By Diana Klemme

# Index funds:

## An elevator merchandiser's friend?

*Background: Mike is the general manager of a medium-size cooperative located in the western Corn Belt. Mike's operation handles significantly more corn than hard red wheat but both are important to the co-op's operations. This is a hypothetical operation, not an actual business.*

Mike turns off the television and glances around his den. The St. Louis Cardinals just lost a close game and he's looking for something to take his mind off sports for awhile. "This is a chance to catch up on my reading," he thinks to himself. "That pile of magazines will be just the thing — otherwise I'll have to mow the yard." He plunges in and soon picks up the February 2006 FEED & GRAIN magazine. He spots the story "When Gorillas Migrate," and wonders what that could be about. He realizes it talks about how index funds impact futures spreads and decides to read more closely. "Wonder how I missed this," he thinks; "futures spreads can make or break a merchandising program." He reads carefully and ends up with a list of things to check into.

The next day at the elevator Mike tackles his 'to do' list. Wheat harvest will start soon and corn won't be far behind. Crops will be big and farmers sold heavily early, and the elevator has a lot of new crop wheat and corn hedged. Mike has all short hedges in July 07 KC wheat and in December 07 corn. He plans to carry a lot of hedged ownership past harvest but hasn't thought much about when to roll those hedges forward. But the story makes him wonder.

### December/March corn spreads

Mike prepares a chart of six years of harvest December/March corn spreads. He charts the last five crop years and includes 1996 crop — that was the corn harvest following the tightest stocks/use ratio in recent history. He looks at data from June 1 to the first day of the delivery month (December 1), deciding that six months is a fair time frame for rolling hedges, and recognizing that he usually rolls by the time deliveries begin. On his chart June 1 shows as Day 1, and December 1 as Day 131. Futures carries show as positive numbers and inverses show as negative values.

| Commodity | $ to hold | Price | $ / price = Bushels needed | Bushels / 5,000 = contracts needed | |
|---|---|---|---|---|---|
| KC wheat | $5 million (5%) | $3.50 | 1.43 million bu | 285 contracts | Long 285 |
| Corn | $8 million (8%) | $2.70 | 2.96 million bu | 592 contracts | Long 592 |
| **The following January:** | | | | | |
| KC wheat | $5 million (5%) | $5.00 | 1 million bu | 200 contracts | Sell 85 contracts |
| Corn | $8 million (8%) | $3.80 | 2.11 million bu | 421 contracts | Sell 171 contracts |

To Mike's surprise, December/March corn widened noticeably in the three recent crop years to their biggest carries approximately one month before deliveries began, regardless of price or carryout. He circles this section on the chart. But there was no clear pattern for the timing of the widest (highest carry) in 2002 and 2003 crop, nor in the unusual 1996 crop. Mike wonders if this is random or do the recent years indicate a new pattern? If this widening in November is something predictable, it could be one factor Mike uses to decide when to roll short hedges.

"I wonder," he asks himself, "could the widening in November be tied to the explosive growth of index funds in ag commodities the past two to three years?" He goes to the Commodity Futures Trading Commission website (www.cftc.gov) for the Commitment of Traders weekly report. He finds data showing weekly Index Funds positions in all commodities, going back to January 2006. He charts this for CBOT wheat, KC wheat and for corn futures. The growth of index fund longs is obvious through early 2006, but he asks himself why their holdings declined in early 2007, then flattened. He recalls a story he saw recently that mentioned "rebalancing." "That must be it," he says out loud. "He marks his chart (Figure 1) with two vertical lines in January 2007 to mark this sell-off of fund longs.

### Index fund rebalancing

A fund's prospectus dictates how fund dollars are apportioned among commodities, and how often the holdings will be adjusted, or rebalanced, based on changing value of the commodity.

For example, assume a long-only index fund holds $100 million on Day 1 and must rebalance annually in January.

The fund is to hold 5% KC wheat, 8% corn; the balance is held in other commodities.

Assume by January, the price is unchanged for all commodities in the fund except for corn and wheat.

