



Session 1 - Futures and Options: The Basics

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Introduction to CME Group

The world's largest and most diverse exchange

Merger: The Chicago Board of Trade (CBOT) was established in 1848, and the Chicago Mercantile Exchange (CME) in 1898.

The Role of the Exchange:

Create products that serve an economic function

- Hedging and risk management
- Price discovery
- Price dissemination

CME Group Clearing House: All transactions cleared, settled, and guaranteed

- World's largest
- 100+ years of default free performance

Centralized Marketplace: Virtual 24 hour trading on the CME Globex[®] electronic trading platform

CME Group Products

- Widest selection of benchmark products
- Access to all major asset classes
- Traditional and alternative product choices

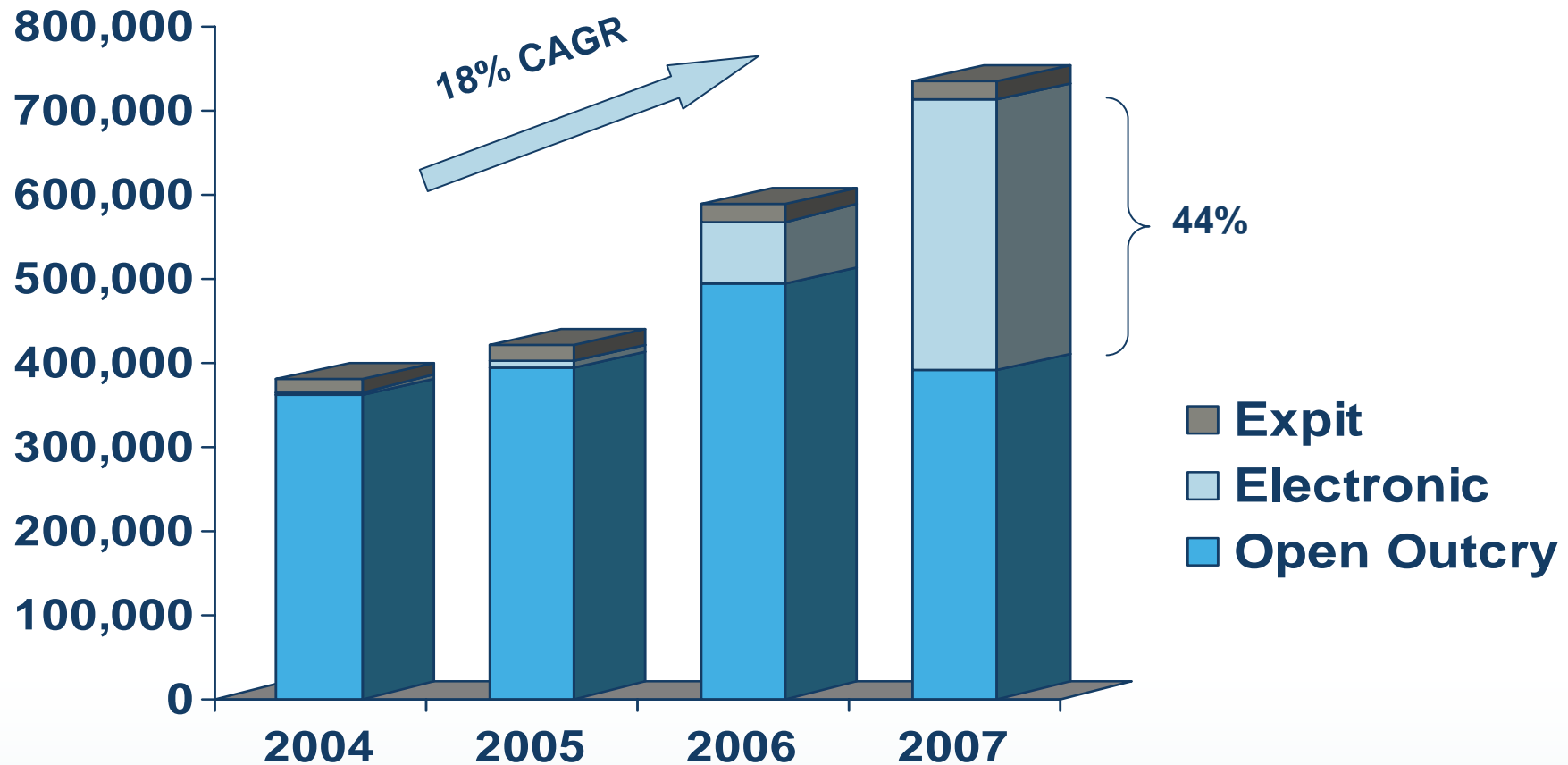
	Q108 ADV*	%Change
Interest Rate	8,251	+24%
Equity	3,628	+72%
Commodity & AI	949	+20%
FX	640	+15%

83% of Q1 2008 volume was electronic.

