Using Options for Price Risk Management

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Mountains & Minds

Futures, Options & Obligations

- Terminology can be confusing
 - Options on Feeders, Wheat, or Corn
 - December option
- Options are rights but not obligations to buy or sell a futures contract
 - Put = Sell and Call = Buy
- Futures contract carries a joint obligation for the buyer and seller
 - Seller must make delivery &The buyer must take delivery <u>OR</u>
 - Offset contract



Discussion of Terms

- CBOT Wheat Futures 12-1-10, \$7.42
- CBOT Put Strike Prices and Premiums, 12-1-2010

Strike	Session									Pr.Day	
эшке	Open	High	Low	Last	Time	Sett	Chg	Vol	Sett	OpInt	Date
future	$743^{-2}/_{8}$	745 ⁶ / ₈	739	742	Nov 26, 16:00	742	3	1044	739	16166	
600	-	23 4/8	23 4/8	23 4/8	Nov 26, 16:43	23 4/8	-2 ³ / ₈	1	25 7/8	1	
660	128	45	45	45	Nov 26, 16:43	45	-3 ³ / ₈	1	48 3/8	1	
680	5-2	54 1/8	54 1/8	54 1/8	Nov 26, 16:43	54 1/8	-3 4/8	1	57 5/8	1	
700	120	64	64	64	Nov 26, 16:43	64	-3 6/8	1	67 6/8	24	
730	-	80 5/8	80 5/8	80 5/8	Nov 26, 16:43	80 5/8	-4	1	84 5/8	1	
740		86 4/8	86 4/8	86 4/2	Nov 26, 16:43	86 4/8	-4 ¹ / ₈	1	90 5/8	1	



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Obligations With Options

- Depends on whether you are <u>buying</u> or <u>selling</u> options
- Put Option is the right but not the obligation to sell an underlying futures contract.
 - You can buy or sell put options
- <u>Call Option</u> is the right <u>but not the obligation</u> to <u>buy</u> and underlying futures contract.
 - You can buy or sell call options
- There is no joint obligation with options



Buying vs Selling Options

- For every buyer, there is a seller.
- The typical producer will most always buy an option
- The buyer of an option has:
 - The right to exercise the option but
 - The seller can not force him to exercise the option.
- Buying Put = Right to sell a futures contract
 - Put = Sell (PS)
 - A true hedger wants equal and opposite positions in the cash and futures market.



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Put = Right to Sell Futures = Short Position

- But you typically buy a put
 - -Buy a right to sell a futures contract
 - -Put = Sell (PS)
- Protection from falling prices
- For producers of a commodity
 - -Small grains, calves

Remember PS => (Put=Sell)



Call = Right to Buy Futures = Long Position

- You typically buy a call
 - Buy a right to buy a futures contract
 - -Call = Buy (CB)
- Protection from rising prices
- For consumers of a commodity
 - -Feeders that use grain
 - Feeders that purchase calvess as an input

Remember CB => (Call=Buy)



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Strike Price and Premiums

- Options are bought and sold at a specified <u>strike</u> price
 - Set by Exchanges and willingness of "option writer"
- The premium paid for the option is set by daily trading at each exchange
 - Very similar to insurance premium
- Once you pay the premium and transactions cost (brokerage fees), you have no more costs associated with an option contract.
 - You either Exercise/Offset or the option expires worthless



Value of an Option

- Options derive their value from the strike price relative to the futures price for a specific commodity and time frame
- The premium paid for a particular strike price is set through daily bidding
- The premium established depends on how high or low the bidders thinks the futures price will get relative to the strike price.
- Value also depends on time to expiration and volatility of the market for a specific commodity



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In the Money or Out of the Money

- In the money = An option who's strike price, if exercised, would give positive returns
- Out of the money = a strike price that if exercised would not produce positive returns
- <u>Puts</u> are in the money when strike price greater than futures
- <u>Calls</u> are in the money when strike price less than futures
- At the money (Strike price = Futures price)



Value of In the Money Option

- Has both intrinsic value and time value
 - Intrinsic value is the positive return it would generate if exercised
 - <u>Time value</u> is the value due to the chance it will change in value between now and when it is exercised
- Why would anyone want to buy an out of the money option?
 - Need to manage risk
 - Price expectations



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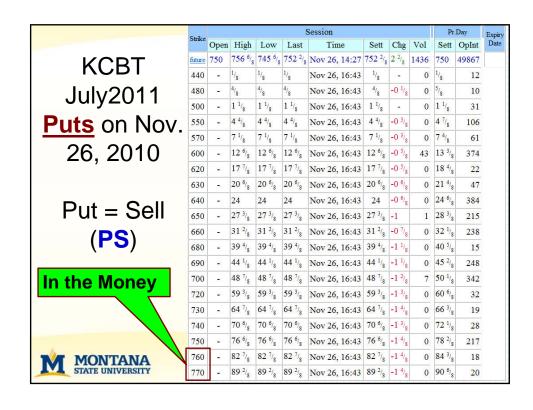
Mechanics of an Option

- How do you capture value?
- Exercise the option
 - Take the underlying position in the futures market
 - Once in the futures market, you offset the futures contract at the current futures price.
- Offset the option by selling (or buying) it back
 - The premium at the time the option is offset should reflect its value.
 - What happens if it does not?



