

How to Better Use Futures and Options

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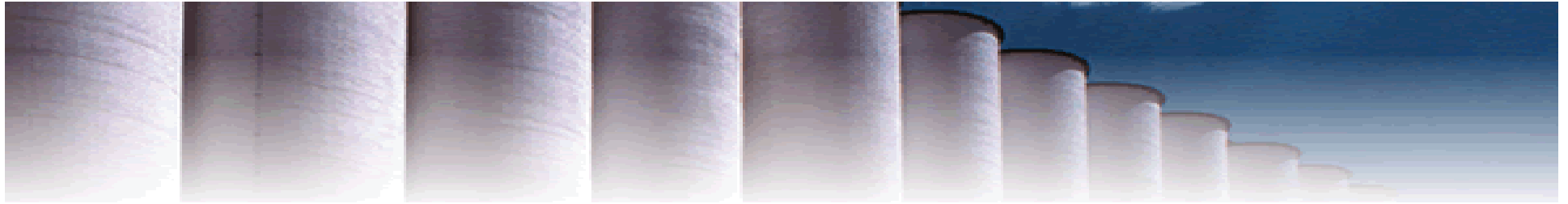
Minneapolis Grain Exchange





Agenda

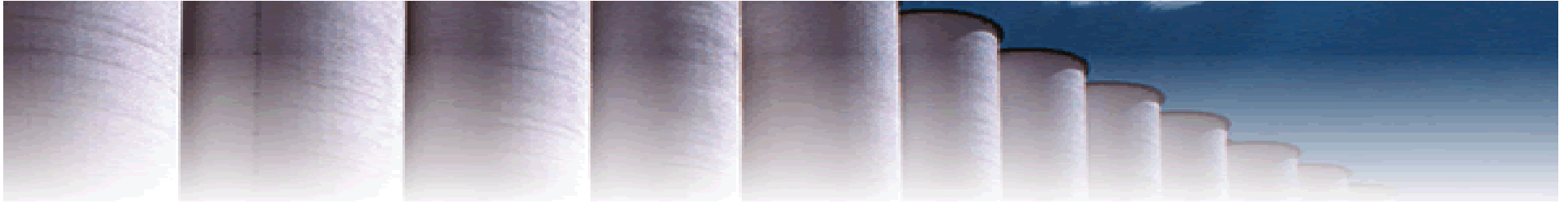
- About the Minneapolis Grain Exchange
- Why Futures and Options?
- Cash Price, Futures, and Basis
- Short Hedge Example
- Price Floor Example
- Long Hedge Example
- New MGEX Agricultural Index Products



About the Minneapolis Grain Exchange

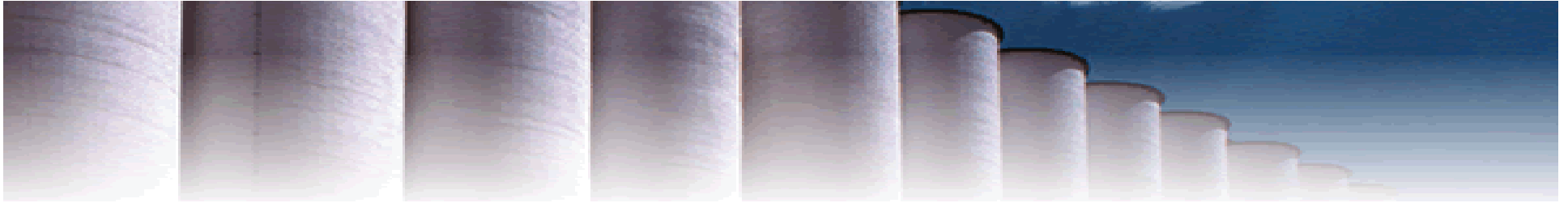
- The only futures/options market for Hard Red Spring Wheat
- Also trades Corn, Soybean, and Wheat Index futures/options
- Trading takes place in both electronic and open-outcry environments (overnight trading in Spring Wheat)
- MGEX celebrates its 125th Anniversary this year!
- New Feature: Market Commentary available on website:

www.mgex.com



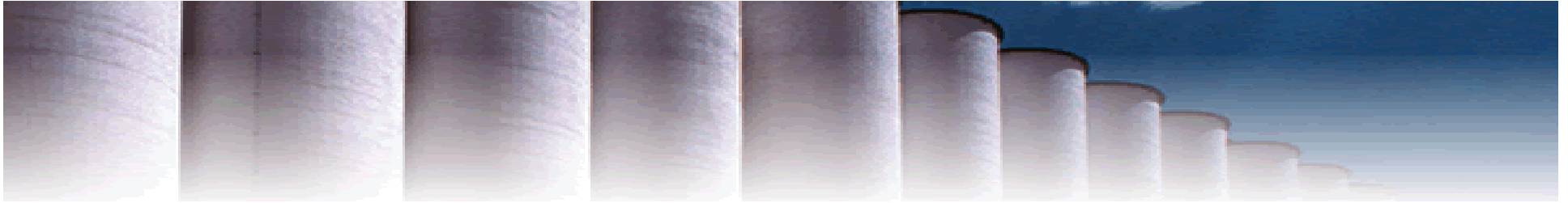
About the Minneapolis Grain Exchange (cont'd)

