Speculation and Price Volatility: Implications for Farmer Marketing

Scott Irwin
sirwin@illinois.edu
University of Illinois

2009 Illinois Farm Economics Summit

The Profitability of Illinois Agriculture: Profitability at a Crossroads

The New York Times

Business

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THE FOOD CHAIN

Price Volatility Adds to Worry on U.S. Farms

Kristen Schmid Schurter for The New York Times

Fred Grieder, a farmer near Bloomington, Ill., has more to worry about these days than hard work, crops and rain. If the market for commodities futures turns the wrong way, he could be wiped out.

By DIANA B. HENRIQUES
Published: April 22, 2008

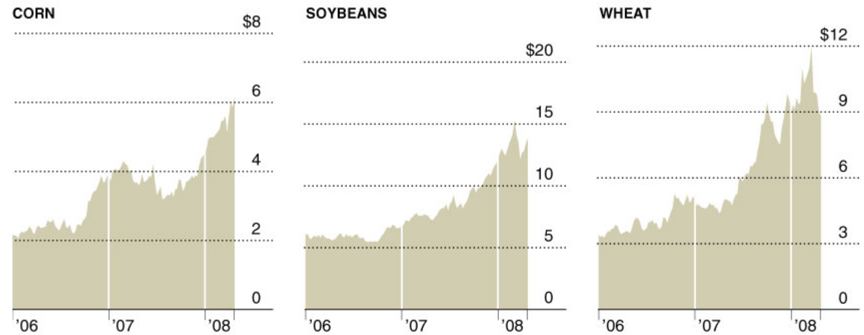
SIGN IN TO

Rising Prices, Rockier Markets

The increased volatility of grain futures prices is making it harder and more expensive for farmers to hedge their risks.

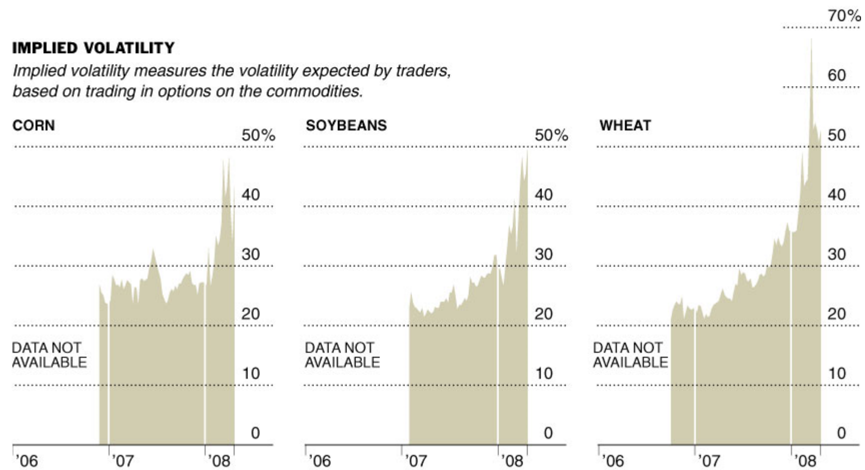
FUTURES CONTRACT PRICE

Prices per bushel, shown on comparable percentage change scales.



IMPLIED VOLATILITY

Implied volatility measures the volatility expected by traders, based on trading in options on the commodities.



All figures are through Friday.

Source: Bloomberg

As Oil Rises, More Speculating About Speculators

JUNE 30, 2008, 10:25 AM

MARKET MAKER

Energy Speculators Draw the Heat

Are Pension Funds Fueling High Oil?

A Senate hearing weighs charges that speculation by big investors and sovereign wealth funds is behind the rise in commodities and energy prices

The Role of Speculators in the Global Food Crisis

By Beat Balzli and Frank Hornig

Vast amounts of money are flooding the world's commodities markets, driving up prices of staple foods like wheat and rice. Biofuels and droughts can't fully explain the recent food crisis -- hedge funds and small investors bear some responsibility for global hunger.

AFP

4 months ago: WASHINGTON - JUNE 24: Michael Masters (R), of Masters Capital Management, LLC, testifies while Walter Lukken (L) , Chairman U.S. Commodity Futures Trading Commission, and Dr. James Newsome (C), President and Chief Executive Officer NYMEX, listen during a Senate Homeland Security and Governmental Affairs hearing on Capitol Hill, June 24, 2008 in Washington DC The Committee is hearing testimony excessive speculation in the commod markets.

Bloomberg News/Landov

CFTC Chairman Gary Gensler, right, speaks with SEC Chairman Mary Schapiro before a Senate Banking subcommittee hearing on oversight of the derivatives market June 22.

