

Risk Management

How Buyers and Sellers Use the Futures Market

Dennis DeLaughter
VantageRM.com

dennis@pfmco.com

Dr. Thomas Wynn
CoastalWarehouse.com

Thomas.wynn@coastalrice.com

CLASS ON FUTURES

Introduction

- Opening Comments –
- The Futures Market
 - Knowing about it and how to use it, is for every market participant
 - Trading in the futures market is NOT for every market participant
 - Making the Futures Work does NOT require actually being in the futures market

Introduction

- HOWEVER –
- If you are going to use the futures, you need to know how to use it as a tool.

Introduction

- Market Action is Always Two-Fold
- When? - Timing is everything.
- How? - Once the decision is made

Introduction

This Course is about HOW to sell,

Not WHEN to sell!!!

Introduction

- **Selling - Redefined**

- Defined as exchanging title
- However, strategies exist where title doesn't change. It is protecting value.
- Today we will show HOW to sell without exchanging title of the physical
- Protecting Value

Making Futures Make Sense...

The First Futures Question...

How do you sell something you don't have?

By promising to own it in the future!!!

Fundamental Terminology

“The key to understanding the futures market is to understand the basic terminology.”

Basic Terminology

- **FUTURES CONTRACT** - A standardized contract for the sale of a specific commodity at a FUTURE date.
- Size (Bu or Cwt)
- Grade (US No 2)
- Date (A specific month in the future)
- Location (Delivery points)
- All are set by the Exchange

Basic Terminology

- **FUTURES CONTRACT** - A standardized contract for the sale of a specific commodity at a FUTURE date.
- **LONG** - When in a position to profit when an increase in price occurs.
- **LONG FUTURES** – When having bought futures contracts.

Basic Terminology

- **SHORT** - When in a position to profit when a decrease in price occurs.
-
- **SHORT FUTURES** - When having bought futures contracts.
- **HEDGED** - When unaffected by any price movement.

The Four Market Participants

1) Producer

Naturally Long

2) Commercial

Naturally Hedged

3) Speculator

Long or Short

4) Consumer

Naturally Short

Basic Terminology...continued

- **BASIS** - Difference between cash market and futures market.

Basic Terminology...continued

***WHAT DETERMINES HOW TO SELL FOR
THE FARMER IS THE BASIS.***

BASIS IS THE KEY TO FARMER SELLING.

There are two questions when it comes to selling or buying.

When and How??

For today....

We are only interested in How to Sell !!!

Basic Terminology...continued

- ***BASIS IS THE KEY TO FARMER SELLING***
- Here is the general rule:
- If the basis is high – Farmer - Sell in the Cash Market – (Can re-own using paper)
- If the basis is low - Sell in the Futures Market and wait for a better basis level.

Basic Terminology...continued

- Exercise - Basis calculations -
- In 2021 in Texas, the price of cash Rice is bid by buyers at \$13.50 and November Rice futures are trading at \$12.90. What is the basis? _____
- If a producer thought he could get a +90-cent basis, what cash price would he receive for his rice if they hedged using futures at \$12.90 and is proven correct?

Basic Terminology...continued

- Exercise - Basis calculations -
- In 2021 in Texas, the price of **cash** Rice is bid by buyers at **\$13.50** and November Rice **futures** are trading at **\$12.90**. What is the basis? _____
- If a producer thought he could get a +90-cent basis, what cash price would he receive for his rice if they hedged using futures at \$12.90 and is proven correct?

Basic Terminology...continued

- Exercise - Basis calculations -
- In 2021 in Texas, the price of **cash** Rice is bid by buyers at **\$13.50** and November Rice **futures** are at trading at **\$12.90**. What is the basis? **+60 Cents**
- If a producer thought he could get a +90-cent basis, what cash price would he receive for his rice if they hedged using futures at \$12.90 and is proven correct?

Basic Terminology...continued

- Exercise - Basis calculations -
- In 2021 in Texas, the price of **cash** Rice is bid by buyers at **\$13.50** and November Rice **futures** are at trading at **\$12.90**. What is the basis? **+60 Cents**
- If a producer thought he could get a +90-cent basis, what cash price would he receive for his rice if they hedged using futures at \$12.90 and is proven correct?
\$13.80

MINIMIZING RISK - “How”

CONCEPT OF HEDGING - “Reducing Unacceptable Risk (for Seller or Buyer)”

For this section we will use Corn as our crop to develop the HEDGING concept.