- 2005 Marked a record volume year for MGEX
- Open Interest at record levels (40,000 – 45,000 contracts)
- It is as easy to trade at the MGEX as anywhere!
 - All wheat markets are not the same (Spring vs. Winter)
 - Higher volumes do not compensate for much higher Basis risk.



Why Futures & Options?

- Futures and Options: Risk Management Tools
- What is Risk?
 - We are uncertain about future events, but do we care about the outcome?
 - If so, we have exposure to that uncertainty.
- Two components to Risk:
 - Exposure – Crop available to sell (operational risk)
 - *Uncertainty – volatility in grain prices (financial risk)*
- Price volatility brings risk and opportunity
- We require a systematic risk management approach



Cash Price, Futures, & Basis

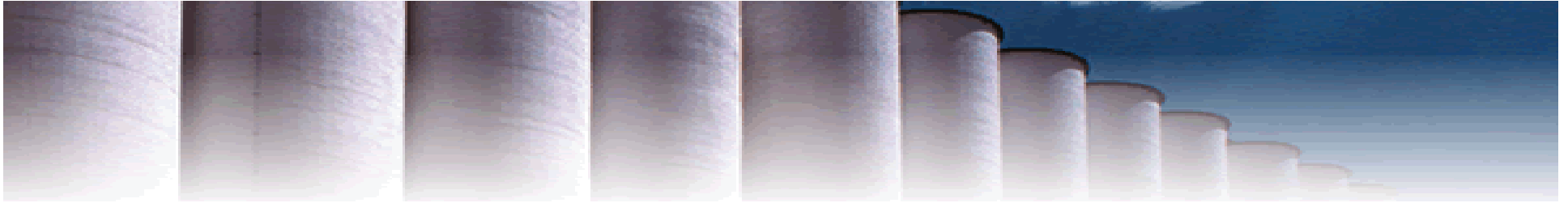
Cash Price = Futures Price + Local Basis

Ex: $\$3.69 \frac{1}{2} = \$3.76 \frac{1}{2} + (-.07)$

(Northeast Montana Cash Bid, MWZ6 Futures as of 10/27/2005)

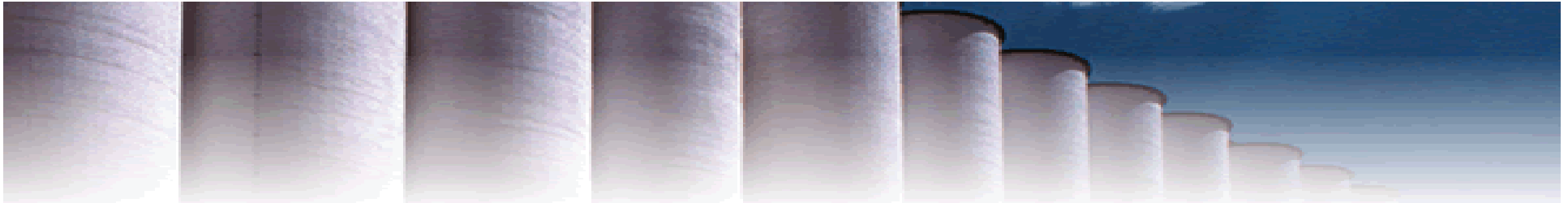
- Cash Sales & Forward Contracts = Speculation that local basis will weaken (or futures decline > strength in basis)
- Cash Sales & Forward Contracts are the most commonly used marketing strategies
- By selling in the *futures* market (a short hedge), this portion of the cash price is fixed:

