

Understanding Futures & Options Pricing: What's the Point and What is it Worth?

Currency Markets: (Chicago Mercantile Exchange or CME)

U.S. Dollar Index, (Symbol: DX) (Trades on New York Board of Trade) Contract size is 1000x Index. Minimum tick move is \$10. Example: If the Dollar moves from 85.75 to 86.35, this is a 60 point move, multiplied by \$10/point, which equals \$600.00 (or 1000 time the increment move of .60).

The Dollar index is a weighted average of six currencies which include the Euro, Yen, Pound, Canadian \$, Swiss Franc, and Swedish Krona relative to March, 1973 when the worlds major trading nations allowed their currencies to float freely against each other. The US DX measures the dollars general value relative to a base of 100.00 set in March, 1973. This base price reads as 10000 or 100.00. The higher the number, the stronger the U.S. Dollar against the collection of currencies. U.S. DX Index components: Euro:57.6% Yen:13.6% BP:11.9% CD:9.1% Swedish Krona:4.2% Swiss Franc: 3.6%. A recent price quote of 85.11 tells us that the DX has decreased 14.89% since its base period that was established in March, 1973.

All other foreign currencies that are traded on the CME are quoted in U.S. Dollar value of that given currency. While currency contract sizes and point values vary, here are some examples in determining the value of a foreign currency in terms of the U.S Dollar along with examples of what a move in the currency would be worth. Prices are quoted as of 2/1/07.

Euro, (Symbol: EC) 1.2928 (in other words, it takes \$1.2928 (1.2928 U.S. Dollars) to buy 1 Euro). Minimum tick move is \$12.50. A move from 1.2928 to 1.3428 is a 500 tick move worth \$6250.

British Pound, (Symbol: BP) 1.9585 (it takes \$1.9585 to buy 1 British Pound). Minimum tick move \$6.25. A move from 1.9585 to 1.9588 is a 3 tick move worth \$18.75.

Australian Dollar, (Symbol: AD) .7719 (it takes \$.7719 to buy 1 Aussie Dollar). Minimum tick move is \$10. A move from .7719 to .7749 is a 30 tick move worth \$300.

Mexican Peso, (Symbol: MQ) .090175 (it takes \$.090175 to buy 1 Mex. Peso). Minimum tick move is \$12.50 or 0.000025. A move from .090175 to .090225 is a 2 tick move worth \$25.

Canadian Dollar, (Symbol: CD) .8481 (it takes \$.8481 to buy 1 Canadian Dollar). Minimum tick move is \$10. A move from .8481 to .8480 is a one tick move worth \$10.

Yen, (Symbol: JY) .8249 (it takes \$.8249 to buy 1 Yen). Minimum tick move is \$12.50. A move from .8249 to .8246 is a 3 tick move worth \$37.50.

Grains (Chicago Board of Trade or CBOT)

Soybeans, (Symbol: S), Wheat (Symbol: W), Corn (Symbol: C), and Oats (Symbol: O). Contract size: 5000 Bushels. Minimum tick move is ¼ Cent or \$12.50. Quotes on these grains can be interpreted in Cents. If Soy Beans are trading at 715 ¼ per Bushel, this can be stated as 715¼ Cents per Bushel or \$7 and 15¼ Cents per Bushel. You will need to memorize how ¼ Cent increments are stated in the Grains. The digit on the far right can be stated as a '0', '2', '4', or '6'. If the last digit on the right is a '0', it means even, a '2' means ¼ Cent, a '4' means ½ Cent, and a '6' means ¾ Cents. Soy Beans trading at 7.182 would mean \$7.18 & ¼ cents per bushel.

Soy Beans Prices:

7152 reads as \$7.15 & 1/4 cents per Bushel
7154 reads as \$7.15 & 1/2 cents per Bushel
7156 reads as \$7.15 & 3/4 cents per Bushel
7150 reads as \$7.15 cents even per Bushel

Example: When Wheat moves from 489 1/2 to 501 ¾, this is a change of 12 1/4 cents which is multiplied by the point value of (\$50 per Cent) equating to \$612.50.