On June 9th, a Mid-West corn farmer has planted 1000 acres and believes that he will yield 200 bu/acre or a total of 200,000 bushels. Believing that the market is going lower but not liking the +10-cent basis, he decides to hedge (sell) his entire crop using futures. December Futures are trading at \$6.00. He places an order to sell 200,000 December Corn at \$6.00 and the Order is filled.

Date	Cash	Futures
6/9/21		Sell Dec @6.00

EXAMPLE 1: - We will do the math for you. Learn the concept.

Example 1 – Page 3

On October 10th, he starts cutting his corn and sells it in the cash market to a commercial buyer at \$5.50/ bu. Immediately after selling the corn to the buyer, he calls his broker and tells him to take off the hedge by buying back his sold or “short” futures position. December Futures are trading at \$5.20.

Date	Cash	Futures
6/9/21		Sell Dec @6.00
10/10/21	Sells @ \$5.50	Buys Dec @5.20

Date	Cash	Futures
6/9/21		Sell Dec @6.00
10/10/21	Sells @ \$5.50	Buys Dec @5.20

He started the marketing process by selling Futures at \$6.00 and he closed the transaction by buying it @ 5.20.

What was his return per bushel from the hedge? $\$6.00 - \$5.20 = \underline{\$0.80}$

What was his final price received for his Corn? $\$5.50 + \$0.80 = \underline{\$6.30}$

So, in your opinion, did the hedge work? Yes _____ No _____

Example 2 – Page 4

What would have happened if the producer had been wrong, and the price went the other way?

Let us change the problem to say that there was an August drought in the Midwest and that prices went up instead of down. On October 10th, the futures price is at \$7.00, and he sells his cash to a commercial at \$7.30 on the turn row.

Your turn. Use the workspace below to work out your answers.

Date	Cash	Futures
6/9/21		Sell Dec @6.00
10/10/21	Sells @ \$7.30	Buys Dec @7.00

Date

Cash

Futures

6/9/21

Sell Dec @6.00

10/10/21

Sells @ \$7.30

Buys Dec @7.00

What was his return per bushel from the hedge? _____

What was his final price received for his Corn? _____

Did the hedge work? Yes _____ No _____

Date	Cash	Futures
6/9/21		Sell Dec @6.00
10/10/21	Sells @ \$7.30	Buys Dec @7.00

What was his return per bushel from the hedge? **-\$1.00**

What was his final price received for his Corn? **\$6.30**

Did the hedge work? Yes _____ No _____

Date	Cash	Futures
------	------	---------

6/9/21		Sell Dec @6.00
10/10/21	Sells @ \$7.30	Buys Dec @7.00

What was his return per bushel from the hedge? **-\$1.00**

What was his final price received for his Corn? **\$6.30**

Did the hedge work? Yes **XXX** No _____

Remember...

There is a When and a How to sell...

For today....

We are only interested in the How !!!

Look back at example #1 and write down the final price he received in that example - \$_____.

Now write down the answer you figured (*or the correct one if you didn't get it right*) for example #2. -- \$_____

Can you explain the difference? (*Hint - it starts with "H"*)

Look back at example #1 and write down the final price he received in that example -\$6.30

Now write down the answer you figured (*or the correct one if you didn't get it right*) for example #2. -- \$6.30

Can you explain the difference? (*Hint - it starts with "H"*)

Basic Terminology

- **SHORT** - When in a position to profit when a decrease in price occurs.
-
- **SHORT FUTURES** - When having bought futures contracts.
- **HEDGED** - When unaffected by any price movement.

Example 3 – Page 5

On May 10th a corn farmer decides to hedge his production on 1000 acres of corn. He expects a yield of 200 bu./acre or 200,000 bushels. He chooses to use December futures as the contract to put his hedge on, and it is trading at \$6.10. On September 30th he gets an offer on his expected production equal to \$5.20 and December futures are trading at \$5.00. He decides to take the bid and close his hedge by buying in the contracts which he sold to place his hedge.