Cash Price = **FIXED** Futures Price + Local Basis



Cash Price, Futures, & Basis cont'd

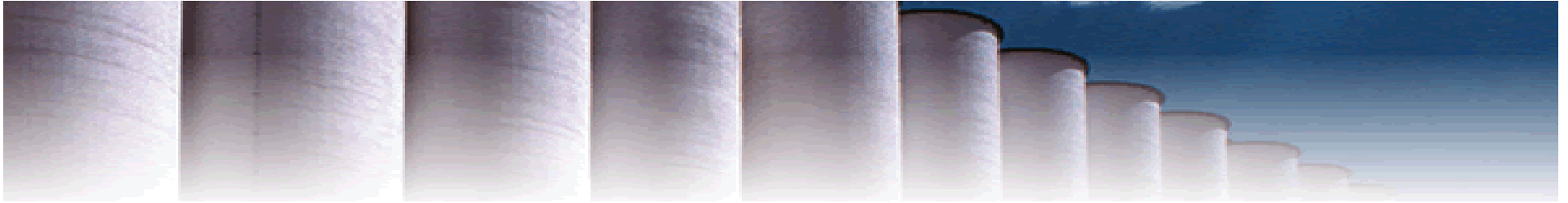
- Basis Risk still exists, so this is not a perfect hedge, but...
- Basis Risk in cents/bushel is much less than Cash Price risk!
- Hedging w/ Futures provides other benefits:
 - Physical Delivery Flexibility
 - Ability to reverse market position should conditions change
 - Longer pricing horizon (up to 24 months)



Short Hedge Example (pre-harvest)...

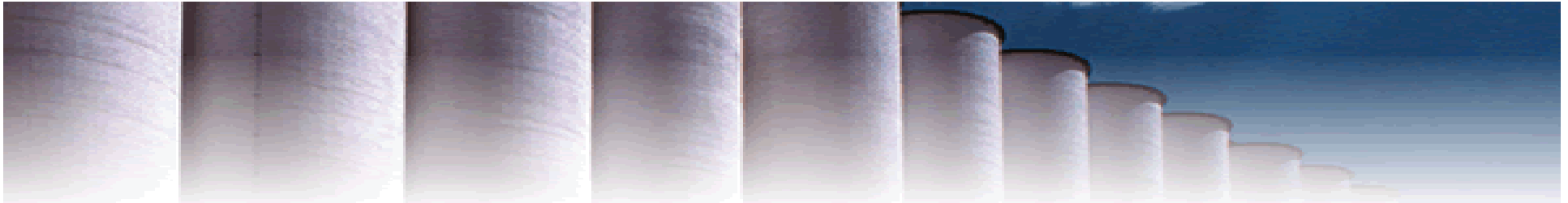
- April 28th 2004:
 - Cash Bid in NE Montana is \$3.73 ½
 - December HRS Futures settle at \$4.21 ½ (Basis = -48)
- **To place a Short Hedge, the producer sells Dec. Futures**
- 10/28/2004:
 - December Futures contract is \$3.67 ½,
 - NE Montana Cash Bid is \$3.72 ½ (Basis = +5)
- **Producer Sells Grain and buys back Dec. Futures**
- In this case of weakening Futures and strengthening basis, the farmer realizes a significant gain:

Actual Cash Sale Price:	3.72 ½
Futures Gain	.53 ½
Gross Price	4.26



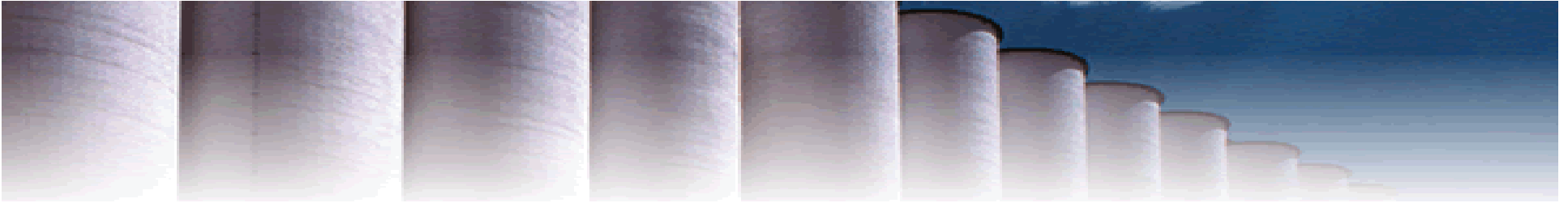
Price Floor Example (pre-/post-harvest)...

- How do Options provide price protection?
- Put Options grant the holder the right (but not the obligation) to sell at a set price (the *strike* price).
- Put Options can be used to establish a Price Floor (minimum price) while allowing the holder to participate in price increases:
 - As prices drop, the right to sell grain at a set price becomes more valuable
 - As prices rise, the right to sell is less valuable, but is offset by an increase in the price of physical grain
- If the producer wishes to physically hold their grain un-priced, purchasing Put Options will set their price floor at the desired level.