Soybean Meal (Symbol: SM) Contract Size is 100 tons with minimum tick move of \$1.00. Soybean meal is quoted in dollars per ton. A quote of 22050 states that Meal is trading at \$220.50 per ton. Many websites drop the last '0' so you may see 2205. If so, you must add the extra zero. An order placed in Soy meal has to end in a zero. If you say you want to buy Soy meal at 22055, your order will be rejected.

Example: Soy Meal moves from 22050 down to 21610. This is a move of 440 points which equates to \$440.

Soybean Oil (Symbol: BO) Contract Size is 60,000 lbs with minimum tick move of \$6. Soy Bean Oil is quoted in cents per pound. Each cent is divided into 100 points. A quote of 2948 is 29.48 Cents per pound.

Example: The price of Soy Bean Oil moves from 2948 down to 2912 or 29.12 Cents per pound. This is a 36 point move. In dollar terms this is a \$6 x 36 pts or \$216 move.

Rough Rice (Symbol: RR or NR) Contract size is 2000 cwt. With a minimum tick move of ½ Cent or \$10 (One Cent is \$20.00/cent)

Rough rice is quoted in cents per cwt. (100 pounds). When you see a quote for 6205, interpret this as 620 & ½ cents, or \$6.20 ½ cents per cwt.

Example: The price moves from 6205 to 8170. That is a move of 196 ½ Cents or \$1.96 & ½ Cents. This equates to a \$3,930 move.

Energies: (New York Mercantile Exchange or NYMEX)

Crude Oil, Sweet Light (Symbol: CL) 1000 barrels/contract. Minimum tick move is \$10.00. (1 point = \$10) There is also an e-Mini-Crude Oil Contract that is ½ size. The 'big' Crude Oil contract is quoted in dollars per barrel, and each dollar is broken into 100 cents. Example: Crude Oil makes a move of 73 points from 5504/barrel to 5577/barrel. That is, multiplied by \$10/point, which equals \$730. A full one dollar move in the price per barrel of crude Oil is worth \$1000.

Gasoline (Symbol:RB), Heating Oil (Symbol:HO) & Propane (Symbol: PN) 42000 gallons/contract. Minimum tick move is \$4.20 (1 point = \$4.20 or 1/100th of a Cent). Prices for HO & RB are quoted in cents per gallon. Each cent is divided into 100 points. If the Unleaded or Heating oil is trading at \$1.70 cents per gallon, the price would read as 1.7000. Example: If the price of Heating Oil moves from 1.7024/gal to 1.7154/gal, this is a move of 130 points, multiplied by \$4.20 per point, which is worth \$546.00.

Natural Gas, (Symbol: NG) 10,000MM BTUs/contract. Minimum tick move is \$10. (1 point is \$10 or 1/10th cent). Natural Gas is quoted in dollars per BTU. If the current price is \$7.35 per BTU, the price quote would read as 7.350 or 7350. Example: If the price of Natural Gas moves from 7350/BTU to 8185/BTU, this would be a move of 835 points, multiplied by \$10/point, which equals \$8350. To recap, this is a move in Nat. Gas from \$7.35/BTU up to \$8.185/BTU.

Electricity, (Symbol: JM) Contract size is 40 Megawatt Hours (Mwh) with minimum tick size of one point worth \$0.05 per Mwh.

Ethanol, (Symbol: AK) Most active contract is on CBOT. Contract Size 29,000 gallons with minimum tick move worth \$29. One tick is 1/10 of one Cent or \$0.001. Quoted in price per gallon. Example: a move of 1.985gal to 2.015gal equates to a 30 tick move valued at \$870.

Stock Index Futures:

S&P 500 (Symbol: SP) Big S&P: Contract size is 250x the index with minimum tick move of (.01) equal to \$2.50.