What was his return on the futures hedge? _____/bu

What was his final selling price for his corn? _____/bu

Example 3 – Page 5

Date	Cash	Futures
5/10/21		Sell Dec @6.10
10/30/21	Sell \$5.20	Buy Dec @5.00

What was his return on the futures hedge? _____/bu

What was his final selling price for his corn? _____/bu

Did the hedge work? *(You better not answer this wrong...)* Yes ___ No

Example 3 – Page 5

Date	Cash	Futures
5/10/21		Sell Dec @6.10
10/30/21	Sell \$5.20	Buy Dec @5.00

What was his return on the futures hedge? **\$1.10/bu**

What was his final selling price for his corn? _____/bu

Did the hedge work? *(You better not answer this wrong...)* Yes ___ No

Example 3 – Page 5

Date	Cash	Futures
5/10/21		Sell Dec @6.10
10/30/21	Sell \$5.20	Buy Dec @5.00

What was his return on the futures hedge? **\$1.10/bu**

What was his final selling price for his corn? **\$6.30 /bu**

Did the hedge work? *(You better not answer this wrong...)* Yes ___ No

Example 4 – Page 5

On May 10th, a corn farmer decides to hedge some of his production on 1000 acres of corn. He expects a yield of 200 bu./acre or 200,000 bushels. He chooses to use December futures as the contract to hedge with and it is trading at \$6.10. But instead of selling 40 contracts (200,000 bushels.) he sells half or 100,000 bu. On May 20th he decides to sell another 50,000 bu (25%) and the price is at \$5.50. On June 9th he sells the final 50,000 bu at \$5.95. On September 30th he gets an offer for his expected production equal to \$5.20 and December futures are trading at \$5.00. He decides to take the bid and close his entire hedge by buying in all 200,000 bushels or 40 contracts.

What was his return on the futures hedge? _____/bu

What was his final selling price for his corn? _____/bu

Example 4 – Page 5

Date	Cash	Futures
5/10/21		Sell Dec @6.10 – 50%
5/20/21		Sell Dec @5.50 – 25%
6/09/21		Sell Dec @5.95 – 25%
10/30/21	Sell \$5.20	Buy Dec @5.00 – 100%

What was his return on the futures hedge? _____/bu

What was his final selling price for his corn? _____/bu

Did the hedge work? Yes ___ No

Example 4

+\$6.10

+\$6.10

+\$5.50

+\$5.95

= \$23.65

\$23.65/4 =

\$5.91 ¼ Avg Sale

Sold Futures @\$5.91 ¼

Bought Them @\$5.00

Futures Gain = \$.91 1/4

Example 4

Sold @	Bought@	Gain	% of Crop	Crop Gain
+\$6.10	\$5.00	\$1.10	50%	\$.55
+\$5.50	\$5.00	\$.50	25%	\$.125
+\$5.95	\$5.00	\$.95	25%	<u>\$.2375</u>
				\$.9125

Example 4 – Page 5

Date	Cash	Futures
5/10/21		Sell Dec @6.10 – 50%
5/20/21		Sell Dec @5.50 – 25%
6/09/21		Sell Dec @5.95 – 25%
10/30/21	Sell \$5.20	Buy Dec @5.00 – 100%

What was his return on the futures hedge? _____/bu

What was his final selling price for his corn? _____/bu

Did the hedge work? Yes ___ No

Example 4 – Page 5

Date	Cash	Futures
5/10/21		Sell Dec @6.10 – 50%
5/20/21		Sell Dec @5.50 – 25%
6/09/21		Sell Dec @5.95 – 25%
10/30/21	Sell \$5.20	Buy Dec @5.00 – 100%

What was his return on the futures hedge? **\$.91 ¼ /bu**

What was his final selling price for his corn? _____/bu

Did the hedge work? Yes ___ No

Example 4 – Page 5

Date	Cash	Futures
5/10/21		Sell Dec @6.10 – 50%
5/20/21		Sell Dec @5.50 – 25%
6/09/21		Sell Dec @5.95 – 25%
10/30/21	Sell \$5.20	Buy Dec @5.00 – 100%