A New Type of Commodity Speculator

Commodity Index Investors

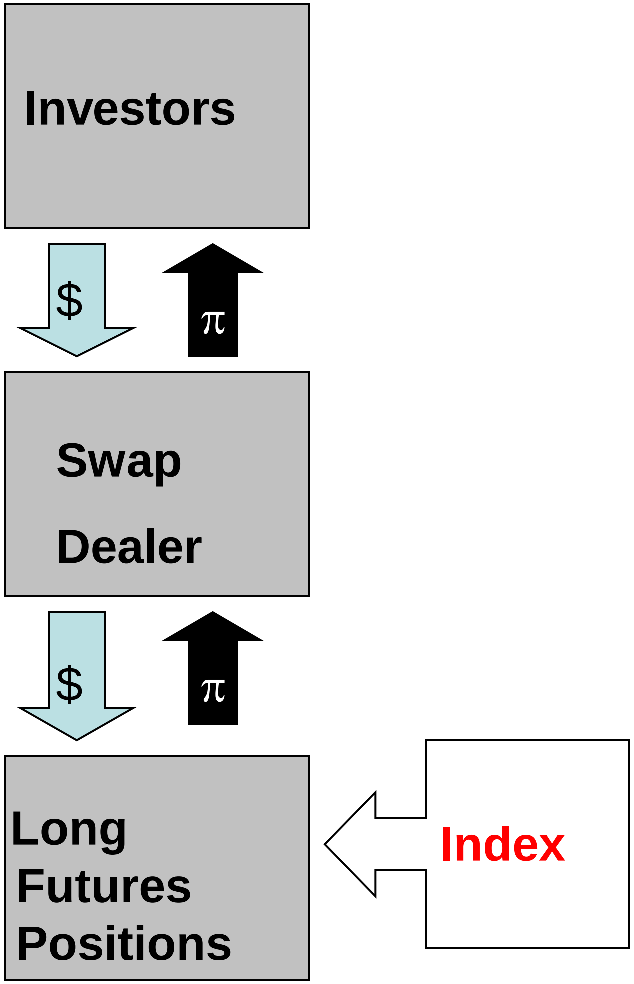
- Desire portfolio exposure to long-only returns from a basket of commodities
- Pension funds and institutional investors

Popular Indexes

- GSCI
- Dow Jones-AIG
- Reuters/Jeffries-CRB

Investment Types

- OTC index funds
- Exchange-traded funds
- Exchange-traded notes



The World According to Mr. Masters

Chart 1. S&P GSCI Spot Price Index vs. Index Speculator Assets

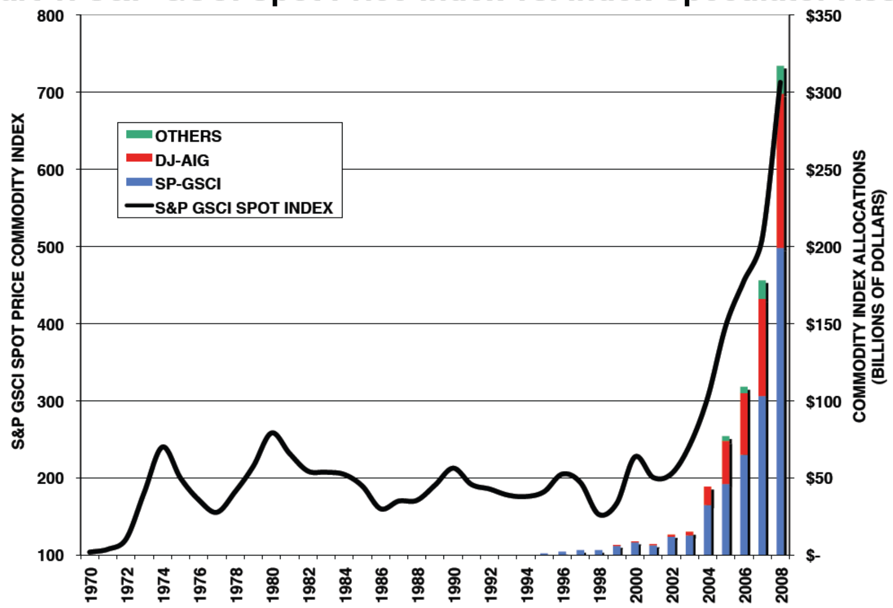
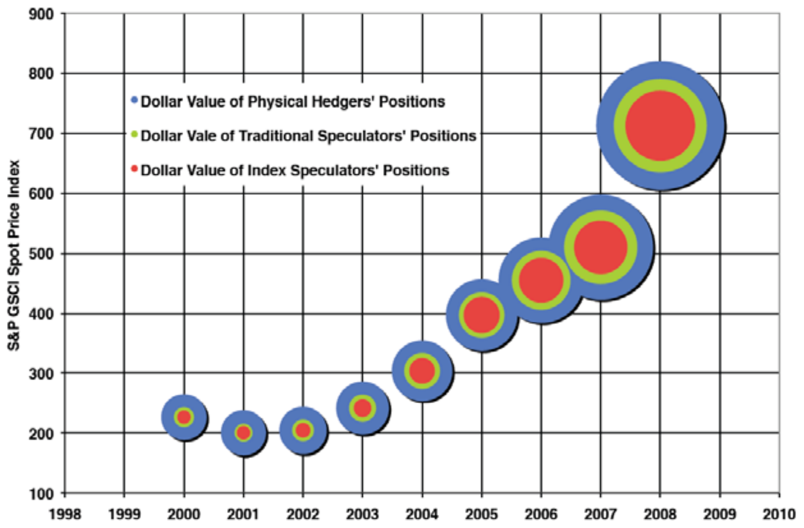


Chart 2. Commodities Futures Market Size (Billions) vs. S&P GSCI



Unpacking the Bubble Argument

- Supplies of physical commodities are constrained in the short-run
- Unleveraged futures positions of index funds are effectively “synthetic” long positions in physical commodities, and hence, represent new “demand”
- If the magnitude of index fund “demand” is large enough relative to physical supply, prices and price volatility can skyrocket
- <u>Bottom-line</u>: index fund investment is “too big” for the size of existing commodity futures markets