*in thousands

Commodity Products ADV

(Combined CME & CBOT, incl. Weather)



Market Statistics

Current Volume & Open Interest (5/15/08)

Futures	Volume	Open Interest	Volume Yr ago	Open Interest Yr ago
Lean Hog	42,886	251,867	29,071	178,261
Options				
Lean Hog	1,283	83,629	1,413	28,871

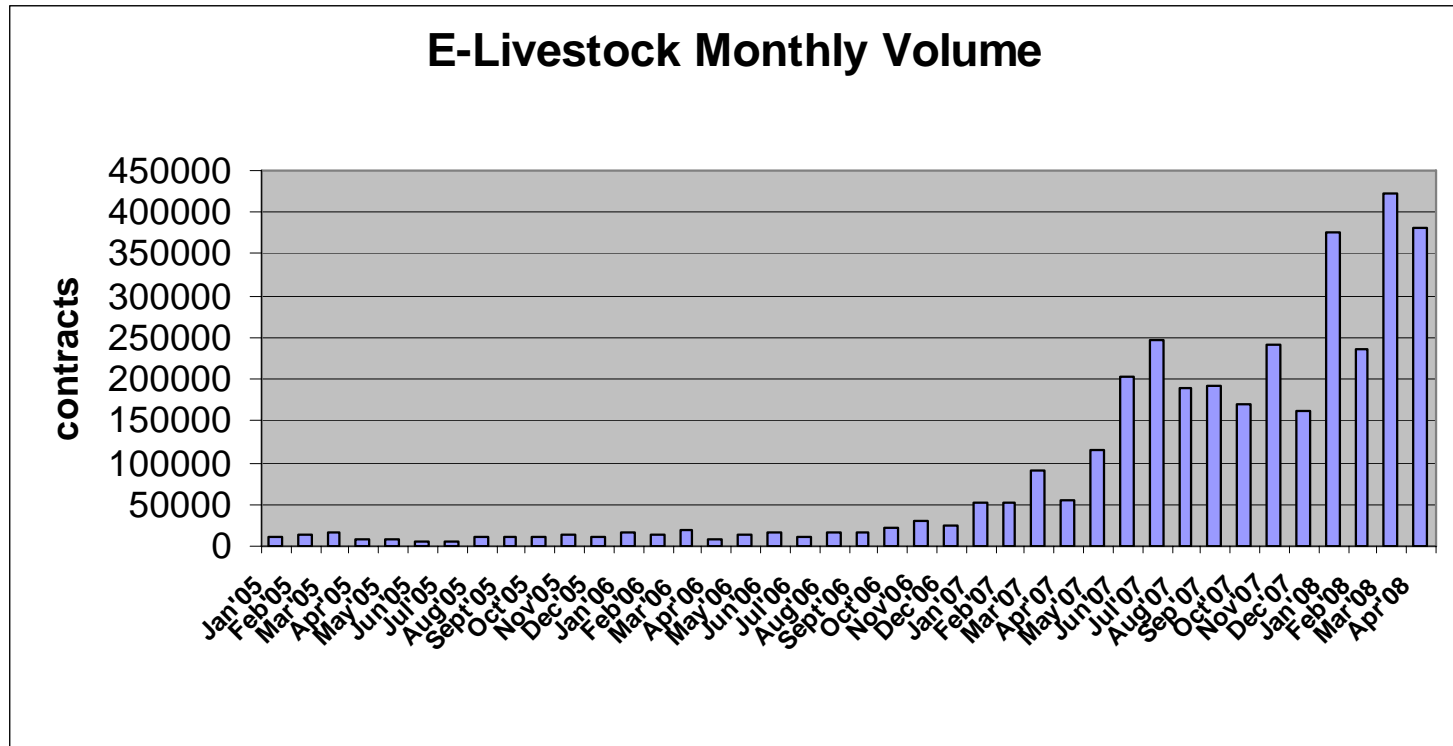
Definitions:

Open Interest - The accumulated total of all currently outstanding contracts (one side only). Refers to unliquidated purchases and sales.