What was his return on the futures hedge? **\$.91 ¼ /bu**

What was his final selling price for his corn? **\$6.11 ¼ /bu**

Did the hedge work? Yes ___ No

Example 5 – Page 7

On May 10th, a rice farmer believes that the risk in the market is unacceptable. With the cash market at \$13.80 and September futures is at \$14.05, he decides to place a hedge on his entire production using September futures and places the hedge at \$14.05. On June 17th the farmer has been proven right and the market is down to \$12.75; however, now he believes that the risk of lower prices has passed and is acceptable, but he still does not like the basis, so he buys back his entire hedge at \$12.75. Once again, he is proven correct and the market rallies to \$13.50/cwt but at that level he views the risk to once again be unacceptable, so he replaces his hedge (sells) on his entire crop at \$13.50 once again using September futures. This time he is wrong on “when” to sell and the market continues moving higher. On August 20th he likes the basis and decides to sell his cash crop at \$15.00 in the cash market and removes his Hedge at \$14.20 cents.

Example 5 – Page 7

Why would the farmer use futures to sell and not the cash market?

What was his basis on May 10th ? _____

What was his basis when he prices his cash? _____

What was his return per cwt when only looking at the futures trades?

What was his final price that he received on rice crop? _____

Did his strategy work? Yes _____ No _____

Example 5 – Page 7

Why would the farmer use futures to sell and not the cash market?

He doesn't like the basis

What was his basis on May 10th ? _____

What was his basis when he prices his cash? _____

What was his return per cwt when only looking at the futures trades?

What was his final price that he received on rice crop? _____

Did his strategy work? Yes _____ No _____

Example 5 – Page 7

Why would the farmer use futures to sell and not the cash market?

He doesn't like the basis

What was his basis on May 10th ? **\$13.80 - \$14.05 = (-\$.25)**

What was his basis when he prices his cash? _____

What was his return per cwt when only looking at the futures trades?

What was his final price that he received on rice crop? _____

Did his strategy work? Yes _____ No _____

Example 5 – Page 7

Why would the farmer use futures to sell and not the cash market?

He doesn't like the basis

What was his basis on May 10th ? **\$13.80 - \$14.05 = (-\$.25)**

What was his basis when he prices his cash? **\$15.00-\$14.20=+\$.80**

What was his return per cwt when only looking at the futures trades?

What was his final price that he received on rice crop? _____

Did his strategy work? Yes _____ No _____

Example 4 – Page 5

Date	Cash	Futures
5/10/21		Sell Sept @14.05
6/17/21		Buy Sept @12.75
		Gain - \$1.30
?????		Sell Sept @\$13.50
8/20/21	Sells @15.00	Buy Sept @\$14.20
		Loss – (-\$.70)

What was his return per cwt when only looking at the futures trades?
+\$.60 /Cwt

What was his final price that he received on rice crop?
\$15.60/ Cwt

Example 5 – Page 7

Why would the farmer use futures to sell and not the cash market?

He doesn't like the basis

What was his basis on May 10th ? **\$13.80 - \$14.05 = (-\$.25)**

What was his basis when he prices his cash? **\$15.00-\$14.20=+\$.80**

What was his return per cwt when only looking at the futures trades?
+.60/Cwt

What was his final price that he received on rice crop? **+\$15.60/Cwt**

Did his strategy work? Yes _____ No _____

Example 6 – Page 8

On May 10th , 2021, a rice buyer in Central America is looking at his cost to acquire rice in March of 2022. He believes that in June of 2021, the price of rice will follow the seasonal tendency to move lower; however, based on lower acres in 2021 and his belief there will be increased competition for US rice in the 21-22 crop year, he decides that if the Market breaks into the end of June, he will protect some of his needed inventory.

Example 6 – Page 8

On May 10th, 2021, a rice buyer in Central America is looking at his cost to acquire rice in March of 2022. He believes that in June of 2021, the price of rice will follow the seasonal tendency to move lower; however, based on lower acres in 2021 and his belief there will be increased competition for US rice in the 21-22 crop year, he decides that if the Market breaks into the end of June, he will protect some of his needed inventory.