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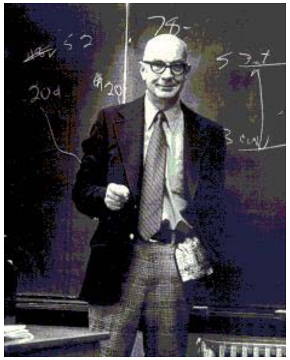
Conceptual Error#1: Money Flows are not Necessarily the Same as Demand

- Futures markets are zero-sum games
- If long positions of index funds are new "demand" then the short positions for the same contracts are new "supply" ?
- With equally informed market participants, there is no limit to the number of futures contracts that can be created at a given price level

"…for every long there is a short, for everyone who thinks the price is going up there is someone who thinks it is going down, and for everyone who trades with the flow of the market, there is someone trading against it."

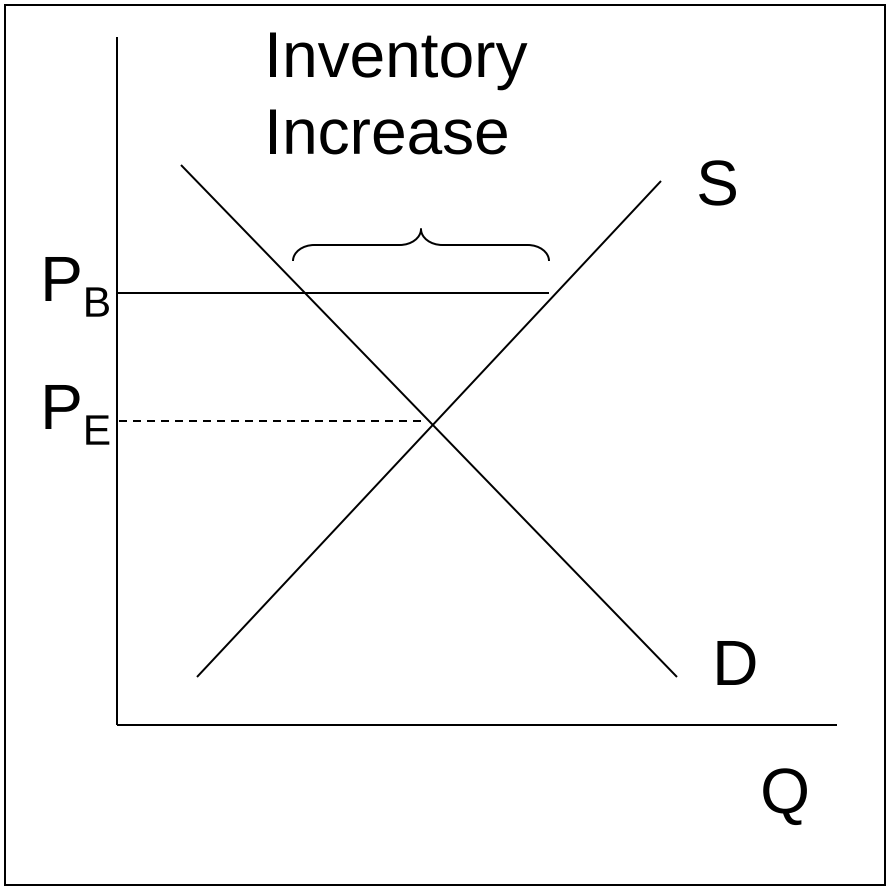
Tom Hieronymus



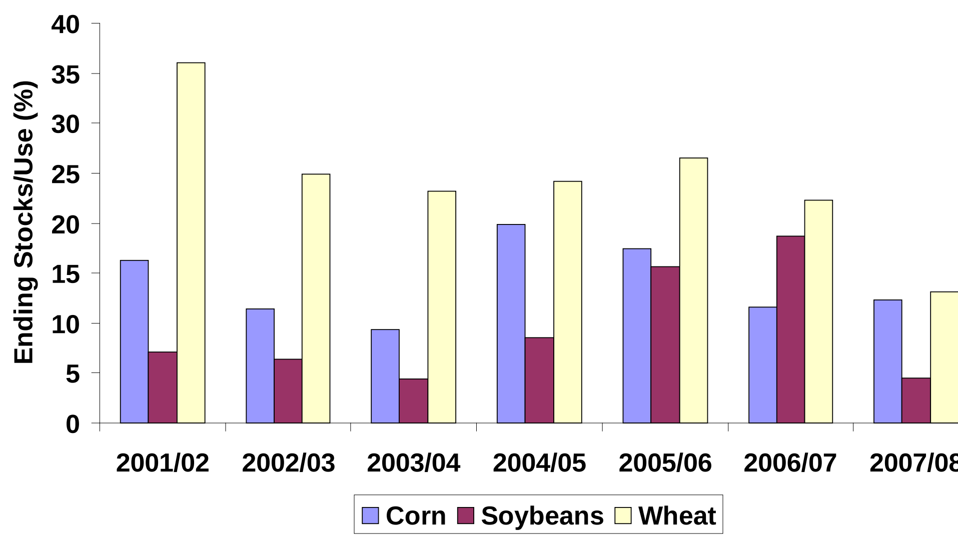
Conceptual Error#2: Index Futures Positions Distort both Cash and Futures Prices

