

Commodity Options Market

A market in which producers purchase the “opportunity” but not the “obligation” to sell or buy a commodity at a certain price anytime during a pre-specified period of time.

INSURANCE

INSURANCE

Substitution of a small but certain loss (insurance premium) for the possibility of a large uncertain loss.

Two Options Markets

- Insuring a selling price
 - PUT OPTION

 - Insuring a buying price
 - CALL OPTION
- In both cases the underlying commodity is a futures contract, not the physical commodity

PUT OPTION

A put option gives the holder the right, but not the obligation, to sell a specific futures contract at a specific price

“To put it on them”

Call Option

A call option gives the holder the right, but not the obligation, to buy a specific futures contract at a specific price

“To call from them”

OPTIONS TERMS

- Strike Price – price at which the futures contract can be bought or sold.
- Premium – cost of the option. The buyer loses the premium regardless of whether the option is used.

Factors Affecting Option Premiums

- Difference between the strike price of the option and the price of the underlying commodity (futures contract)
 - INTRINSIC VALUE
- Length of time to option expiration
 - TIME VALUE

INTRINSIC VALUE

“positive” difference between the strike price and the underlying commodity price

- FOR A PUT OPTION – strike price exceeds futures price
- FOR A CALL OPTION – strike price below futures price

Options are said to be:

In the money – have intrinsic
value

Out of the money – have no
intrinsic value

TIME VALUE

- Portion of option premium resulting from length of time to expiration. Expiration is the date on which the rights of the option holder expire.
- Usually decreases with length of time until expiration, but does increase as price volatility of the underlying futures contract increases.

$$\begin{array}{r}
 \text{INTRINSIC VALUE} \\
 + \quad \text{TIME VALUE} \\
 \hline
 \text{OPTION PREMIUM}
 \end{array}$$

OPTIONS WORKSHEET
 (put option to protect sales price)

STRIKE PRICE	_____
+ EXPECTED BASIS	_____
- PREMIUM	_____
- COMMISSION	_____
= EXPECTED MIN NET	
SELLING PRICE	_____

What Happens If?

- July Futures are \$4.35
- Basis in June is expected to be -0.39
- July puts are:
 - \$4.40 strike 17cents
 - \$4.30 strike 11cents
 - \$4.20 strike 7 cents

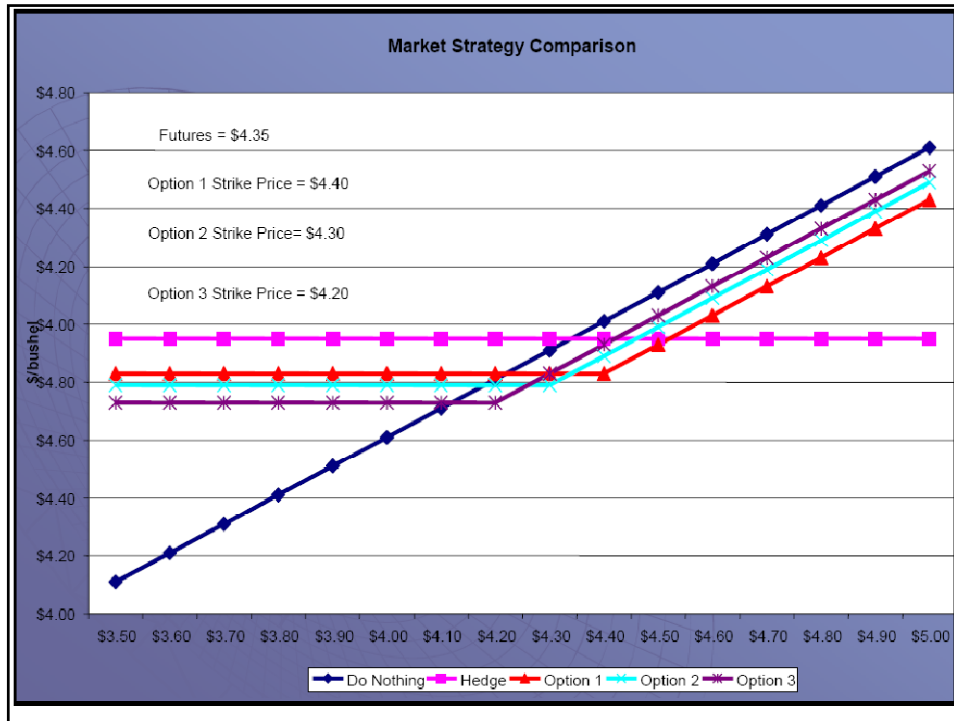
	Hedge	Option 1	Option 2	Option 3
Price	\$4.35	\$4.40	\$4.30	\$4.20
Basis	-0.39	-0.39	-0.39	-0.39
Premium		-0.17	-0.11	-0.07
Comm.	-.01	0-.01	0-.01	-0.01
Exp Min Price	\$3.95	\$3.83	\$3.79	\$3.73

Prices fall 50 cents
Futures = \$3.85

	Hedge	Option 1	Option 2	Option 3
Sell Futures	\$4.35	\$4.40	\$4.30	\$4.20
Buy Futures	-\$3.85	-\$3.85	-\$3.85	-\$3.85
Premium & Comm	-\$0.01	-\$0.18	-\$0.12	-\$0.08
Net Futures	+\$0.49	+\$0.37	+\$0.33	+0.27
Sell Cash	\$3.46	\$3.46	\$3.46	\$3.46
Net Price	\$3.95	\$3.83	\$3.79	\$3.73

Prices rise 50 cents
futures = \$4.85

	Hedge	Option 1	Option 2	Option 3
Sell Futures	\$4.35			
Buy Futures	-\$2.85			
Premium & Comm	-\$0.01	-\$0.18	-\$0.12	-\$0.08
Net Futures	-\$0.51	-\$0.18	-\$0.12	-\$0.08
Sell Cash	\$4.46	\$4.46	\$4.46	\$4.46
Net Price	\$3.95	\$4.28	\$4.34	\$4.38



OPTIONS WORKSHEET
 (call option to protect a buy price)

STRIKE PRICE _____

+ EXPECTED BASIS _____

+ PREMIUM _____

+ COMMISSION _____

= EXPECTED MAX NET
 PURCHASE PRICE _____

What Happens If?