He is proven correct and in June, November futures have fallen \$1.60/cwt or \$35.27 per metric ton. He decides it is too early to own cash inventory but believes there is a \$50 to \$60/ton upside risk in the futures market and little risk in an adverse basis change so he decides to protect some of his purchases.

Example 6 – Page 8

He needs the protection in March, but March futures are not trading so he decides he will buy the protection using November futures and over time will adjust (roll) his position into the March futures.

On June 17th with the November futures is at \$12.80, he decides to place a hedge on part of his March needs and buys his protection at that level.

On October 10th , November Futures are trading at \$13.20, with March futures, which now has enough volume to use, trading at \$13.70. The buyer decides it is time to move or roll from November to March which was his long-term objective.

Example 6 – Page 8

On February 1st, 2022, he buys his cash needs from a supplier and removes the hedge with March trading at \$14.50.

(Notice, no cash prices are used in this example...we want to just focus on the process.)

What was his gain using futures on a cwt basis? _____

What was his gain using futures on a metric ton basis? _____

If back on June 17th, he bought protection on only 25% of what he was going to buy and his cash purchase was at \$340/MT NOLA, what was the cash price paid on 100% of what he bought? _____

Example 6 – Page 8

Date	Cash	Futures
6/17/21		Buy Nov @\$12.80
10/10/21		Sell Nov @\$13.20
		Gain - +\$.40
10/10/21		Buy Mar @\$13.70
2/01/22		Sell Mar @\$14.50
		Gain – +\$.80

What was his gain using futures on a cwt basis?

+\$1.20/Cwt

What was his gain using futures on a metric ton basis?

+\$26.46/MT

Example 6 – Page 8

On February 1st, 2022, he buys his cash needs from a supplier and removes the hedge with March trading at \$14.50.

(Notice, no cash prices are used in this example...we want to just focus on the process.)

What was his gain using futures on a cwt basis? +\$1.20/Cwt

What was his gain using futures on a metric ton basis? +\$26.46/MT

If back on June 17th, he bought protection on only 25% of what he was going to buy and his cash purchase was at \$340/MT NOLA, what was the cash price paid on 100% of what he bought? _____

Example 6 – Page 8

On February 1st, 2022, he buys his cash needs from a supplier and removes the hedge with March trading at \$14.50.

(Notice, no cash prices are used in this example...we want to just focus on the process.)

What was his gain using futures on a cwt basis? **+\$1.20/Cwt**

What was his gain using futures on a metric ton basis? **+\$26.46/MT**

If back on June 17th, he bought protection on only 25% of what he was going to buy and his cash purchase was at \$340/MT NOLA, what was the cash price paid on 100% of what he bought? **\$333.38/MT**

Section II – MINIMIZING RISK

“How” Using Options

Concept of Hedging –

The reduction of Unacceptable Risk with Options

Basic Option Terminology

OPTION - Conveys the right, but not the obligation to purchase or sell a futures contract at a certain strike price.

STRIKE PRICE - A specific price level set by the exchange.

PREMIUM - The cost of the option usually stated in cents.

Basic Option Terminology

BUY A CALL - A call is the right, but not the obligation to buy a futures position at the striking price.

BUY A PUT - A put is the right, but not the obligation to sell a futures contract at the striking price.

SELLING A CALL - The call seller promises to deliver a long futures position to the call buyer anytime during the exercise period.

SELLING A PUT - The put writer promises to deliver a short position to the put buyer at the striking price anytime during the exercise period.

Major Points Regarding Options:

1. You should think of this as another contract separate and yet connected to its underlying futures market.
2. By definition, options are a right to a position in the futures contract, but as such, it is a right that may be declined. In other words, you do not have to take a position later unless you want to.

Major Points Regarding Options:

3. There are two types of options. A “Put” and a “Call”. A “Put” is the option to be “short” or “sold” in the underlying futures account and the “Call” is the option to be “long” or to have “bought” the underlying futures contract.
4. If you buy a “Call” when opening a position, to offset it you would sell the “Call”. “Puts” and “Calls” are two different contracts and only connected because they are made on the same underlying contract. They never offset each other in closing a position.