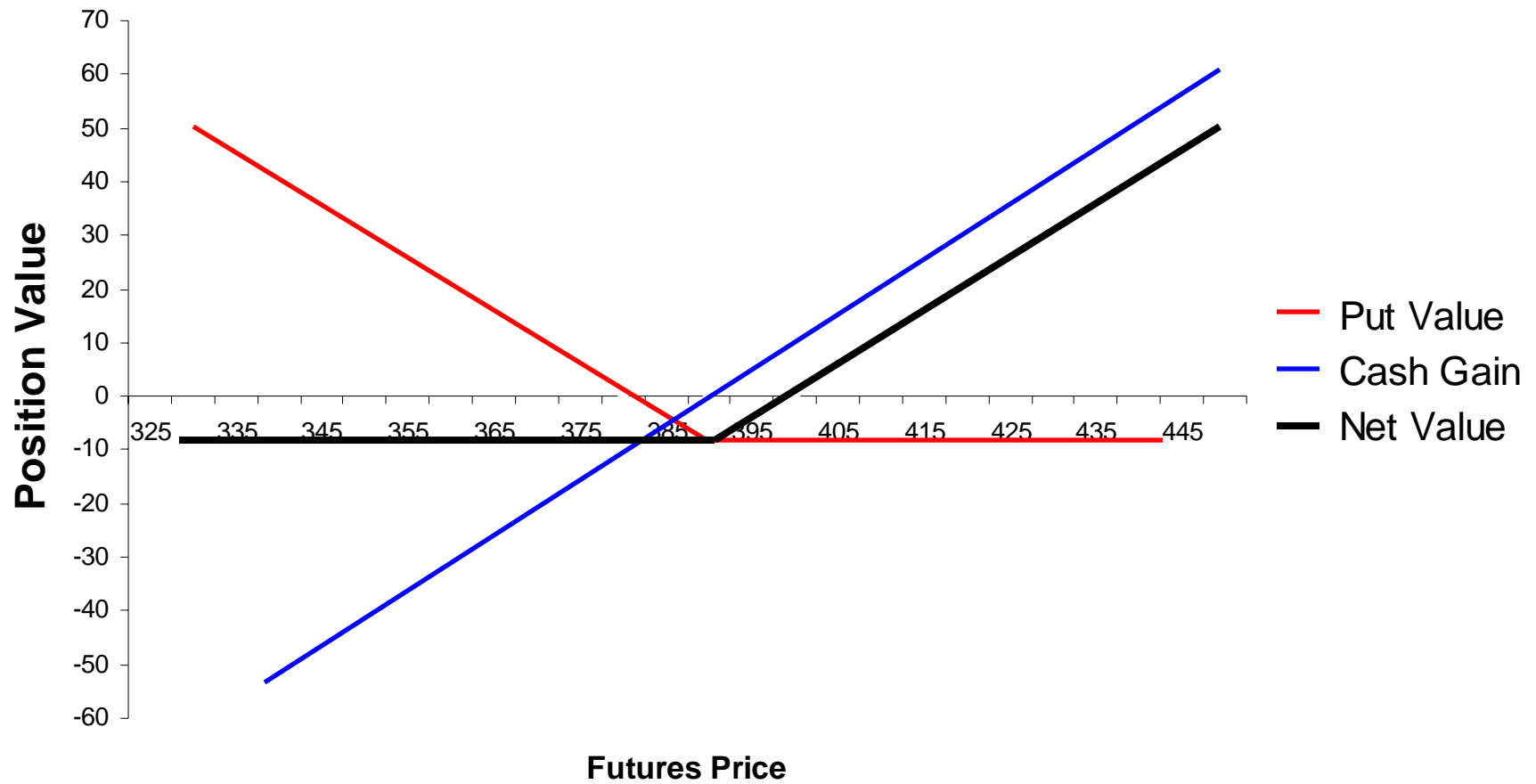


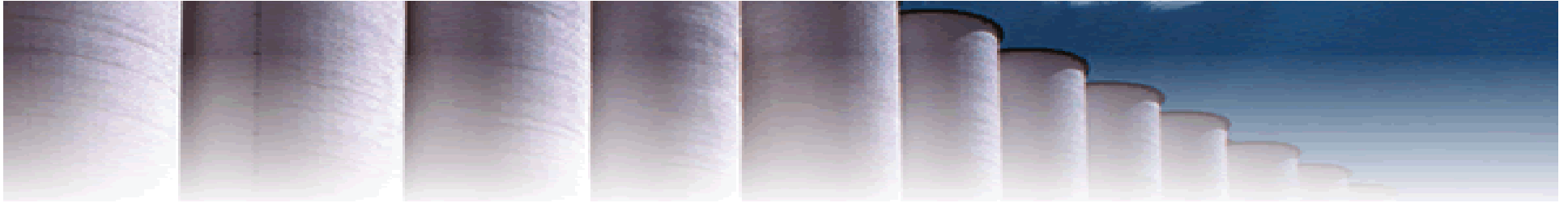
Price Floor Example (cont'd)...