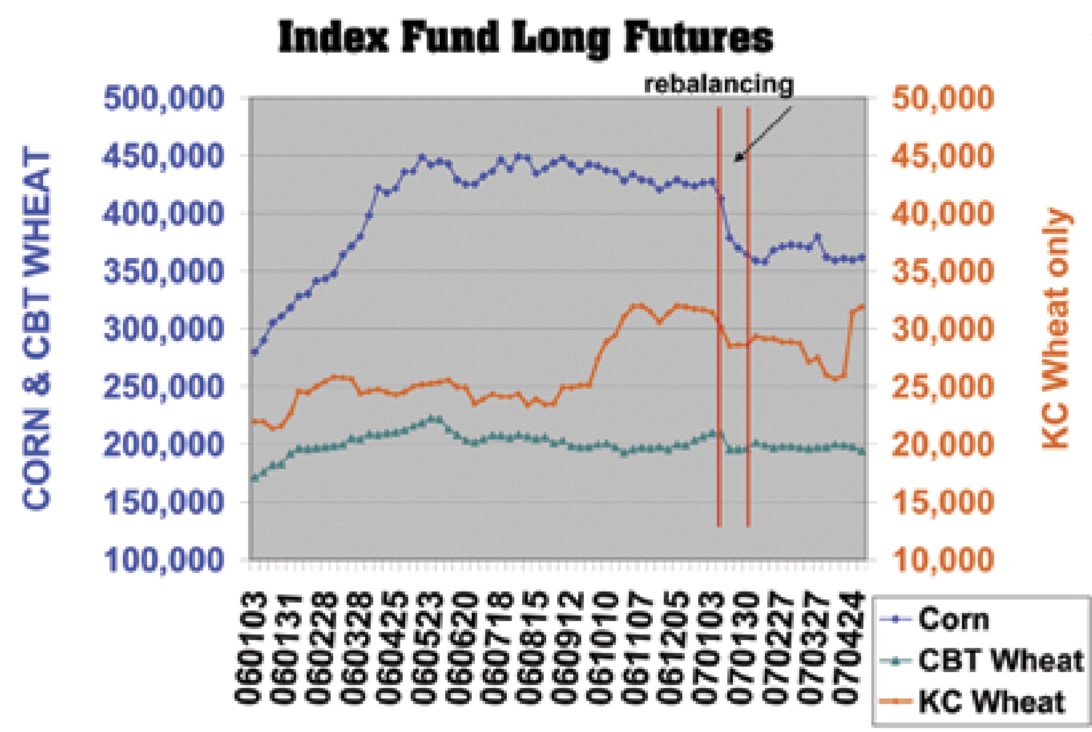


*Figure 1*

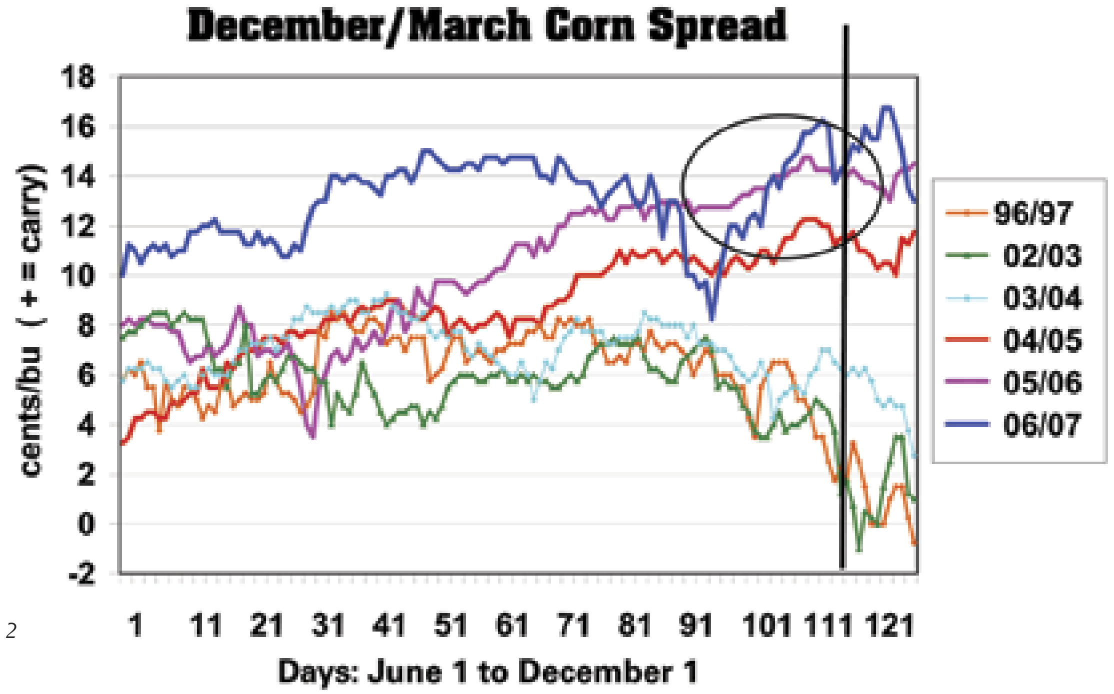


*Figure 2*

Rising futures have been profitable for the fund's long corn and wheat futures, but now the fund needs to own fewer bushels to maintain the $13 million proportion of the fund's principal. To rebalance the dollar investment, the fund manager will sell 85 contracts of wheat, sell 171 contracts of corn, and retain the balance.

**Rollovers**

Index funds directly affect futures spreads. These funds hold long positions in a defined system, usually being long the nearby futures month or months where liquidity and volume are typically greatest. Setting these parameters also maintains the passive nature of the investment. But as described in the 2006 article "When Gorillas Migrate", index fund longs now hold 30 to 50% of total outstanding contracts in some commodities, and a higher percentage when looking only at the open interest in the nearby futures month. These funds all must liquidate their front-month holdings before deliveries begin, and as a result they "roll" to the second or other allowed month on a