Volume - The number of contracts traded (one side of each trade only) for each delivery month during the trading period.

Market Statistics

Electronic Trade



What are Futures & Options?

- **Futures contracts** are standardized, legally binding agreements to buy or sell a specific product or financial instrument in the future. The buyer and seller of a futures contract agree on a price today for a product to be delivered or settled in cash at a future date. Each contract specifies the quantity, quality and the time and location of delivery and payment.
- **Options** can be thought of as insurance policies. The option buyer pays a price for the right – but not the obligation – to buy or sell a futures contract within a stated period of time at a predetermined price.

Mechanical Aspect of Trading Futures

Open account and deposit performance bond funds

Contract trade positions

Futures trade position settlement procedures

Contract specifications for futures product traded

Order entry

“Margining” futures trade position

Options overview



Setting up a Futures Trading Account

Any commodities broker can help you structure your company's account and project brokerage related costs for any given production, or usage time period.

Contract Trade Positions

Futures Contract:

- An obligation to buy or sell a commodity that meets set grades and standards on some future date.

Types	Terminology	Price Advantage	Deliver/Offset Cash Settle
Sell	Short	Prices down 	Long
Buy	Long	Prices up 	Short

How Are Prices Determined?

Actions of hedgers and speculators looking at:

- Supply
 - Demand
 - Political factors
 - Psychological factors
-
- And coping with price volatility

