

## Advisory Notice

Clearing House

07-271

TO: Clearing Member Firms

FROM: CME Clearing

SUBJECT: **Volatility-Quoted Foreign Currency Options – *Launching Q1 2008***

DATE: November 9, 2007 -- **Revised December 3, 2007 and February 12, 2008**

**Note: The value of 'ExecInst' that indicates a volatility-quoted trade, is "r", not "I" as previously indicated.**

CME Group plans to offer volatility-quoted foreign currency options for trading on the CME Globex® electronic trading platform, launching first quarter 2008. Volatility-based quoting facilitates “delta-neutral” trading, reducing the execution risk that is inherent to trading in premium-quoted options.

Volatility-quoted options trading will work as follows:

- You submit your order to CME Globex, specifying the volatility-quoted option (as opposed to the normal premium-quoted option).
- You specify the price in volatility terms -- *ie*, as the volatility of the option instead of its premium. (We call this the "volatility price", or simply the "vol price".)
- The order matches on the volatility price.
- You now receive **two** iLink fill messages: (a) one for the option itself, and (b) a second one for an opposite-side-of-the-market futures trade. Together, the option and the future comprise a delta-neutral option-future spread.

If you traded an option strategy -- for example, a straddle -- you would get one fill message for each option leg, and a single fill message for the future.

The iLink fill message for the option specifies both the volatility price for the option, and its equivalent in normal premium terms, calculated by CME Globex using standard option pricing models. Similarly, CME Globex calculates the quantity and price for the futures leg so as to make the resulting spread be delta-neutral.

Volatility-quoted options will be available in both American- and European-style expiration on the following options products:

- EuroFX
- British Pound
- Japanese Yen
- Canadian Dollar

- Swiss Franc
- Australian Dollar (American-style only, initially)

Note that **there are no new products in Clearing and in bookkeeping systems.** When you execute a volatility-quoted options trade, you will receive trade confirmation messages for the **exact same product** as if you had done a normal premium-quoted option trade.

For example, you can buy an option on Globex with a volatility-quoted trade, and liquidate that option position with a normal premium-quoted trade done either on Globex or on the floor. You don't need to use any special "fungibility" screens to make things offset.

### **Clearing Implications of Volatility-Quoted Options**

As described above, for purposes of clearing and bookkeeping processing, volatility-quoted options traded on CME Globex will load to the clearing system and bookkeeping systems as trades with prices in normal premium terms. While volatility-quoted options have a separate Globex code for order entry purposes, after being converted by the clearing system they will be carried on the books of clearing members as premium-based foreign currency options on futures transactions.

For example, a volatility-quoted Australian Dollar option will go into CME Globex with a **Globex product code** of V6A; however, the clearing system will send a FIXML trade confirmation message to the clearing firm with the **clearing product code** of AD.

In the FIXML trade confirmation messages:

- Clearing firms will be able to identify these trades as resulting from volatility-quoted options orders by a value of "r" (the lower-case letter R) in the FIXML Execution Instruction attribute, for example: **ExecInst="r"**. This value will be provided on **both** the option and the futures legs.
- Both the option leg and the futures leg will contain the Order Number (**ClOrdID** attribute) from the original order, and can be tied together using this value if firms so desire.
- On the option leg, the normal price field (the **LastPx** attribute) will contain the price in **premium** terms.
- Also on the option leg only, an additional **Vol** attribute will be added to provide firms with the volatility price, for example: **Vol="2.375"**. Volatility prices will be in percent, will have a maximum of three decimal places, and will tick in units of 0.025 percent.

FIXML Giveup-API messages ("allocation reports") resulting from the giveup of options or futures from vol-quoted orders, will also have the **ExecInst="r"** attribute. So you'll be able to identify not only the trades resulting from vol-quoted orders, but also any giveups of those trades.

Fees for the options side of volatility-quoted options trades, and also for the futures sides, may not be the same as for normal trades. So firms will need to capture the fact for each leg that it resulted from a volatility-quoted options trade.

The volatility price is information that firms may choose to ignore, or to pull into their bookkeeping system. It won't drive any processing in clearing or in books.