- On 1/19/2006:
 - March HRS Futures were \$3.90, Northeast Montana Cash Bid was \$3.60 (Basis -30)
 - March \$3.90 Puts were \$.10
- **Producer purchases the March 390 Puts**
- Assume Futures decrease to \$3.60, and Cash Bid to \$3.30:
 - Put Option Cost: -.10
 - Put Option Value(\$3.90 - \$3.60): +.30
 - Cash Price: +3.30
 - Total **\$3.50**
- Assume Futures increase to \$4.20, and Cash Bid to \$3.90:
 - Put Option Cost: -.10
 - Put Option Value(\$3.90 - \$4.20): +.00
 - Cash Price: +3.90
 - Total **+3.80**



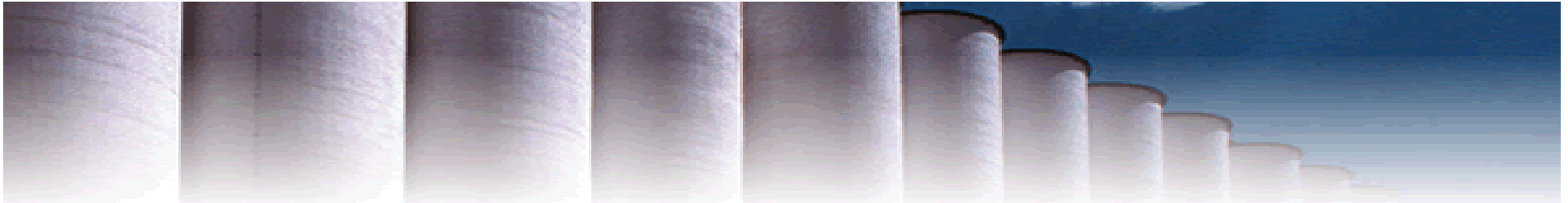
Price Floor Example (cont'd)...





Long Hedge Example (post-harvest)...

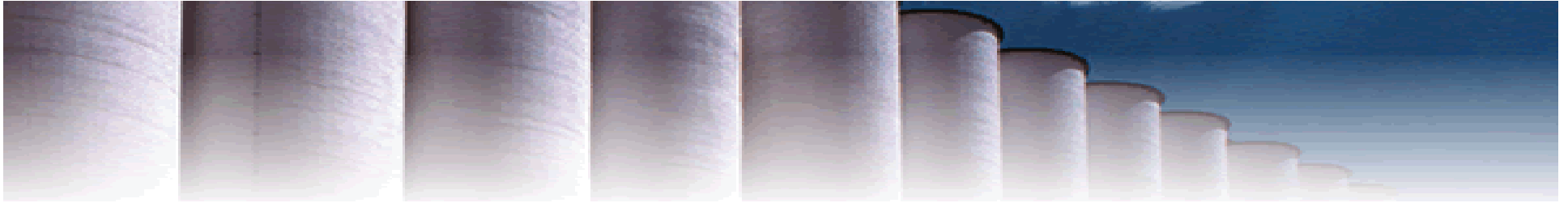
- Call Options grant the holder the right (but not the obligation) to buy at a set price
- Call Options allow the holder to participate in Wheat price increases
 - As prices rise, the right to buy grain at a set price becomes more valuable
 - As prices fall, the right to buy is less valuable, but loss is limited to the option premium
- If the producer wishes to sell Wheat off the combine, they can still participate in later price increases by purchasing Call Options



Long Hedge Example (post-harvest)...

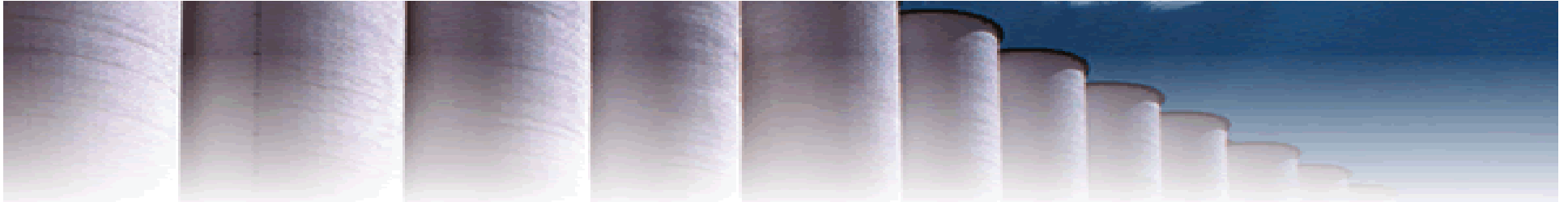
- On 8/29/2005:
 - Northeast Montana Cash Bid was \$3.46 ½
 - December 05 HRS Futures were \$3.39 ½ (Basis +7)
 - December \$3.40 Call is \$.20
- **Producer sells Wheat and purchases Call Option**
- On 12/28/2005:
 - Cash Bid is \$3.78
 - December 05 Futures are \$3.92 (Basis -14)
- **Producer Sells Call Option for \$.52 ½**

• Call Option Price	- .20
• Call Option Value (\$3.925 - \$3.40)	.525
• Cash Sales Price	3.46 ½
• Total	3.79



New Products:

MGEX Agricultural Index Futures & Options



What is an Agriculture Index?