KCBT Sept 2011 Puts on 11-26-10 Session Pr.Day Expiry Strike Sett OpInt Open High Low Last Time Sett Chg Vol 761 ⁶/₈ 763 ⁶/₈ 752 ⁶/₈ 759 ⁶/₈ Nov 26, 14:27 759 ⁶/₈ 3 ⁶/₈ 475 756 8120 66 ⁴/₈ | 66 ⁴/₈ | 66 ⁴/₈ | Nov 26, 16:43 | 66 ⁴/₈ | -1 ⁶/₈ 720 Puts are In The Money when Strike price is > the Current Futures Price, i.e. why would I exercise the right to sell at \$7.20 when the Futures are trading at \$7.60 **MONTANA** Mountains & Minds

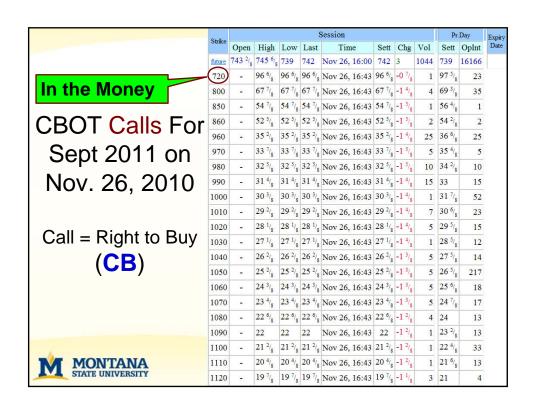
Establishing A Floor Price Using a Put Initial Conditions: • KCBT <u>Puts</u> Strike Price \$7.20 • Plus Basis HRW, \$-.58 • Minus Trading cost per bushel \$.02 • Minus Premium Cost for Put \$.67 • Estimated Floor Price Cash \$5.93

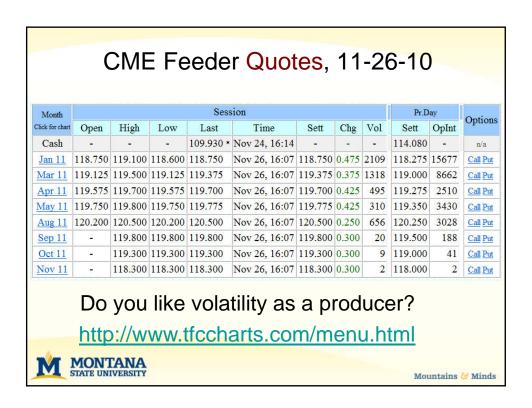


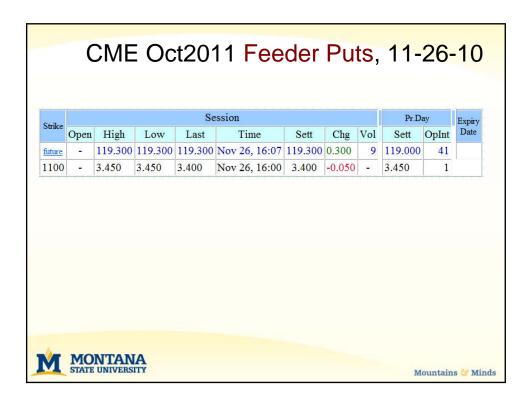


		KC	ВТ	July	/2011 <u>C</u>	alls	, 1	1-2	6-10)	
Strike	Session									Pr.Day	
	Open	High	Low	Last	Time	Sett	Chg	Vol	Sett	OpInt	Date
future	750	756 ⁶ / ₈	745 6/8	$752^{-2}/_{8}$	Nov 26, 14:27	752 2/8	2 2/8	1436	750	49867	
600	-	164 3/8	164 3/8	164 ³ / ₈	Nov 26, 16:43	164 3/8	1 5/8	0	162 6/8	29	
660	=	123	123	123	Nov 26, 16:43	123	1 2/8	0	121 6/8	68	
680	=	111 4/8	111 4/8	111 4/8	Nov 26, 16:43	111 4/8	1 2/8	0	110 2/8	6	
700	- /	101	101	101	Nov 26, 16:43	101	1 1/8	0	99 7/8	184	
750	3	79	70	79	Nov 26, 16:43	79	0 6/8	0	78 2/8	272	
770	-	71 4/8	71 4/8	71 4/8	26, 16:43	71 4/8	20.00	0	70 7/8	13	
780	-	68 1/8	68 1/8	68 1/8	Nov 26, 16:45	01/	0 5/8	0	67 4/8	22	
800	-	61 6/8	61 6/8	61 6/8	Nov 26, 16:43	61 In	the	 _ Mc	oney	240	
820	-	56	56	56	Nov 26, 16:43	5	. 8		511C y	16	
850	=	48 5/8	48 5/8	48 5/8	Nov 26, 16:43	48 5/8	0 3/8	0	48 2/8	425	
860	-	46 3/8	46 3/8	46 3/8	Nov 26, 16:43	46 3/8	0 2/8	3	46 1/8	174	
900	-	38 6/8	38 6/8	38 6/8	Nov 26, 16:43	38 6/8	0 2/8	0	38 4/8	742	
1000	=	25 ⁵ / ₈	25 5/8	25 5/8	Nov 26, 16:43	25 5/8	_	0	25 5/8	229	

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Option Sellers (Writer)

- You are exposed to added risk if you are an option seller
 - Margin calls just like the futures market
- A person buying the option you sold can force you to provide the underlying position in the futures market.
 - Margin account balance used to cover your losses
- Can sell Puts or Calls
 - Sell right to sell = put (PS)
 - Sell right to buy = call (CB)



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Futures, Options, Margin Accounting- Use Slideshow Mode