E-mini S&P 500 (Symbol: ES) (E-mini is 1/5 size) E-mini S&P: Contract size is 50x the index with minimum tick move of (.25) equal to \$12.50.

Examples: If the S&P 500 (Big) moves from 1426.40 to 1416.30, this is a 1010 tick move, equaling \$2525 when multiplied by \$2.50, the value of 1 tick.

If the E-mini S&P 500 moves from 1426.50 to 1416.25, this is a 1025 point move, equaling \$512.50 when multiplied by \$0.50, the value of 1 tick.

Dow Jones (Symbol: DJ) Contract size is 10x the Index with minimum tick move of (1) equaling \$10. Mini-Dow (symbol: YM)...Divide everything in half.

Example: If the DJ moves from 12587 to 12697, that is a 110 point move, equaling \$1,100 when multiplied by \$10.00, the value of 1 tick.

NASDAQ 100 (Symbol: NQ) Contract size is 100x the Index with minimum tick move of (.25) equaling \$25 at \$1 per point.

e-Mini NASDAQ (Symbol: EN) Contract size is 20x the Index or 1/5 size of the big contract. Minimum tick move is (.25) at \$.20/tick

Examples: If the NASDAQ 100 moves from 1808.75 to 1819.50, this is a move of 1075 points equaling \$1075 when multiplied by \$1/tick. Regarding the NASDAQ e-Mini, multiply by \$0.20/tick to get the move in dollar value of \$215.

Nikkei 225 (Symbol: NK) Contract size is 5x the Index with minimum tick move equal to \$5 or (xxxx5.0)

Example: If the Nikkei moves from 17555.00 to 17695 this equates to \$700 or 140 ticks multiplied by \$5.

Financials: (Chicago Mercantile Exchange & Chicago Board of Trade)

30 Year U.S. Bond (Symbol: US) Contract size: \$100,000 face value. Minimum tick move is 1/32 which equates to \$31.25. Each full Bond point is divided into 32 ticks. (Bond options are valued at 1/64th or \$15.625 per min. tick). When reading a price quote of the Bond trading at 109~21, this tells us the Bond is trading at 109 & 21/32. Example: If the bond moves up from 109~21 to 110~30 (110 & 30/32), this is a 41 tick move. (11 ticks plus 30 ticks). Valued at \$31.25 per tick, this equates to a move worth \$1312. Remember 32/32 is 1 FULL Bond Point. A 32 point move up from the Bond trading at 109 even would be 110. A full point move down from the bond trading at 114~17 would take us to 113~17 or 113 & 17/32nds.

Ten Year Notes (Symbol: TY) Contract size is \$100,000 face value (31.25 per 1/32) (Ten Year Note contact specs are similar for the **5 year T-Note, Symbol: FV**)

Ten year notes are similar to the 30 year bonds in reading the quote and calculating the point value. However, they trade in halves of a 1/32nd. The quote for the Ten Year Note has an extra digit to account for the halves. 109255 or 109~255 can be translated literally as 109 & 25/32 & a half

Example: The ten year moves from 109~255 to 110~040. This is a move of 10.5/32nds equating to 10.5 X \$31.25 or \$328.125.

Eurodollars (Symbol: ED) and T-Bills (Symbol: TB) Contract size is \$1 Million with minimum tick move of \$25.

The Eurodollar and T-Bill futures are 3 month interest bearing time deposits. If the price is going up, this implies the interest rate or yield is going down and visversa. The Eurodollar is the most actively traded futures contract. A quote on the Euro Dollar is shown as 97530 or .97530--the last digit is for halves.

Example: The Eurodollar moves from 97530 to 97615. This move is 8.5 points. At \$25/tick, this equates to a move worth \$212.50.

Euroyen (Symbol; EY) Contract size is 100 million. Valued at 2500 yen/point.

The Euroyen is a 3 month time deposit of the Yen currency. The point value in terms of U.S. dollars fluctuates with the exchange rate between the yen and the dollar. Read the Euroyen quote as you would the Eurodollar quote.