- Simple average of country elevator bids collected daily by DTN

Number of Daily Elevator Bids

HRSI: 270

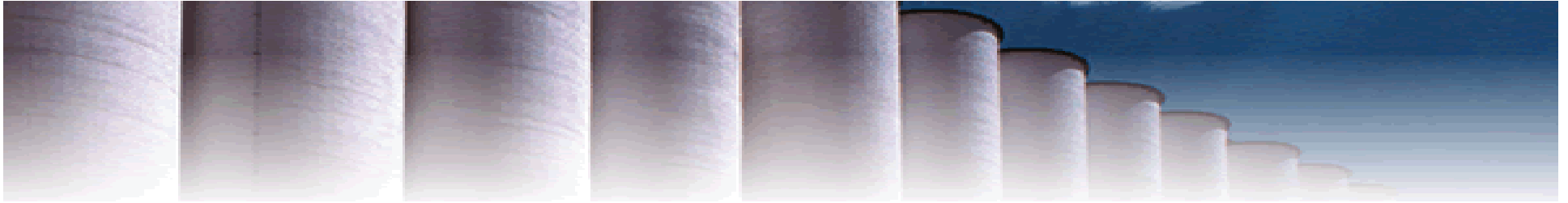
SRWI: 465

HRWI: 500

NCI: 2,100

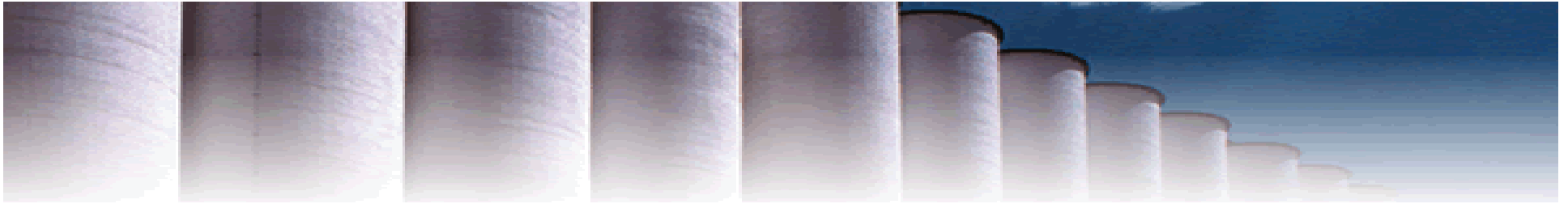
NSI: 1,900

- Spot indexes, futures prices, volume open interest, spreads posted daily at www.mgex.com



Index Contract features

- Financially settled (no deliveries) to spot indexes calculated by Data Transmission Network (DTN)
- Represents country-origin pricing for corn, soybeans and wheat
- Exclusively electronic
- All months traded
- Simultaneous expiration of futures and options

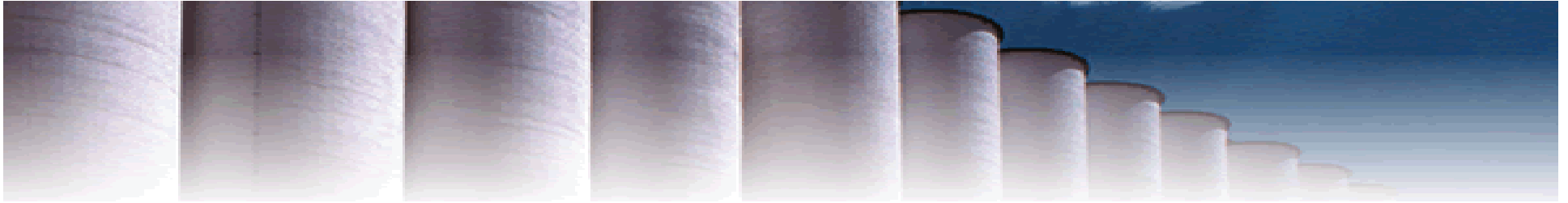


Hedging with MGEX Index futures & options

- Recall that hedging w/ traditional futures does not eliminate Local Basis Risk:

$$\text{Cash Price} = \text{Futures Price} + \text{Local Basis}$$

- There is a way to reduce Basis Risk as well!
- MGEX Agricultural Index Products Reduce Basis Risk...
 - HRSI – Hard Red Spring Wheat Index
 - HRWI – Hard Red Winter Wheat Index
 - NCI – National Corn Index
 - NSI – National Soybean Index



Why do the Indexes reduce Basis Risk?

