



Futures Hedging and Basis Movement

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Futures Hedging



- Hedging: taking an equal and opposite position in the futures market than you have in the cash market.
- A farmer hedges by taking an action now in the futures market that they will take later in the cash market.



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Basis



- The difference between the cash price and futures price. Many factors influence basis: local supply/demand, etc.
- The calculation for basis is:

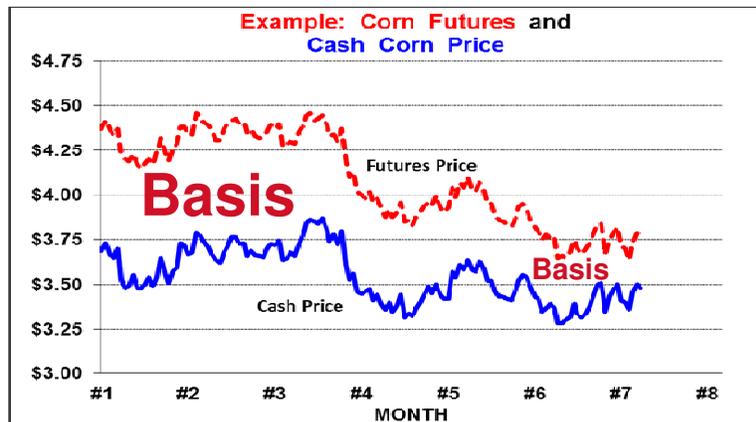
$$\begin{array}{r r r r} \text{Cash Price} & - & \text{Futures Price} & = \text{Basis} \\ \$3.10 & - & \$3.55 & = -45\text{¢} \\ \$9.00 & - & \$9.60 & = -60\text{¢} \end{array}$$



Basis



The difference between the local cash price and the underlying futures price of a commodity.



Example futures hedge story



- It's November: goal is to sell 5000 bu. of cash corn in late Feb. at \$3.70.
- Estimated basis for late February is -30¢ (cash under March futures).
- March corn futures are sold at \$4.00.
- **What happens if basis is different than expected?**

**Hedging examples do not include commissions and interest.*



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Hedging Example (market lower)



DATE	CASH	FUTURES	BASIS
November	Goal: \$3.70 Cash Corn	Sell 1 March Corn @ \$4.00	Estimated: - 30¢
Late February	Sell Cash Corn @ \$3.40	Buy 1 March Corn @ \$3.50	Actual: - 10¢
Results	- 30¢	+ 50¢	+ 20¢



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Net Hedge (without commissions and interest cost)

1. Original futures less actual basis	=	net hedge
\$4.00 - 0.10	=	\$3.90
2. Cash sale to buyer +/- futures gain/loss	=	net hedge
\$3.40 + 0.50	=	\$3.90



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Hedging Example (market lower)



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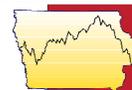
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Hedging Example (market higher)



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CHALLENGE

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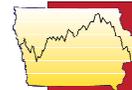


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Hedging Example (market higher)



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COMMODITY
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 \$4.20 - 0.60 = \$3.60



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Key points:

Futures Hedging and Basis Movement



- A Hedge-To-Arrive (HTA) cash contract is similar to futures contract hedging.
- Basis is key to result of futures sold hedge or HTA:
 stronger basis than expected = higher price
 weaker basis than expected = lower price



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