- Futures contracts are financial transactions that only rarely involve the actual delivery of physical commodities (i.e. “side bets”)
- To impact the equilibrium price of commodities in the cash market over all but very short time intervals, index funds must take delivery and/or buy quantities in the cash market and hold these inventories off the market
- Absolutely no evidence that index funds took delivery of commodities

Inconsistent Fact #1: Inventories did not Increase for Storable Commodities



Ending Stocks as a Percent of Use, 2001/02-2007/08

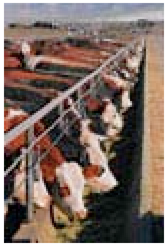


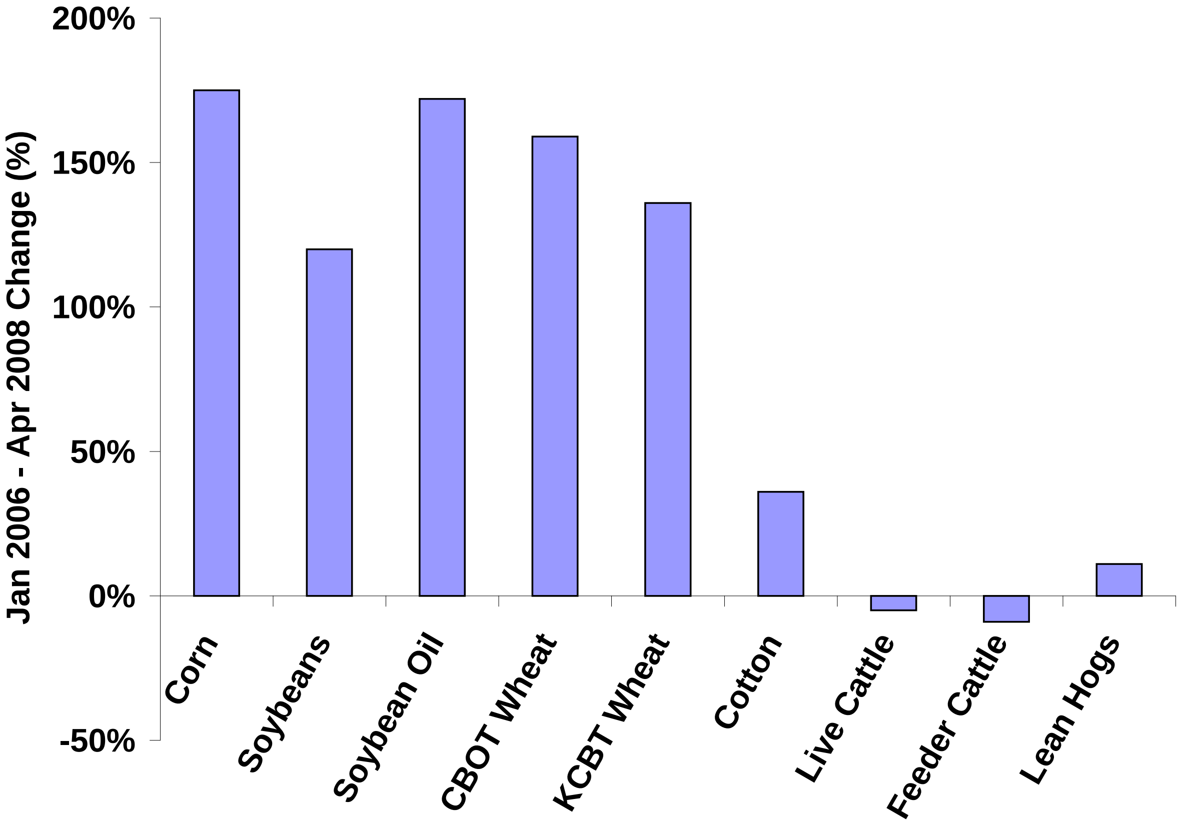
"So my challenge to people who say there's an oil bubble is this: let's get physical. Tell me where you think the excess supply of crude is going."

Inconsistent Fact #2: Speculation was not Excessive Compared to Hedging (2006:I-2008:I Averages)

	Long Hedging	Short Hedging	Long Speculation	Short Speculation
Corn		---# of contracts---		
2006	328,362	654,461	558,600	208,043
2008	598,790	1,179,932	792,368	182,291
Change	270,428	525,471	233,768	-25,752
Soybeans				
2006	126,832	192,218	183,105	107,221
2008	175,973	440,793	351,379	74,844
Change	49,141	248,575	168,274	-32,377
Wheat				
2006	57,942	213,278	251,926	92,148
2008	70,084	240,864	300,880	121,578
Change	12,141	27,585	48,954	29,430

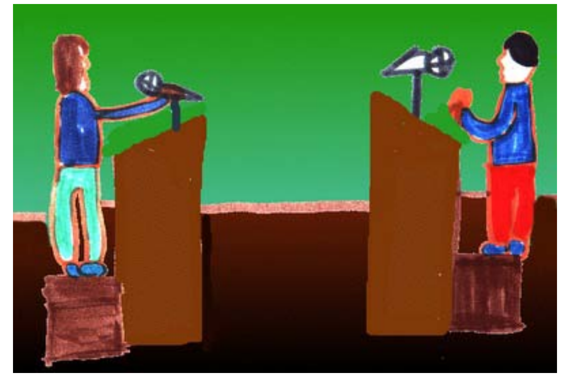
Inconsistent Fact #3: Price Increases Did not Occur in All Commodity Futures Markets Included in Popular Indexes (January 3, 2006 – April 15, 2008)





The Debate Continues

- Conceptual problems and inconsistent facts build a reasonably strong case against bubbles in commodity prices
- Unpersuasive to those who think this was a unique market episode
- Temporal relationship between index fund investment and commodity price movements just seems so obvious!