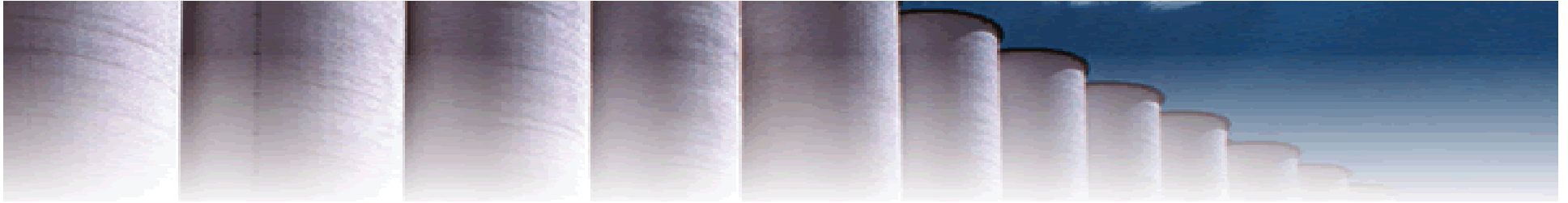
Better representation of prices at local elevator

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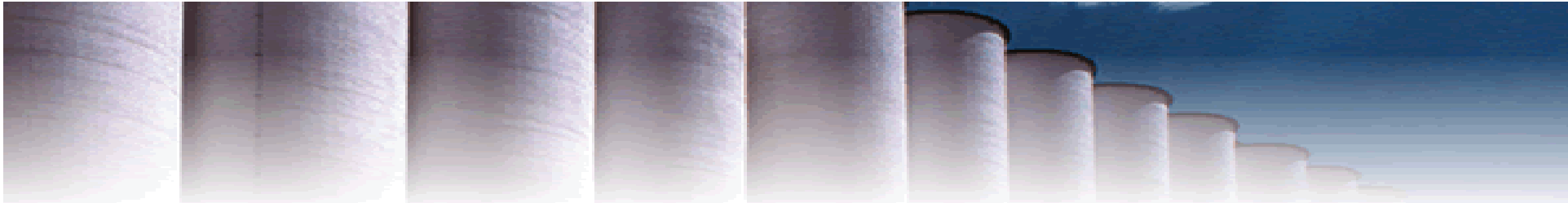
Reduced basis risk and cash market divergence

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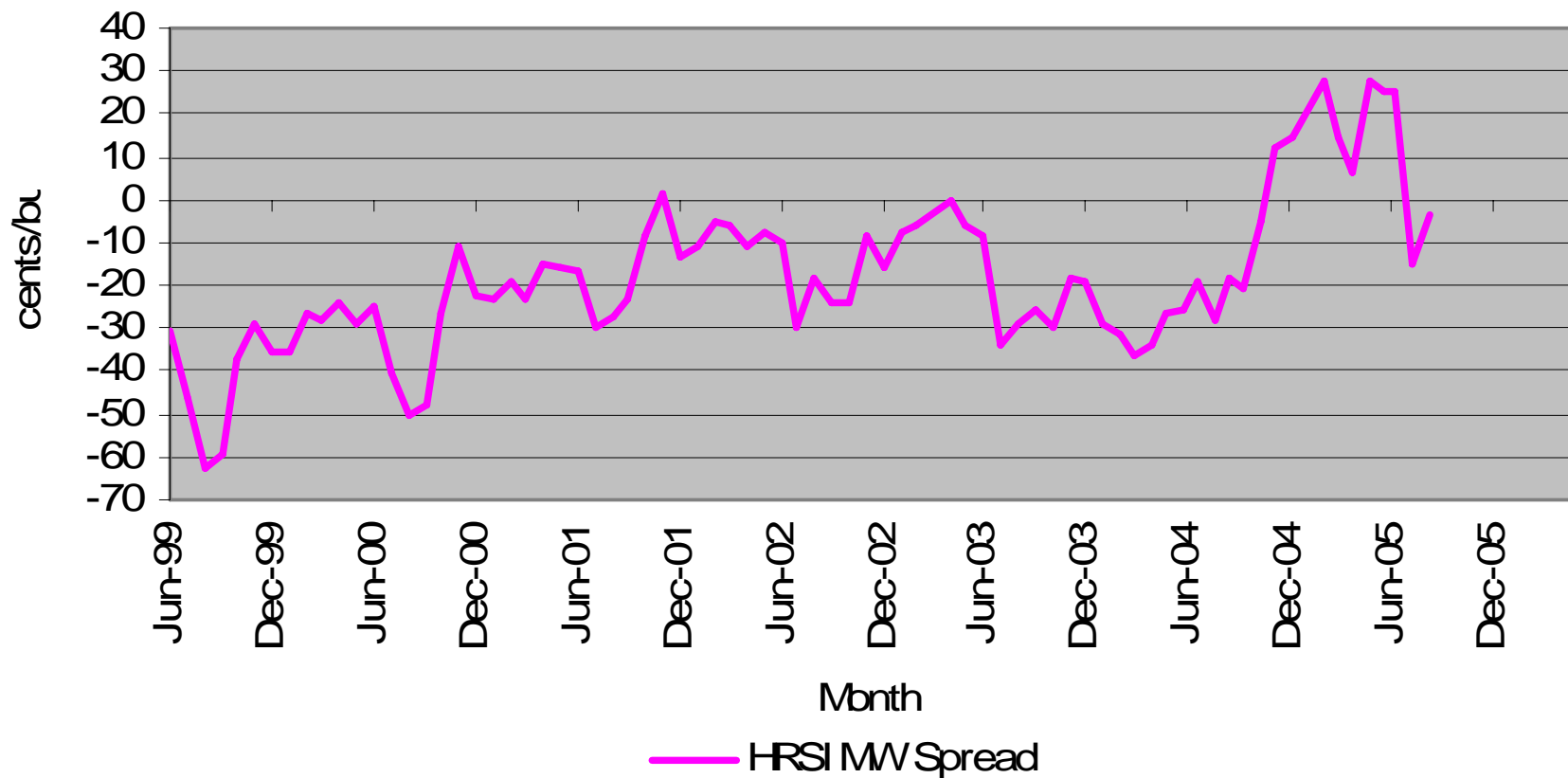
A more accurate hedge

