will then either accept or reject the new price independently of its source. Any focus on the activities of a particular class of trader, while an interesting starting point for a conversation, will provide no useful insight into future price movement.