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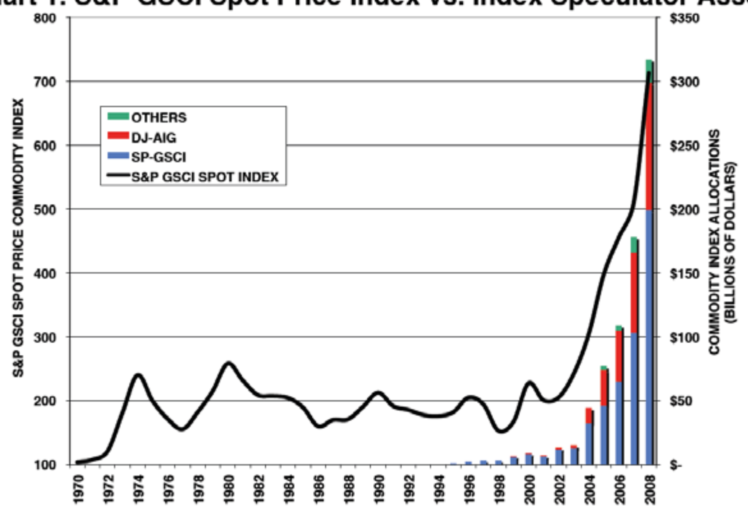