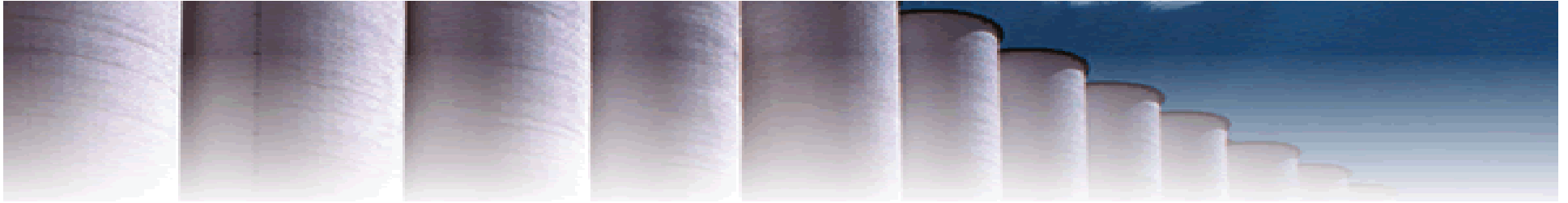


- In late 2004, anyone who bought or sold spring wheat learned all about cash market divergence.
- During this period, cash prices soared to historically high premiums when compared to MGEX spring wheat futures.
- This divergence between cash market prices and futures prices is more often referred to as *basis risk*, and this situation can throw a monkey wrench into even the best-made marketing plans.



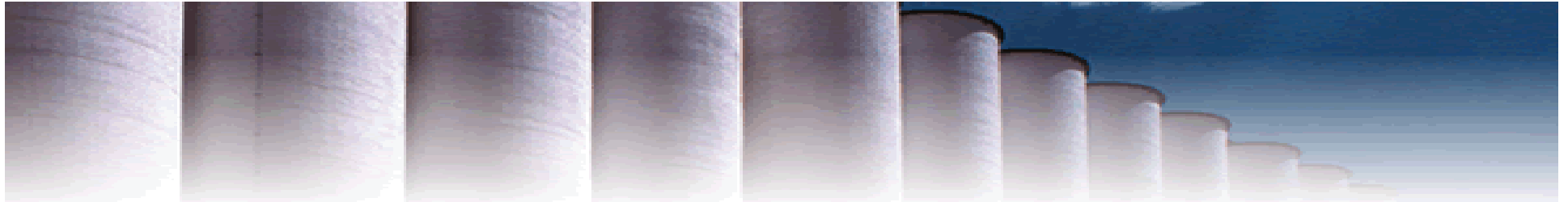
Cash Market Divergence (Basis Risk): Recent examples





Building Interest

- Real-time streaming quotes free at MGEX.com
- MGEX staff will call market participants to get interest.
- Two or three cent markets may become $\frac{1}{2}$ to 1 cent markets
- Customer service support center. Call for personalized help, including the bid/offer for any MGEX contract. Toll-Free 866-255-MGEX



Thank you!

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