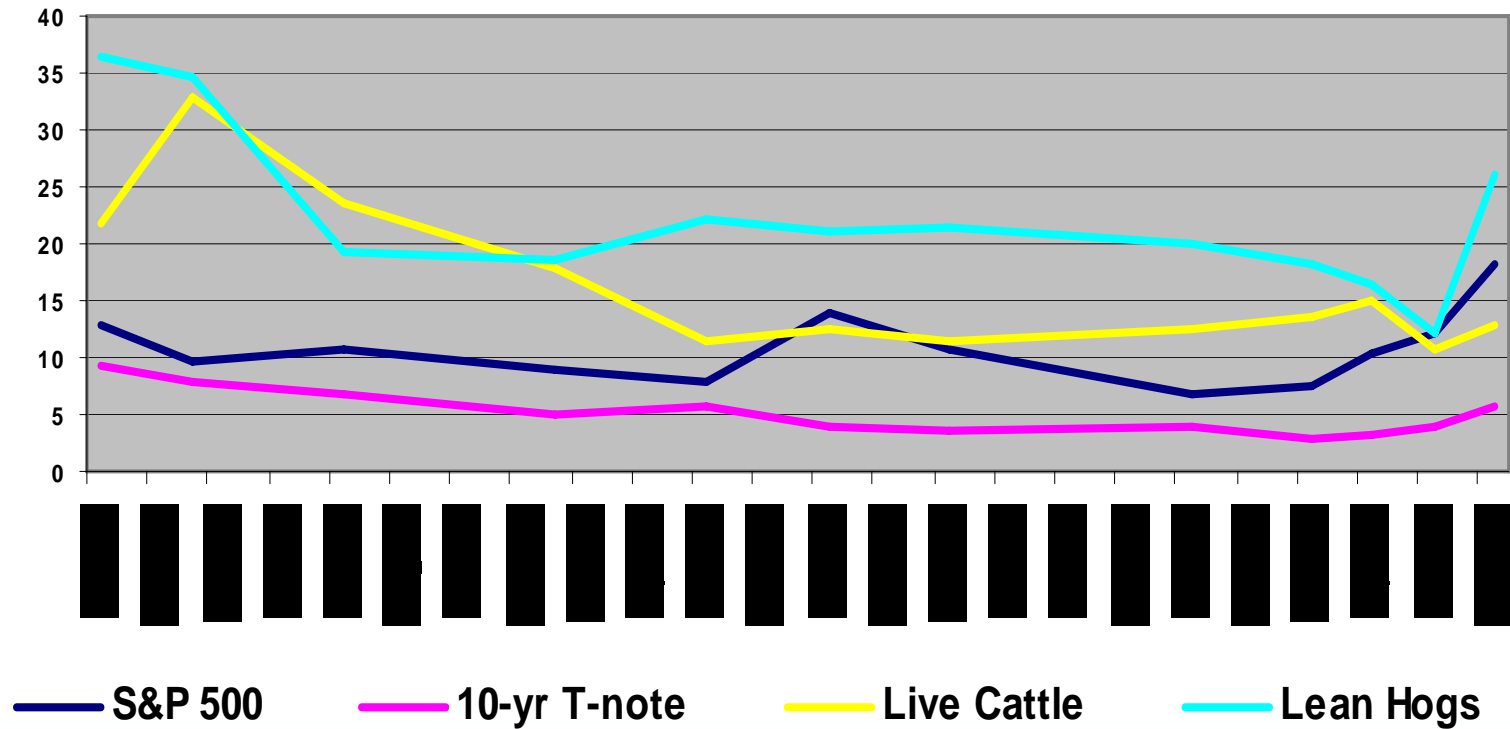
Market Statistics

Lean Hogs Historical Volatility

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Average
2003												36.5	36.5
2004	25.0	41.5	24.3	28.1	42.1	22.7	33.7	59.8	22.6	33.5	21.0	20.5	31.2
2005	18.2	36.4	17.7	35.4	15.7	20.6	18.9	50.7	19.3	42.7	21.3	12.1	25.8
2006	20.9	26.0	22.0	66.2	16.7	20.4	17.6	48.2	21.4	33.8	20.9	14.9	27.4
2007	20.3	16.2	18.4	55.6	10.8	21.9	27.1	35.1	13.9	11.9	32.4	32.0	24.6
2008	18.7	42.4	27.4										
Mean	20.6	32.5	22.0	46.3	21.3	21.4	24.3	48.4	19.3	30.5	23.9	23.0	
High	25.0	42.4	27.4	66.2	42.1	22.7	33.7	59.8	22.6	42.7	32.4	36.5	
Low	18.2	16.2	17.7	28.1	10.8	20.4	17.6	35.1	13.9	11.9	20.9	12.1	