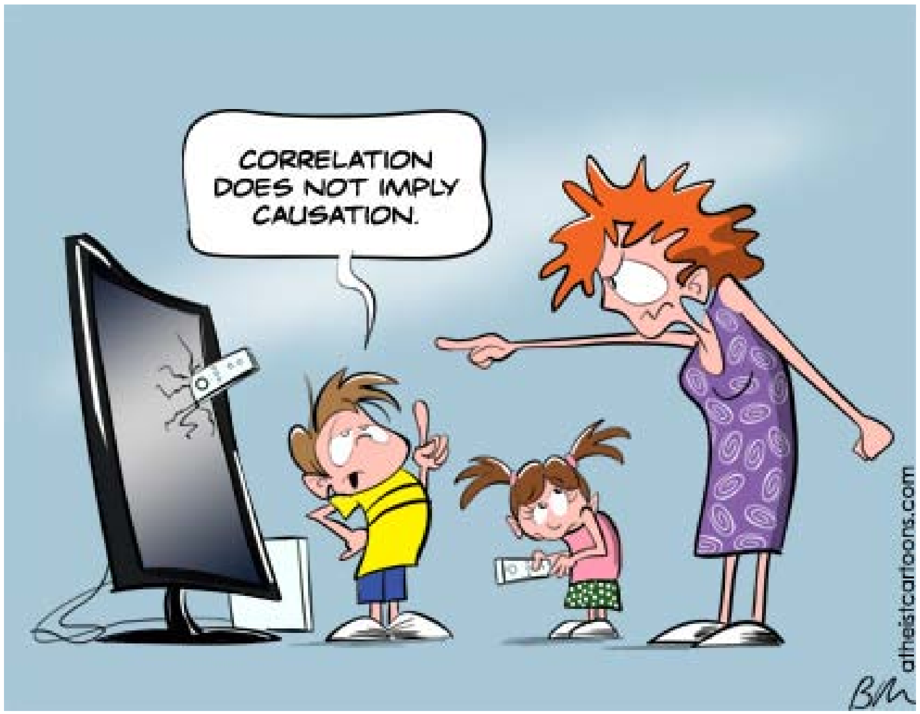
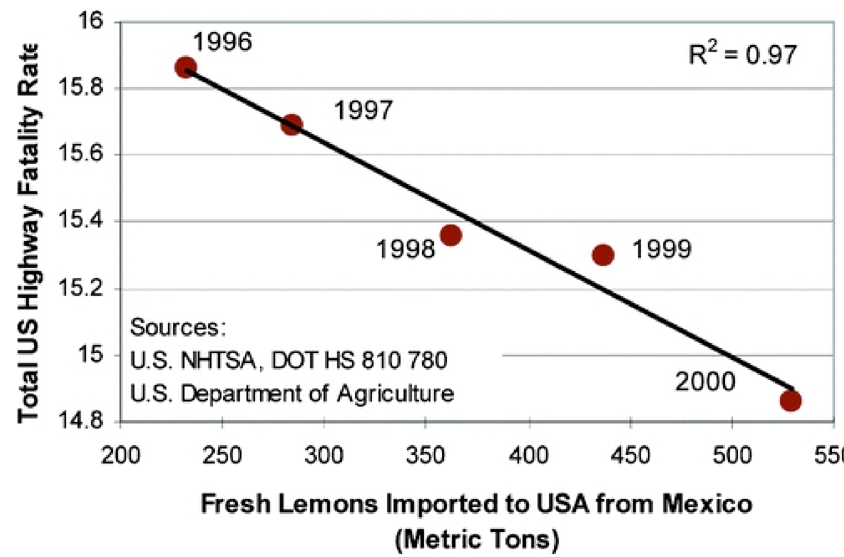
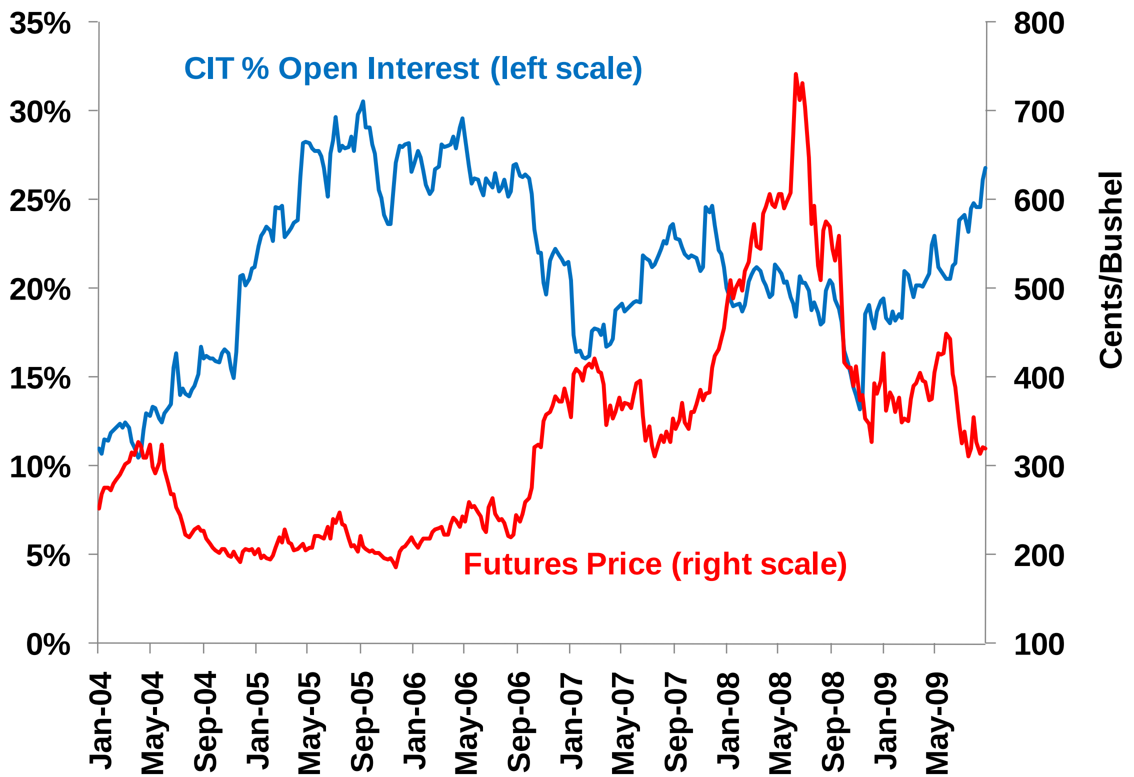