Example: If the Euroyen moves from 98930 to 98955, this is a 2 1/2 tick move. Multiply 2 1/2 ticks by 2500 yen, which equals 25000 yen. If the exchange rate is at 118 yen per dollar, divide the 25000 yen by 118, which equates to \$52.97.

Metals: (New York Mercantile Exchange or NYMEX)

Gold (Symbol: GC) and Palladium (Symbol: PA) Each have a contract size of 100 Troy Oz. Gold has a minimum tick move of 10 points with each point worth \$1. (Minimum tick move is worth \$10). Gold is quoted in dollars per oz. If gold is trading at \$632.40, the quote might be stated at 63240 or 632.40. One point also means one cent when quoting the price of gold. The only difference in the Palladium contract is that PA has a minimum tick move of 5 instead of 10. Just as with Gold, 1 point in PA is worth \$1.

Example: Gold price changes from 61850 to 64480 per oz. This is a move of 2630 points worth \$2630 when multiplied by \$1.00/point. This is an increase in the price of Gold by \$26.30/Oz.

Silver (Symbol: SI) Contract size is 5000 troy oz. with minimum tick value of ½ cent increment worth \$25 (Each cent in Silver is worth \$50 as in the Grains). Silver is quoted in cents per troy oz. If Silver is trading at \$15.245 per ounce, the quote may read 15245, 152450, 15.245, or 15.2450. The price of silver moves by half cent increments during trading, however, after closing prices end in different digits such as 15.247, 15.248, 15.249, etc.

Example: Silver price moves up 36.5 cents from 15.245 per oz to 15.610 per oz. This move is worth 36.5 Cents or \$1,825.

Platinum (Symbol: PL) Contract size is 50 troy oz with a minimum tick move of 10 points valued at \$.50/point. Platinum is quoted in dollars per troy oz. and is read the

same way as the Gold market, however, the contract size is different and therefore the point value is different.

Example: Platinum moves from 1181.00 per oz to 1188.60 per oz. This is a move of 760 points, multiplied by 50 cents/point, which equals \$380.00.

High Grade Copper (Symbol: HG) Contract size is 25,000lbs with a minimum tick move of 5 points valued at \$2.50/point. HG is currently priced at 257.35 Cents per pound.

Example; if Copper moves up from 257.35 Cents per pound to 266.45 Cents per pound, this move equates to 910 points (or 9.1 Cents). Multiplied by \$2.50/point, this move is worth \$2275.00.

Industrial Metals (London Metals Exchange or LME)

Aluminum Nickel Lead Zinc Contract sizes are 25 Metric Tons (Tonnes) for each with minimum tick move of ½ point worth \$12.50. Aluminum, as with Nickel, Lead & Zinc, are quoted in price per metric tonne. Example: A 1/2 tick move (minimum move) in Aluminum from \$2801.00/tonne up to \$2801.50/tonne is worth \$12.50.

Tin Contract Size is 6 Metric Tonnes with a minimum move of one tick worth \$5.

SOFTS AND FIBERS (New York Board of Trade--NYBOT)

Coffee (Symbol: KC) Contract size is 37,500lbs with minimum tick move of 5 points. Each point is valued at \$3.75 so a minimum tick move has a value of \$18.75. Coffee is quoted in cents per pound. Each cent is divided into 100 points. If Coffee is trading at 120 Cents per pound, quote services may read it as 12000, 1.2000 or 120.00.

Example: If the price of Coffee moves from 151.25 to 130.65, this would be a move of 2060 points and when multiplied by \$3.75/point equals \$7725.00.

Cocoa (Symbol: CC or CO) Contract size is 10 metric tons with minimum tick move of 1 point worth \$10. Cocoa is quoted in dollars per ton. There are usually no decimal points in the quote. If Cocoa is trading at 1656, this means \$1656 per ton.

Example: Cocoa moves from 1725 to 1907. That is a move of 182 points. When multiplied by the value of one point in the CO market, this move equates to \$1907.