Market Statistics

Volatility



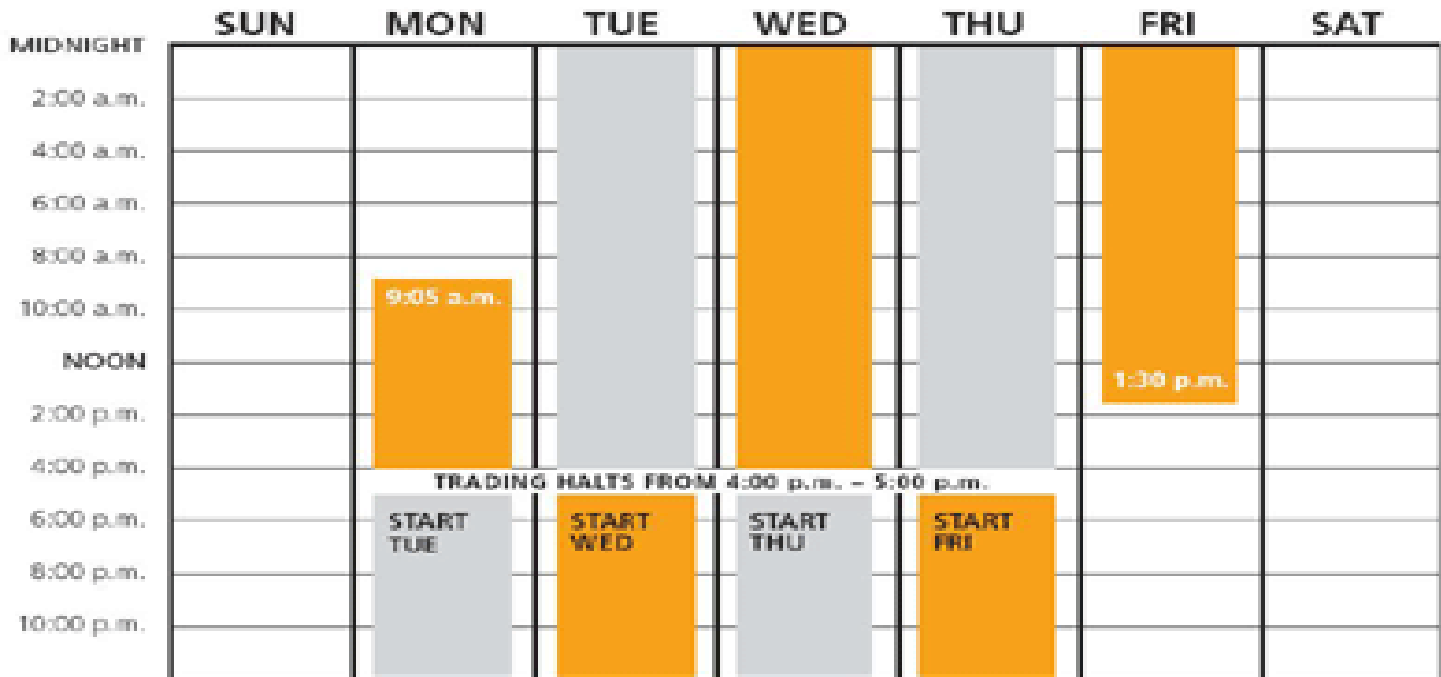
Lean Hog Contract Specifications

Contract Size	40,000 lbs
Description	190+/- Carcasses Ave.
Floor/Globex Symbol	LH/HE
Expiration Type	Cash Settled
Last Day of Trading	10th Business day of contract month
# of Months Listed	11
Contract Months	Jun, Jul ,Aug, Oct, Dec, Feb, Apr, May
Minimum Fluctuation	Full-size: \$.025/lb. or \$10 per contract
Price Limits	Futures: \$.03/lb. or \$1,200/contract
Options Exercise	On any day that the option is trading
Strike Price Intervals	\$1 per cwt. in first 2 contracts, \$2 in others (\$24 listing range)

Trading Information

Livestock futures and options Trading Hours

- Floor: 9:05 a.m. - 1:00 p.m. Monday – Friday
- Globex:



All times are listed in Chicago time.

Cash Settlement

CME Lean Hog Index

- The CME Lean Hog Index is a **two-day weighted average** of national lean hog values. The data is collected by the USDA. The Index represents the most active trades in “lean-value” or “grade and yield” hogs.

Detail:

The CME® Lean Hog Index is a two-day weighted average of cash prices. For contracts through February 2003, these cash prices are the actual base costs at 51-52% lean of the hogs that were slaughtered that day. These prices are available in [USDA Report LM_HG213-National Daily Base Lean Hog Carcass Slaughter Cost](#). Beginning with the April 2003 contract, the cash prices used in the Index will be the average net prices at the average percent lean for slaughtered hogs. These prices are available in [USDA Report LM_HG201-National Daily Direct Hog Prior Day Report-Slaughtered Swine](#). Each packer reports this base cost and average net price, the number of hogs slaughtered and the average carcass weight to the USDA. The USDA then calculates an average base cost and net price, weighted by the number of hogs slaughtered and the average carcass weight. This weighting allows each price to be represented in proportion to the number of hogs sold so that the Index better represents production patterns and prices received by producers. On the day after slaughter, the USDA releases the weighted average base cost and average net price, the total number of hogs slaughtered and the average carcass weight. Because the information is reported the day following the actual slaughter, the Index itself has a lag.

Real Time Electronic Quotes

CME Group: E-Livestock® - Microsoft Internet Explorer provided by Chicago Mercantile Exchange Inc.

Address: http://elivestockrdc.cme.com:443/index3.html

CME Group A CME/Chicago Board of Trade Company | **DATASUITE E-Livestock**

Select a Product:

Overview | Dairy Futures | Dairy Options | **Livestock Futures** | Livestock Options | Wood Pulp

Live Cattle | Inter-commodity Spreads | Feeder Cattle | **Lean Hogs**

Select Front Month: Settlements

Questions about E-Livestock? Please contact: [Anne Carrara](#) (312) 930-4597

Trade Date: **Tuesday, April 29, 2008**

HEK8

High	75.300A
Low	73.225
Volume	384
Last	73.550B

Outright

Bid Size	Bid Price	Ask Price	Ask Size
2	73.550	73.775	5
3	73.500	74.050	1
2	73.375	74.275	1
5	73.300	74.500	5
10	73.250	74.875	1