Testing the Bubble Hypothesis

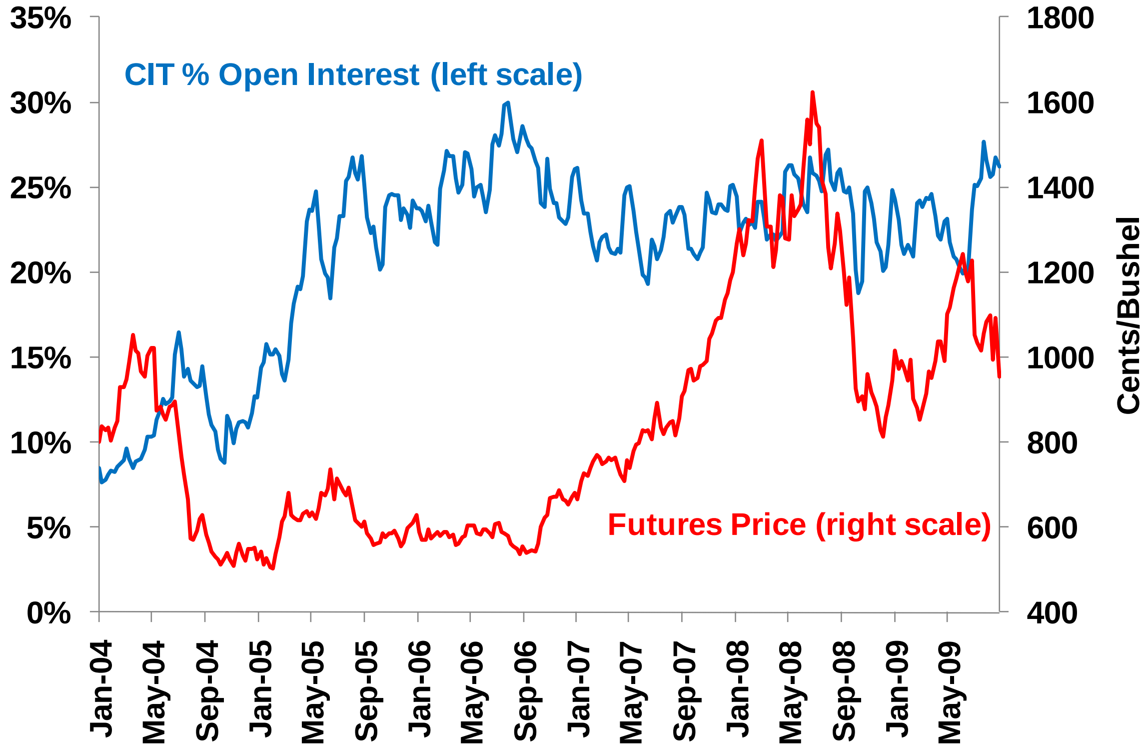




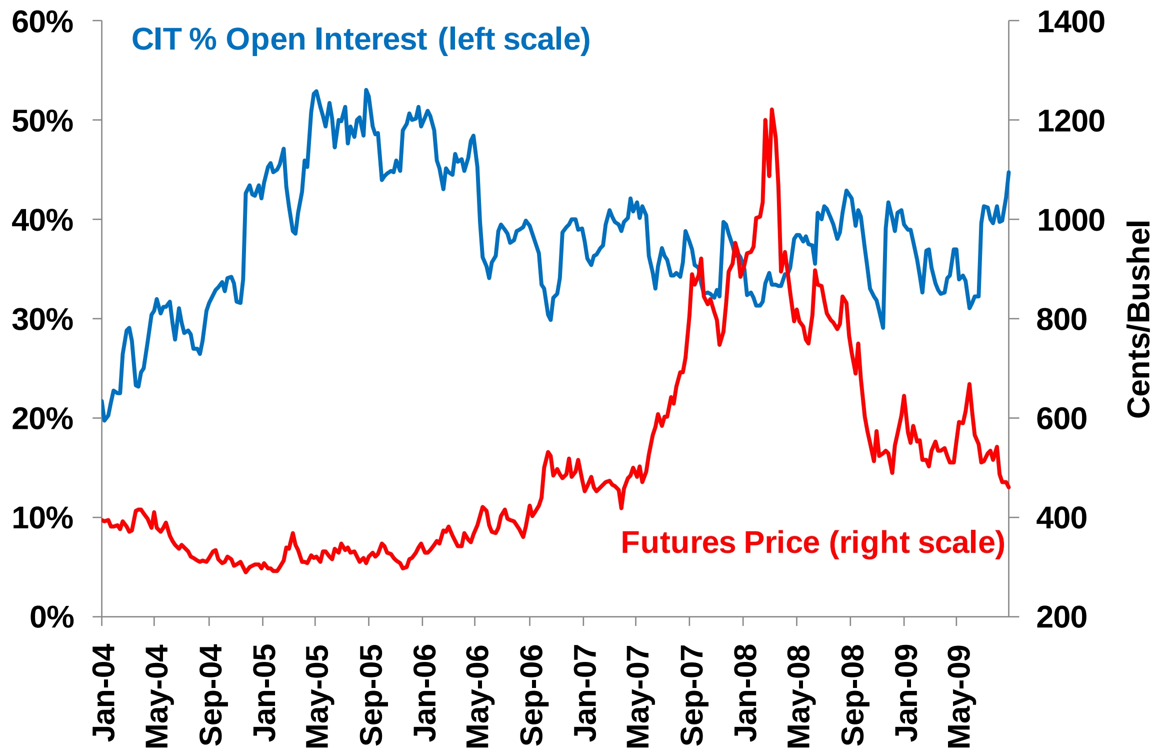
Commodity Index Trader Percentage of Total Corn Open Interest and Nearby CBOT Corn Futures Price, January 2004-August 2009



Commodity Index Trader Percentage of Total Corn Open Interest and Nearby CBOT Soybean Futures Price, January 2004-August 2009



Commodity Index Trader Percentage of Total Corn Open Interest and Nearby CBOT Wheat Futures Price, January 2004-August 2009



The American Heritage® Dictionary of the English Language: Fourth Edition. 2000.

scapegoat

SYLLABICATION: scape·goat

PRONUNCIATION: skāp'gōt'

NOUN: **1.** One that is made to bear the blame of others. **2.** *Bible* A live goat over whose head Aaron confessed all the sins of the children of Israel on the Day of Atonement. The goat, symbolically bearing their sins, was then sent into the wilderness.

TRANSITIVE VERB: Inflected forms: **scape·goat·ed**, **scape·goat·ing**, **scape·goats**
To make a scapegoat of.

ETYMOLOGY: scape[2] + goat (translation of Hebrew *ʿēz ʾōzēl*, goat that escapes, misreading of *ʿăzāʾzēl*, Azazel).