Sugar #11 (Symbol: SB) Contract size is 112,000lbs with minimum tick move of 1 point which is worth \$11.20. Sugar is quoted in cents per pound. Each cent is divided into 100 points. If SB is trading at 10 cents per pound, it may read as 1000, 10.00 or .1000.

Example: If sugar is trading at 1247 per oz. and moves to 1101, this would be a 146 point move and would equate to \$1,635.20.

Orange Juice (Symbol: OJ or JO) Contract size is 15,000lbs with minimum tick move of 1 point worth \$1.50. Orange Juice is quoted in cents per pound. Each cent is divided into 100 points. If it is trading at 195 cents per pound, you may see 19500, 1.9500 or 195.00. Orders on orange juice have to end in a 0 or a 5 as this has been designated as the minimum tick.

Example: Orange juice moves from 20745 to 19135. This is a move of 1610 points worth \$2415.00 when multiplied by \$1.50/point.

Cotton (Symbol: CT) Contract size is 50,000lbs with minimum tick move of 1 point worth \$5. Cotton is quoted in cents/pound. Each cent is divided into 100 points. If cotton is at 55 cents per pound, you may see it as 5500, .5500, or 55.00.

Example: Cotton moves from 5630 to 6796. That is an 1166 point move (11.66 Cent move) worth \$5,830 when multiplied by \$5/point.

Lumber (Symbol: LB) Traded on the Chicago Mercantile Exchange. Contract size is 110000 board feet with minimum tick move of 10 points. One point in Lumber is worth \$1.10 so a minimum point move is worth \$11.10. Lumber is quoted in dollars per 1000 board feet. If lumber is trading at \$288.00 per 1000 board feet, it may read as 28800 or 288.00. Lumber will always end in a 0 because of the 10 point minimum tick.

Example: The price of Lumber advances from 28800 to 40110. This is a big move of 11310 points or an increase of \$113.10 per 1000 board feet. To compute the value of this move, multiply \$1.10/pt x 11310 pts to get \$12,441.

Beef & Pork (Chicago Mercantile Exchange or CME)

Feeder Cattle (Symbol: FC) Contract size is 50000 pounds. Minimum tick move is 2 ½ points and is calculated at \$5 per point, thus, the minimum tick move is worth \$12.50.

All Beef & Pork contracts are quoted in cents per pound with each cent divided into 100 points--If Feeder Cattle is trading at 95 cents per pound, some quotes will read .9500, while others will read 95.00. Also, watch for meats to be quoted as dollars per 100 weight (cwt) or \$95.00. Meat futures contracts move in minimum ticks of 2 ½ points so the quote must end in a 0, 2, 5, or 7. If Feeder Cattle is .9602, this means .9602 & ½. Remember, the last digit representing the ½ or .5 is implied, not stated.

Example: The Feeder Cattle contract moves up from .9965 to 1.0030. That is a move of 65 points, multiply by \$5.00 per point, which equates to \$325.00.

The Feeder Cattle contract is read like the other Beef & Pork contracts except for the minimum tick value and the contract size. Remember, one point in Feeder Cattle is worth \$5 while one point in all the other beef & pork contracts is worth \$4. This is because the contract size is 50,000lbs in Feeder Cattle while it is 40,000lbs with the other meats.

Live Cattle (Symbol: LC), Lean Hogs (Symbol: LH), Pork Bellies (Symbol: PB) All contract sizes are all 40,000lbs with minimum tick move of 2 ½ points with each point worth \$4 per point. (Live Cattle and Lean Hogs are slaughtered and frozen Pork Bellies are bacon.

Example: The Pork Bellies contract moves from 9625 up to 9787 or 162 ½ points, multiply by \$4.00 per point which equals \$650.00.

Disclaimer: There is risk in all commodity trading. Past performance does not guarantee future results. This data is believed to be reliable; however, this data has not been independently verified. Such data cannot be guaranteed as to its reliability, accuracy, or completeness. The data provided is subject to change anytime without notice.