Spreads

Contracts	Bid Size	Bid Price	Ask Price	Ask Size	High	Low	Volume	Last
HEK8-HEM8	3	0.700	0.975	5	1.100	0.475	113	0.700
HEK8-HEN8	2	-2.325	-1.475	1	-1.250	-1.600	100	-1.500
HEK8-HEQ8	2	-3.000	-2.325	1	-	-	-	-2.175S
HEK8-HEV8	2	1.850	2.625	1	-	-	-	3.300S
HEK8-HEZ8	2	-0.500	0.375	1	-	-	-	1.225S
HEK8-HEQ9	2	-5.550	-4.800	5	-	-	-	-3.950S
HEK8-HEM8-HEN8	-	-	-	-	-	-	-	2.025S

HEM8

High	75.750
Low	72.450
Volume	9319
Last	72.850B

Bid Size	Bid Price	Ask Price	Ask Size
18	72.800	72.875	3
20	72.750	72.900	19
25	72.700	73.000	12
5	72.650	73.050	3
9	72.600	73.075	3

Contracts	Bid Size	Bid Price	Ask Price	Ask Size	High	Low	Volume	Last
HEM8-HEN8	5	-2.650	-2.400	4	-1.475	-2.750	1175	-2.400
HEM8-HEQ8	5	-3.500	-3.350	26	-2.525	-3.750	751	-3.400
HEM8-HEV8	5	1.100	1.725	1	1.775	1.125	3	1.125
HEM8-HEZ8	5	-1.000	-0.525	1	0.300	-1.025	95	-1.000
HEM8-HEQ9	5	-6.300	-5.500	3	-	-	-	-4.250S
HEM8-HEN8-HEQ8	-	-	-0.550	50	-1.325A	-1.325A	-	-1.325A

HEN8

High	77.000A
Low	74.550
Volume	2389
Last	75.250B

Bid Size	Bid Price	Ask Price	Ask Size
1	75.250	75.525	3
4	75.200	75.550	2
10	75.150	75.875	3

Contracts	Bid Size	Bid Price	Ask Price	Ask Size	High	Low	Volume	Last
HEN8-HEQ8	19	-1.000	-0.725	15	-0.850	-1.350	177	-1.000
HEN8-HEV8	1	3.550	4.225	6	4.350A	3.725	56	3.850
HEN8-HEZ8	1	1.200	2.475	1	2.200	2.200	2	2.200

www.cmegroup.com/elivestockquotes

Order Entry

Electronic trading (CME Globex®):

- Variances according to which brokerage and which type of system interface

Limit: an order to execute a trade at a specified limit price.

Market-limit: an order to execute a trade at the best available price. If the entire quantity cannot be filled at the best opposite price, the unfilled quantity remains in the market as a Limit order at that opposite price.

Stop-limit: As with open outcry, a request to execute a trade at a specified Limit price only when the market hits the specified Stop price.

Price Fluctuations

Minimum (tick): $2 \frac{1}{2}$ cents/cwt.



- Each tick move: 400 cwt. X .025 cwt.
= **\$10.00 per Lean Hog contract**

Maximum daily limit from previous day's settlement price :

- Lean Hogs = $\$3.00 \times 400 \text{ cwt.} = \$1,200$

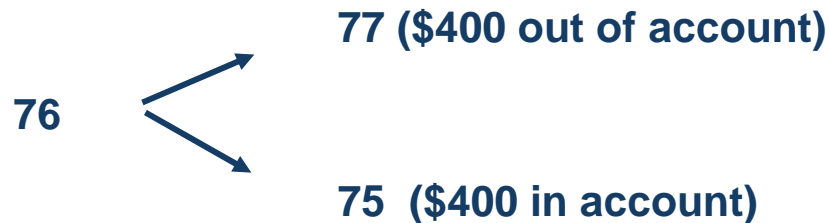
Market Safeguards

Clearing House:

- All the clearing firms of the Exchange together stand in between every buyer and seller.

Market-to-Market:

- Funds move into or out of each trading account daily, based on settlement price change.
- Sell (short) one Lean Hog contract with \$1.00 price move:



- Vice-versa in long contracts

Performance Bond or Margins

Like a Security Deposit. Must be maintained at a certain level while futures position held. Usually less than 10% of contract value.