Implications

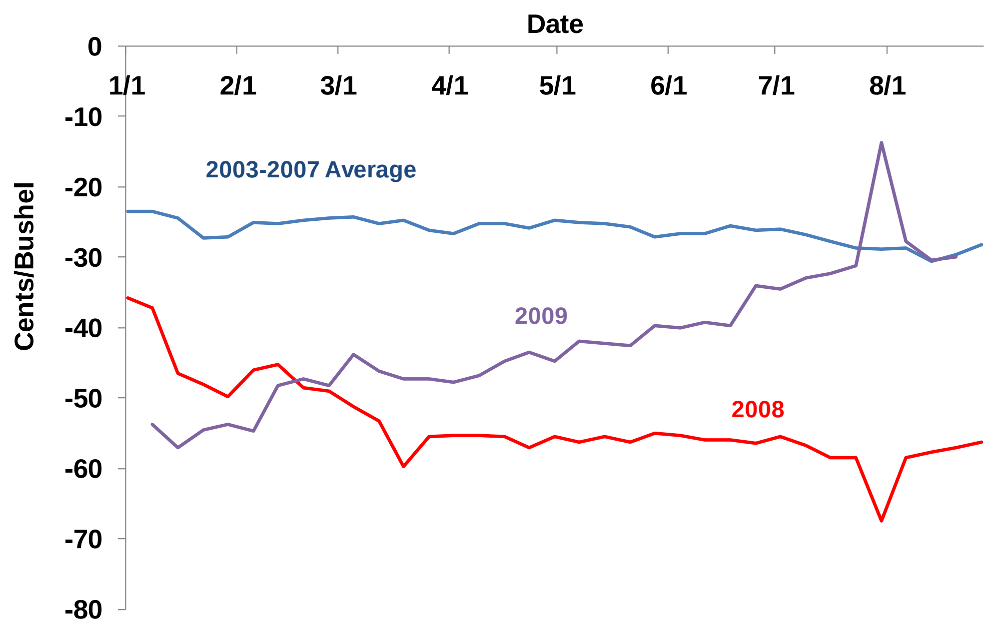
- High price volatility may limit the forward contracting opportunities offered by grain merchandisers
  - Shorter time horizons
  - Weak basis levels
  - More erratic basis behavior

Elevators' Marketing Jam

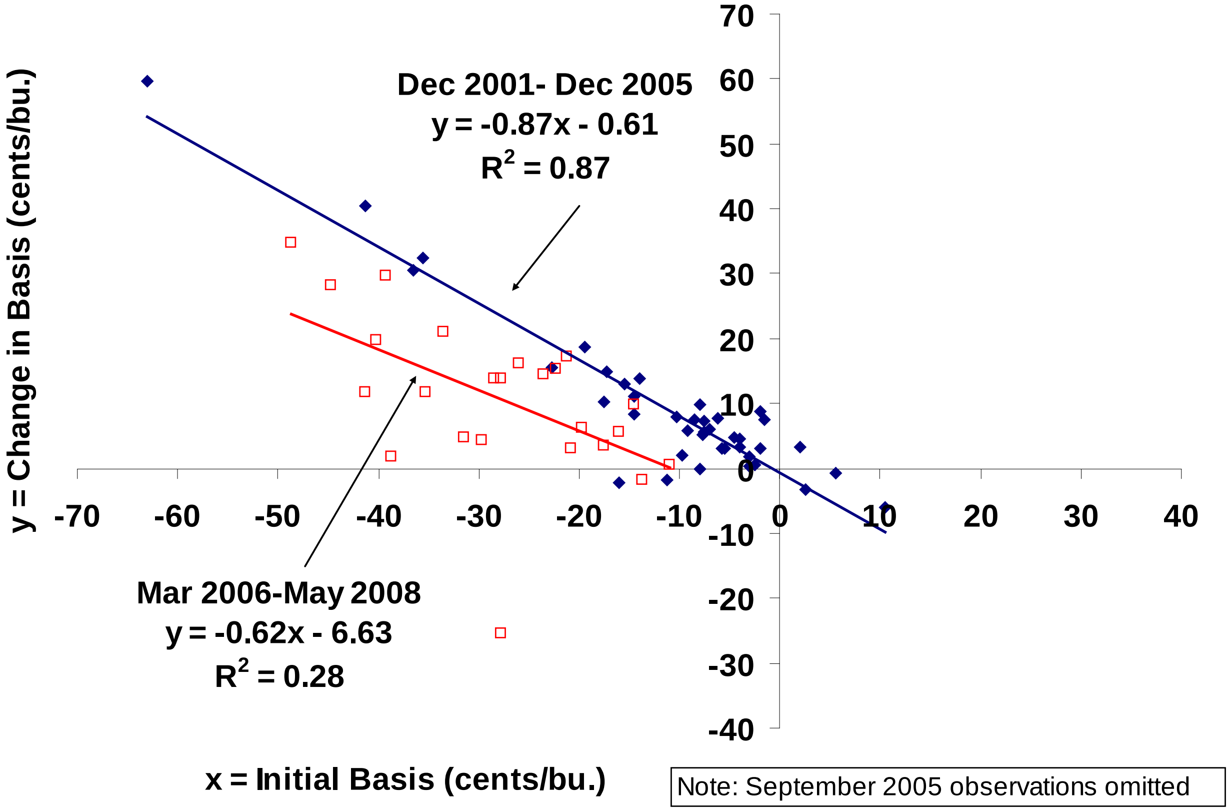
Aug 1, 2008 12:00 PM, BY LARRY STALCUP

Corn prices at $6-plus and soybeans pushing $14 through 2010 are mighty tempting for growers looking to forward contract a year or two out. But in many areas, don't try it with your local elevator.

Harvest Delivery Forward Basis for Corn in South Central Illinois, 2003-2009



Predictability of CBOT Corn Basis Change to First Day of Delivery with all Delivery Locations Pooled, December 2001 – May 2008 Contracts



Alternatives to Forward Contracting

- Direct use of futures hedging
  - Margin risk
  - Basis risk
- Direct use of options hedging
  - Initial premium outlay may be large
  - Basis risk
- Basis contract + futures hedge
- Contract with a grain user (e.g., ethanol plant)
  - Default risk
- Increase crop revenue insurance coverage