Major Points Regarding Options:

5. You can select at what price you want the option “Put” or “Call” based upon. This is called the “strike” price. The different “strike” prices are determined by the exchange. (In the case of rice, the Chicago Board of Trade)
6. The amount you pay is called a “premium” and that is the most you can lose. This means your risk is known.
7. If the buyer wishes to take the option he has bought and receive a contract in the futures, this is called “exercising the option”.

Major Points Regarding Options:

8. If an option is “in-the-money” this refers to the fact that if the option was exercised there would be a profit in the newly acquired position.
9. If an option is “out-of-the-money” this refers to the fact that if the option was exercised there would not be a profit in the position and in most cases would not be exercised.
10. An “at-the-money” option means that the futures price is trading exactly equal to the “strike” price.

The following is a table of listed strike prices and premiums. Notice the prices used are as they were back in 2016. Again, we want to understand the concept before using reality. For this example, the futures price of rice for November is at \$9.40. The date is August 5th, 2016th.

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

We will take a strike price and go through it. Since the producer hedging his crop wants to be “short” futures if the market drops but not the obligated to be sold if the market goes up, the “Put” side above will be used. We will look at the three categories mentioned before.

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

“In the Money” - Using “Puts” any strike price ABOVE the current futures price will be an “in-the-money” option. If the \$9.60 “Put” was purchased and the option was exercised, with the futures at \$9.40 the position would immediately have a 20-cent profit. $\$9.60$ (Put value) - $\$9.40$ (futures) = .20

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

This brings us to two more important definitions regarding options. Notice that in the table the option is trading for 38 cents yet if exercised, the position would only have a 20-cent profit. The amount of money that the option is “in-the-money” is referred to as its “*intrinsic value*”. The rest of the premium is referred to as its “*time value*”.

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

Your turn ... Look at the \$9.80 “Put”, what is its intrinsic value? The Futures is at \$9.40. _____

What is its time value? _____

How about the \$9.00 “Call”, what is its intrinsic value? _____

What is its time value? _____

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

Your turn ... Look at the \$9.80 “Put”, what is its intrinsic value? The Futures is at \$9.40. **\$.40**

What is its time value? **\$.16**

How about the \$9.00 “Call”, what is its intrinsic value? **\$.40**

What is its time value? **\$.16**

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

Your turn ... Look at the \$9.80 “Put”, what is its intrinsic value? The Futures is at \$9.40. **\$.40**

What is its time value? **\$.16**

How about the \$9.00 “Call”, what is its intrinsic value? **\$.40**

What is its time value? **\$.16**

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

Look at the \$9.40 “Call”, what is its intrinsic value? _____

What is its time value? _____

One last time. What is the intrinsic value of the \$9.20 “Put”?

What is its time value? _____

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

Look at the \$9.40 “Call”, what is its intrinsic value? **\$-0-**

What is its time value? **\$.28**

One last time. What is the intrinsic value of the \$9.20 “Put”? **\$-0-**

What is its time value? **\$.19**

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.28
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

Pretty simple, but how do we Hedge using them. Before we do that, one more interesting point, notice that the premium is the same for the “Call” and the “Put” in the “at-the-money” strike price of \$9.40. Why do you think that is?

In order to understand their connection with each other lets change the \$9.40 Call to 32 cents. Can you figure out how a trader would take advantage of this situation and make some money? (*I'll buy you a cup of coffee if you get it.*)

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.32
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

What would happen if I bought the \$9.40 Put and Sold the \$9.40 Call?? Net I would receive 4 cents in my pocket.

Being Long a Put and Short a Call is the same thing as being Short. It is a synthetic short. So ... I would be short at \$9.40 plus the 4-cent credit. So short at \$9.44. The market is at \$9.40 so I would buy the futures and capture the 4 cents with no-risk.

<u>PUTS</u>		<u>CALLS</u>	
STRIKE	PREMIUM	STRIKE	PREMIUM
\$ 9.00	\$.12	\$ 9.00	\$.56
\$ 9.20	\$.19	\$ 9.20	\$.38
\$ 9.40	\$.28	\$ 9.40	\$.32
\$ 9.60	\$.38	\$ 9.60	\$.19
\$ 9.80	\$.56	\$ 9.80	\$.12
\$10.00	\$.74	\$10.00	\$.07

All kidding aside, it is especially important that you understand there is a direct connection between the “Calls” and the “Puts” and the underlying contract itself. The market values as stated in the previous example does happen but not that dramatically and never, never, never... in corn options.