Lean hog cash value vs. Futures contract margin example:

$$40,000\text{lbs} = 400 \text{ cwt.}$$

$$400 \text{ cwt.} \times \$76 = \$30,400$$

$$\$1,215 / \$30,400 = 4\%$$

Lean Hog Margin	Initial	Maintenance
Hedge	900	900
Speculative	1,215	900

Performance Bond Example

Contract Size	$\frac{40,000 \text{ lbs.}}{100 \text{ Cwt.}}$	=	$\frac{400 \text{ Cwt.}}{1}$
Minimum Tick (\$.025/Cwt.)	$400 \text{ Cwt.} \times \0.025	=	10.00
Limit Move (\$3.00/Cwt.)	$400 \text{ Cwt.} \times \3.00	=	$1,200$
Performance Bond:	$\$1,200$	(initial)	
Maintenance	$\$900$		

Day (Trade Price)	Futures Price (Buy/Sell)	Dollar Change	Account Balance
Trade Day	Sell HEM8@ 77.50		2,000
HE Close 77.000		+0.50 x 400 = +200	2,200
HE Close 79.50		-2.50 x 400 = -1,000	1,200
HE Close 80.525		-1.025 x 400 = -410	790 (MC= 410)
HE Close 78.525		+2.00 x 400 = +800	2,000
Offset HE	Buy HEM 77.10	+1.42 x 400 = +570	2,570
Trade Summary		Account Summary	
S 77.50		1,200 Initial +410 MC = 1,610	
B 77.10 = +.40 x 400 = \$160		Trade balance = 2,000 - 2,570 = \$570	
		160 Profit + 410 MC = \$570	

Options Terms: Puts and Calls

Put Option: A right to SELL:

- a futures contract
- at a fixed price
- before an expiration date

Call Option: A right to BUY:

- a futures contract
- at a fixed price
- before an expiration date

Note: The opposite of a put.

Does not offset a put.

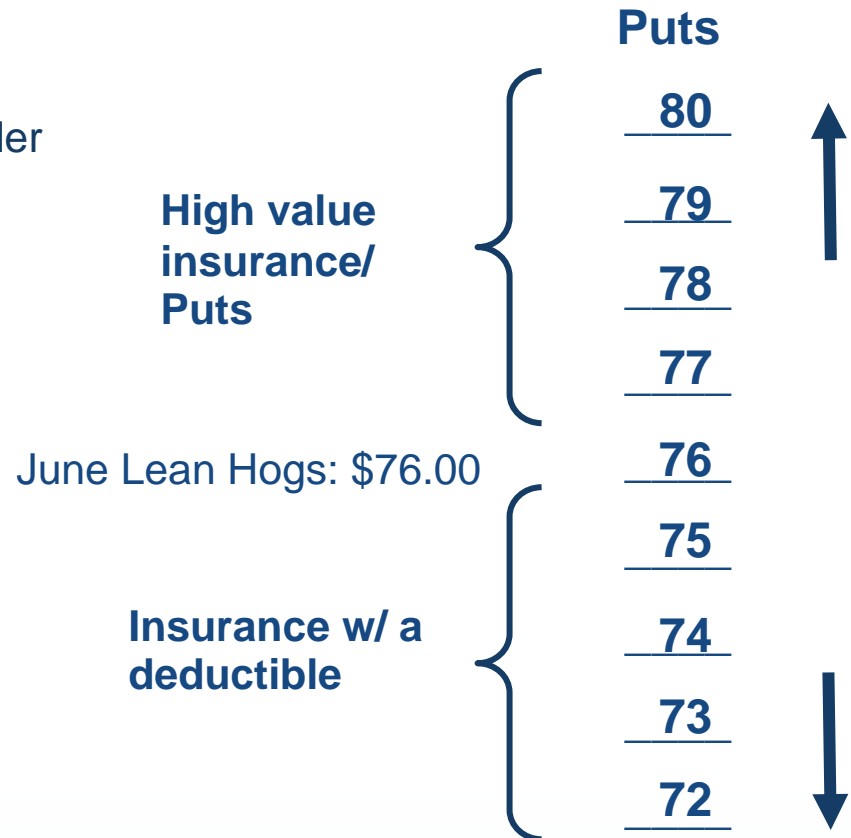
Options Terms: Premium

- The cost of an option
- Quoted in cents/lb. (\$/cwt.)
- Varies from minute-to-minute**
as the underlying futures price changes

Options Terms: Strike Price

Strike (Exercise) Price:

- The fixed price at which the option holder has the right to buy or sell futures.
- Strike prices are:
 - Every \$2.00 (12 strikes)
 - Every \$1.00 (front months)



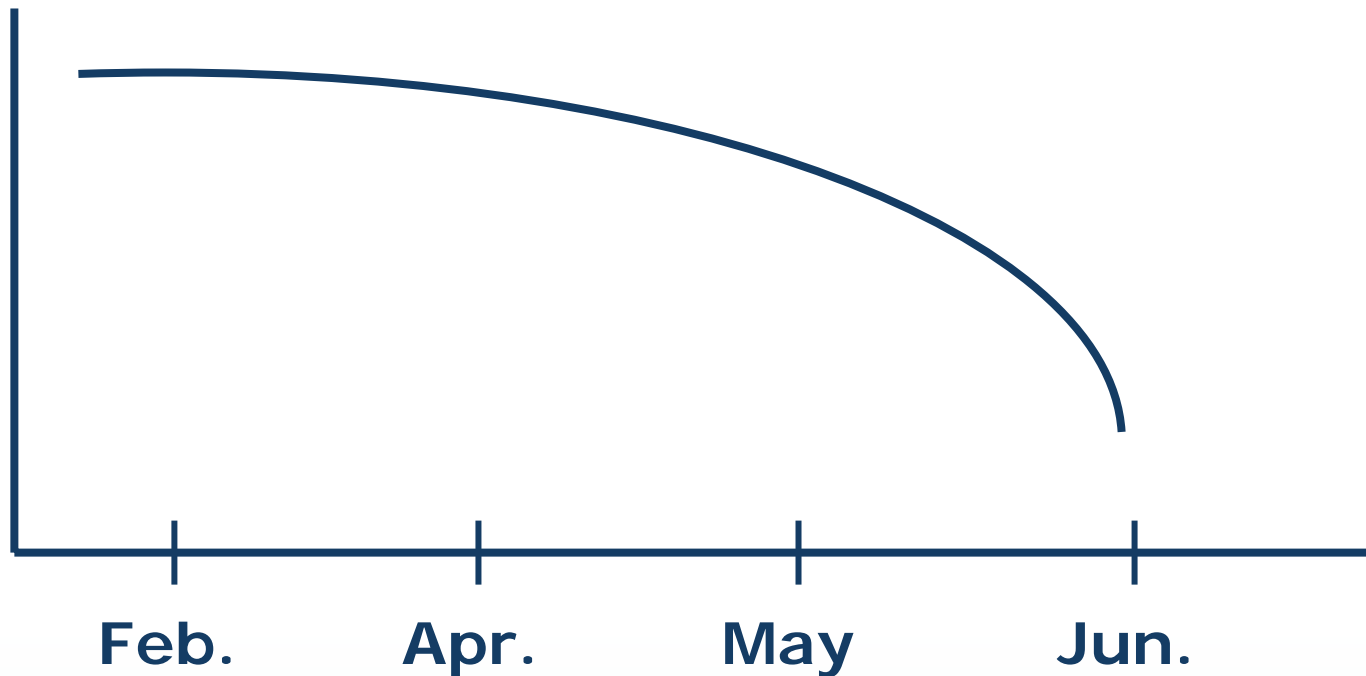
Options and Futures Contract Price

June Lean Hog Futures = **76.00**

	Puts	Calls
In-the-money	77, 78, 79, 80	75, 74, 73, 72
At-the-money	76	76
Out-of-the-money	75, 74, 73, 72	77, 78, 79, 80

Time Value Decay June Puts

Time value



Put Option Buyers and Sellers

Put Buyer	Put Seller
Pays premium	Collects premium
Has right to exercise into a <u>short</u> futures position	Has obligation to accept <u>long</u> futures position if assigned
Pays no Performance Bond	Insures put buyer by paying Performance Bond

Further Information

CME Web site: www.cmegroup.com

CME commodities Web site: www.cmegroup.com/commodities

CME contact information:

- Commodity Products 312-338-2080
- Customer Service and Publications 800-331-3332

- Thomas Clark, Associate Director

Thomas.clark@cmegroup.com

312-930-4595

Disclaimer

Futures trading is not suitable for all investors, and involves the risk of loss. Futures are a leveraged investment, and because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for a futures position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles. And only a portion of those funds should be devoted to any one trade because they cannot expect to profit on every trade.

All references to options refer to options on futures.

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