defined timetable. This "rush to the exits" of such sizable long positions almost inevitably weighs on the front-month spread and is one factor that pushes spreads wider (selling the nearby/buying a deferred future). Figure 2 shows Dec/March corn spreads, with the vertical black line marking when much of the Index rollover activity occurs.

The Goldman Sachs index, for example, rolls 20% of their longs daily for 5 consecutive business days starting on the 5th business day of the month prior to delivery in every commodity owned by their index.

Mike looks over the charts, analyzes the corn spreads, and asks himself if the fund rollover activity is relevant or just interesting. "I think it's relevant," he finally says out loud. "Just look at the size of their positions. Figure 1 shows me that in corn, index funds are currently long around 360,000 contracts of corn (1.8 billion bushels), 29% of all open contracts. That's almost 17% of the entire U.S. corn crop! This fall, much of those fund longs will be in December futures

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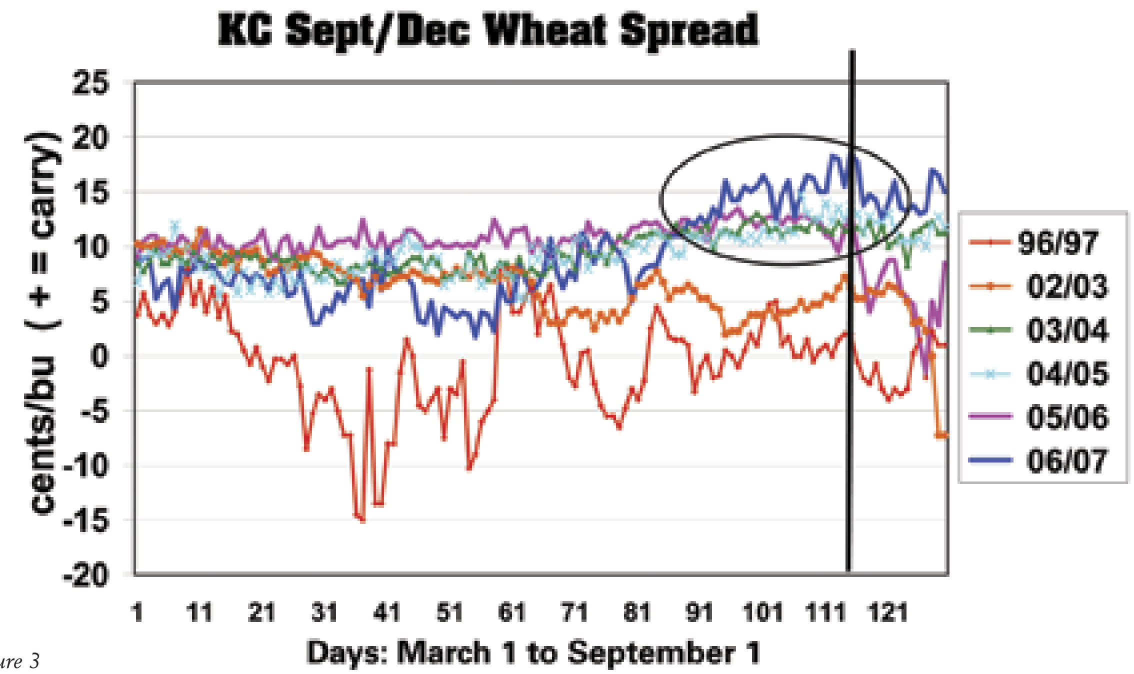


