



Futures Hedging

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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.



Futures Hedging Example



DATE	CASH	FUTURES	BASIS
Start date		Sell now	
End date			
Results			



Basis



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

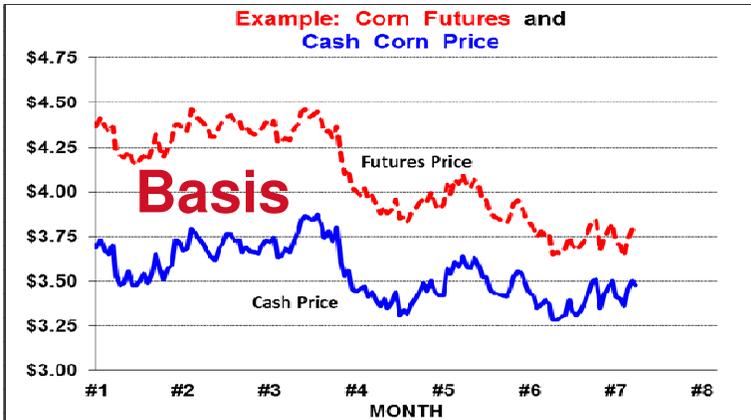
$$\begin{array}{rclcl} \text{Cash Price} & - & \text{Futures Price} & = & \text{Basis} \\ \$3.10 & - & \$3.55 & = & - 45\text{¢} \\ \$9.00 & - & \$9.60 & = & - 60\text{¢} \end{array}$$



Basis



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



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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 price goes lower or higher?**
- **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 @ \$3.25	Buy 1 March Corn @ \$3.55	Actual: - 30¢
Results	- 45¢	+ 45¢	0.00



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Hedging Example (market lower)



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Results	- 45¢	+ 45¢	0.00

Net Hedge (without commissions and interest cost)

$$\begin{array}{rcl}
 1. \text{ Original futures less actual basis} & = & \text{net hedge} \\
 \$4.00 & - & 0.30 & = & \$3.70 \\
 2. \text{ Cash sale to buyer +/- futures gain/loss} & = & \text{net hedge} \\
 \$3.25 & + & 0.45 & = & \$3.70
 \end{array}$$



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Results	- 45¢	+ 45¢	0.00

Net Hedge (without commissions and interest cost)

$$1. \text{ Original futures less actual basis} = \text{net hedge}$$

$$\$4.00 \quad - \quad 0.30 = \$3.70$$

$$2. \text{ Cash sale to buyer +/- futures gain/loss} = \text{net hedge}$$

$$\$3.25 \quad + \quad 0.45 = \$3.70$$



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Hedging Example (market higher)



DATE	CASH	FUTURES	BASIS
November	Goal: \$3.70 Cash Corn	Sell 1 March Corn @ \$4.00	Estimated: - 30¢
Late February	Sell Cash Corn @ \$4.10	Buy 1 March Corn @ \$4.40	Actual: - 30¢
Results	+ 40¢	- 40¢	0.00



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Hedging Example (market higher)



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Results	+ 40¢	- 40¢	0.00

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$$\$4.00 \quad - \quad 0.30 \quad = \quad \$3.70$$

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$$\$4.10 \quad - \quad 0.40 \quad = \quad \$3.70$$



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Hedging Example (market higher)



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November	Goal: \$3.70 Cash Corn	Sell 1 March Corn @ \$4.00	Estimated: - 30¢
Late February	Sell Cash Corn @ \$4.10	Buy 1 March Corn @ \$4.40	Actual: - 30¢
Results	+ 40¢	- 40¢	0.00

Net Hedge (without commissions and interest cost)

$$1. \text{ Original futures less actual basis} = \text{net hedge}$$

$$\$4.00 \quad - \quad 0.30 \quad = \quad \$3.70$$

$$2. \text{ Cash sale to buyer +/- futures gain/loss} = \text{net hedge}$$

$$\$4.10 \quad - \quad 0.40 \quad = \quad \$3.70$$



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Key points:

Futures Hedging



- The cash market, futures market and basis can be tracked in futures hedges.
- A futures hedge works in lower and higher markets.
- A Hedge-To-Arrive cash contract is similar to futures contract hedging.