- July Futures are \$4.35
- Basis in June is expected to be -0.19
- July calls are:
 - \$4.50 strike 7cents
 - \$4.40 strike 11cents
 - \$4.30 strike 16 cents

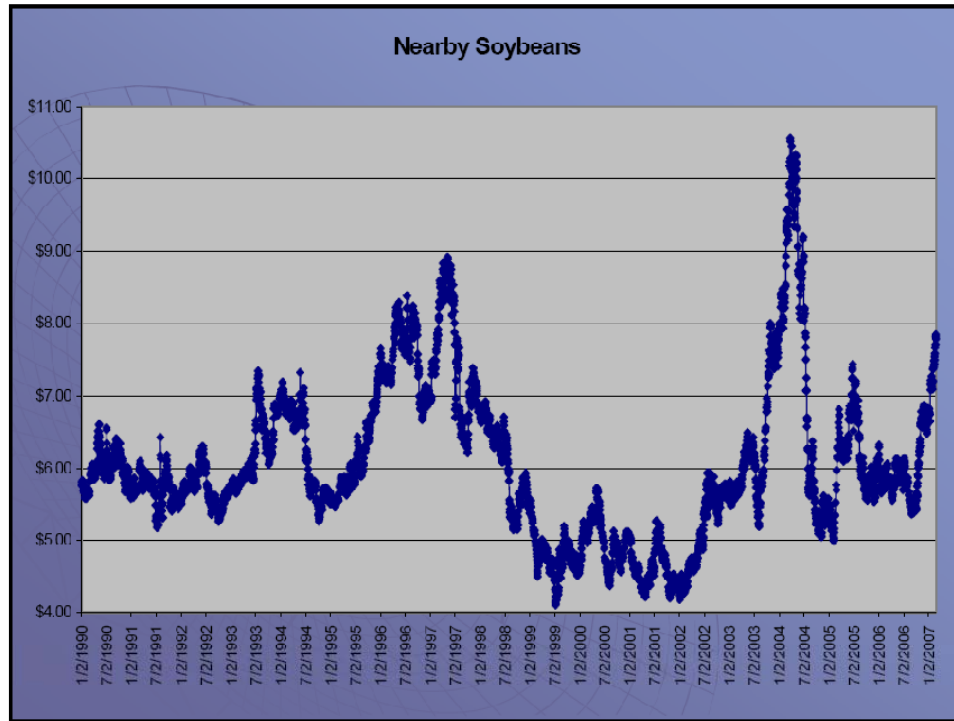
	Hedge	Option 1	Option 2	Option 3
Price	\$4.35	\$4.40	\$4.30	\$4.20
Basis	-0.19	-0.19	-0.19	-0.19
Premium		+0.07	+0.12	+0.20
Comm.	+0.01	+0.01	+0.01	+0.01
Exp Max Price	\$4.17	\$4.29	\$4.24	\$4.22

Prices rise 50 cents
Futures = \$4.85

	Hedge	Option 1	Option 2	Option 3
Buy Futures	\$4.35	\$4.40	\$4.30	\$4.20
Sell Futures	\$4.85	\$4.85	\$4.85	\$4.85
Premium & Comm	\$0.01	\$0.08	\$0.13	\$0.21
Net Futures	+\$0.49	+\$0.37	+\$0.42	+0.44
Buy Cash	\$4.66	\$4.66	\$4.66	\$4.66
Net Price	\$4.17	\$4.29	\$4.24	\$4.22

Prices falls 50 cents
futures = \$3.85

	Hedge	Option 1	Option 2	Option 3
Buy Futures	\$4.35			
Sell Futures	\$3.85			
Premium & Comm	\$0.01	-\$0.08	-\$0.13	-\$0.21
Net Futures	-\$0.51	-\$0.08	-\$0.13	-\$0.21
Buy Cash	\$3.66	\$3.66	\$3.66	\$3.66
Net Price	\$4.17	\$3.74	\$3.79	\$3.83



Option Buyers

- Right, but not the obligation to take a futures position at the strike price.
- Pay the option premium regardless of whether the right is used.
- Owners of call options
 - Right to buy a futures contract at the strike price
- Owners of put options
 - Right to sell a futures contract at the strike price

Options buyers face limited risk (can only lose the premium) and unlimited opportunities. As such, no margin requirements are needed.

Selling Options

- Option sellers collect the premium.
- In return, they take on the obligation to facilitate an option buyers use of the right the option allows.
- Sellers of Puts:
 - Must buy a futures contract at the strike price if the option owner exercises
- Sellers of Calls:
 - Must sell a futures contract at the strike price if the option owner exercises

Options sellers face unlimited risk and limited profit opportunities (can only collect the premium). Margin accounts must be maintained, including making margin calls. The premium cannot be taken from the margin account until the option is offset, exercised, or expires.

Fortenbery Rules of Thumb

- Never pay for intrinsic value in a price risk management program.
- Convince yourself that the futures market has a good chance to increase by TWICE the premium before buying an option.
- Only use options as a temporary substitute for a hedge or forward cash contract.