*Figure 3*

and they'll be selling December in November and buying March or another deferred month. The growth of index funds in the past three years, and their predictable rolling, really may be a significant factor! Not only are spreads 'peaking' in November, but they're moving close to full carry!"

**Kansas City wheat**

Mike looks next at CFTC data on index fund positions in KC wheat. These holdings are relatively small, around 20,000 to 35,000 contracts. He sets up this chart to show the KC numbers against the right-hand axis. These positions aren't as big as corn, but HRW is a much smaller crop — around 900 million bushels on average. Holding 30,000 contracts in index funds equates to 150 million bushels. Figure 3 shows the predelivery spread weakness isn't quite as pronounced in KC Sept/Dec as it is in Dec/March corn, but the last three crop years this KC wheat carry peaks shortly before delivery, regardless of crop size.

**Game Plan**

Mike jots down factors to consider when deciding how to roll the elevator's short hedges forward.

- Crop size of wheat and corn, projected harvested receipts and purchases
- What is full carry, the cap on how wide (high) carry can go?
- What is the spread now, as a percentage of full carry?
- What is my maximum potential gain or loss if I wait to set the carry?
- Could I ship the corn (or wheat) if the futures carry should disappear?
- What is the cash basis for these markets, relative to the value from delivery against futures? (Cheaper basis tends to widen carries.)
- If our elevator holds an unusually large basis position, should I also hold off setting the carry trying to squeeze out a little more or is that keeping too much risk on the table?
- Watch the weekly index fund positions.

Mike reaches for his calculator and figures full carry for corn and wheat. For December7/March8 corn, full carry is approximately 19.5¢ and the spread is now at 11¢, just 57% of full carry. For KC September/December7 wheat, full carry is approximately 21.5¢ and the spread is also at 57%. He knows he could ship much of the wheat if the carry goes away, but there's no way he could move all the corn at harvest. He thinks to himself, "Crops will be big this year and space will be tight. Basis should be reasonably weak, possibly extremely weak. That should also help widen futures carries:" He makes some notes:

1. Have "Good until Canceled" orders working to set the December7/March8 corn carry on 50% of my anticipated total ownership, if the spread reaches 15¢, approx 77% of full carry. That's 4¢ wider than is tradable right now, but I don't think waiting is high-risk at this point, in view of huge index fund positions.

2. On KC wheat, I could ship if necessary so I'm going to be more aggressive and keep all short hedges in July for now. But just in case, I'll have a Good Until Canceled order to set the carry if September/December reaches 18¢. That would be 84% of full carry, and turning that down, trying to capture another penny or so, would be too aggressive for my blood.

3. 2007 and 2008 crops look as if they will be marked by the same price and basis volatility as 2006 has seen.

Mike closes his spreadsheets and calls the elevator's assistant-merchandiser into his office. "Annie, look at these charts and tell me your thoughts on setting corn and wheat spreads, and on how much basis ownership we should hold. Waiting to set spreads has some risk, but our interest and holding costs are up and we don't want to set goals just because they were good in the past," he surmises.

"These index funds may help our return to space! Let's meet tomorrow and write up a plan that we can talk about at this month's board meeting. We can always change our plan but having a plan will keep us focused," he concludes.

*Disclosure: Past performance of spreads does not guarantee future performance. Each year is unique and fundamentals and delivery economics vary over time.*

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