With all of this stated, let us go back to corn and see how we can use options to reduce unacceptable risk.

Its May 10th and a farmer who will produce 100,000 bushels wants to reduce his risk. He decides to do so by buying a “Put” and selects the \$3.90 strike price for his protection and pays \$.25 (\$1250) for each “Put”. The futures are also trading at \$3.90 or “at-the-money”.

On October 1st, the December futures are trading at \$3.60. The \$3.90 “Put” is trading at 35 cents. The farmer sells his 100,000 bu. in the cash market at \$3.75 and sells the “Put” at \$.35.

What did he gain from just his hedging procedure?

What was the final price he received for his corn?

What would he have received using futures instead of options?

What did he gain other than a few cents???

Its May 10th and a farmer who will produce 100,000 bushels wants to reduce his risk. He decides to do so by buying a “Put” and selects the \$3.90 strike price for his protection and pays \$.25 (\$1250) for each “Put”. The futures are also trading at \$3.90 or “at-the-money”.

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What did he gain from just his hedging procedure? **+\$.10**

What was the final price he received for his corn?

What would he have received using futures instead of options?

What did he gain other than a few cents???

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What did he gain from just his hedging procedure? +\$10

What was the final price he received for his corn? +\$3.85

What would he have received using futures instead of options?

What did he gain other than a few cents???

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What was the final price he received for his corn? +\$3.85

What would he have received using futures instead of options?

\$4.05

What did he gain other than a few cents??? -

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What did he gain from just his hedging procedure? +\$.10

What was the final price he received for his corn? +\$3.85

What would he have received using futures instead of options?

\$4.05

What did he gain other than a few cents???

Time to see if the market would go higher.

Final Point - “DELTA” - What is it and what does it tell us?

In the Option Example above, the producer made money in his hedge, but he would have done better had he used the futures. That is because the time value he paid to buy the option was lost. Of the 25 cents he paid in time value, he only received 10 cents back when he sold it for 35 cents, and it was 30 cents “in-the-money”.

What would have happened if instead of buying 20 Puts to cover his crop, he purchased 30 Puts or 40 Puts or 50 Puts. Well first, it would have cost him a lot more money on a per bushel basis because he was buying time to watch the market. ~~345 days to be exact.~~ So, he would have had a lot more invested. Secondly, how would he know how many “Puts” it would take to equal the same number of futures contracts?

There is an answer and it's called "DELTA". By definition, "Delta" is the percentage of the futures market price change that the option will have because of the change of the underlying contract. (Do not panic... keep reading.)

Let us look at it this way... If the futures go up 4 cents and the "Call" (*You need to work with "Calls" too*) goes up 2 cents, then the Call would have a "Delta" of .50 or 50%. If the option only gained 1 cent it would then have a "Delta" or .25 because the option only changed 25% of what the futures contract did.

Again - "Delta" is the percentage change in the futures market price that is passed on to the option at a specific strike price.

Remember, Delta is not the same for each strike price.

Question - Using this 4-cent change and a “delta” of .5, if I was “long” 2 calls and short 1 futures contract, how much would I have made or lost in a 4 cent move up?

Answer- If the “Delta is .5 then each “call” option would have gained 50% of 4 cents or 2. Since I own 2, then I would have gained 4 cents on the options which would cancel out the 4 cents I lost on the futures contracts. This is called being “**delta neutral.**” It means that any loss in options will be gained in futures and vice versa.

We are not going to go into why someone would want to be “Delta Neutral” but suffice it to say that millions of dollars are made by traders who stay “Delta Neutral.” What is important is that “Delta” tells you how many futures options it takes to be hedged with options, the same as if directly with futures contracts. Remember with options your risk is known and thus the advantage is a defined cost and no margin calls.



What do they know that he doesn't???



What does he know that they don't???



What do I know that you don't about this?