There is only one more implication for clearing and bookkeeping processing, namely: **The premium price for the options leg of a volatility-quoted trade, will be at a smaller tick increment than that for a normal trade.** This is discussed in more detail below.

Other than capturing the fact that both the option leg and the futures leg resulted from a volatility-quoted trade, in order to process fees correctly, and dealing with the smaller tick increment for the option leg, there are no clearing or bookkeeping implications of these innovative new products.

### **Smaller Tick Increments**

In order to ensure that the resulting futures-options spread is delta-neutral, CME Globex will calculate the premium price for the options leg **at a smaller tick increment** than is used for normal premium-style trading.

We're calling this smaller tick increment for the premium price for vol-quoted options, the **volatility tick**. Except for British Pounds, it is **one-tenth** the size of the standard outright tick for normal premium-quoted trading, or **one-fifth** the size of the standard tick for spreads.

Clearing firms should make sure their bookkeeping systems can process option trades at any of these three types of increments: the normal tick for outright, half-ticks for spreads, and the special smaller tick for volatility-quoted trades. And because a volatility-quoted options leg can be given up and/or transferred, firms may be receiving either electronic trades or give-up transactions at the special volatility tick, and they may need to submit or receive transfer transactions at the special volatility tick.

**Note that the values assigned to option trades at "cabinet" prices are unaffected by this.**

The following table shows the affected products and for each, the normal tick for outright premium trades, half-ticks for normal spread premium trades, and the special smaller tick for the options leg of volatility trades:

Product	Clearing Codes	Normal Tick	Half Tick	Volatility Tick
EuroFX	EC, YT, 1T-5T, 1X-5X	0.0001 = \$12.50	0.00005 = \$6.25	0.00001 = \$1.25
British Pound	BP, YB, 1B-5B, 1P-5P	0.0001 = \$6.25	N/A	0.00002 = \$1.25
Japanese Yen	J1, YJ, 1J-5J, 1Y-5Y	0.000001 = \$12.50	0.0000005 = \$6.25	0.0000001 = \$1.25
Canadian Dollar	C1, YD, 1C-5C, 1D-5D	0.0001 = \$10.00	0.00005 = \$5.00	0.00001 = \$1.00
Swiss Franc	E1, YS, 1S-5S, 1W-5W	0.0001 = \$12.50	0.00005 = \$6.25	0.00001 = \$1.25
Australian Dollar	AD, 1A-5A	0.0001 = \$10.00	0.00005 = \$5.00	0.00001 = \$1.00

**Important Change to Clearing Price Format for British Pound Options**

The TREX and SPAN price formats for all affected option products already accommodated this greater level of precision with one exception, namely options on British Pound futures.

Prices for these options previously had **four** implied decimal places, and were converted to have **five** implied decimal places.

For consistency, we made this change for **all British Pound futures and options**:

<b>BP</b>	Full-sized futures and American options on futures
<b>1P through 5P</b>	Weekly American options on futures
<b>YB</b>	European options on futures
<b>1B through 5B</b>	Weekly European options on futures

For example, suppose an option price is 0.1346 USD per GBP. Previously, in TREX messages, and in settlement price files and SPAN files, this price is provided as **0001346**. With this change, the price is now provided as **0013460**.

For clearing firm trade data entry operators submitting pit trades, simply add a ***trailing zero*** in the price field, compared to what previously keyed.

This change was made **in production effective Sunday evening January 21, for trade date Monday January 22, 2008**.

### **Globex Codes for Volatility-Quoted Options Trading**

The following table lists the new **Globex codes** for volatility-quoted options trades.

**Important note: As stated above, there are no new clearing product codes.**

Product	Expiration Style	Listing Term	Product Code
Australian Dollar Volatility-Quoted Options	American	Monthly	V6A
Australian Dollar Volatility-Quoted Options	American	Weekly	VA(1-5)
British Pound Volatility-Quoted Options	American	Monthly	V6B
British Pound Volatility-Quoted Options	American	Weekly	VB(1-5)
British Pound Volatility-Quoted Options	European	Monthly	VXB
British Pound Volatility-Quoted Options	European	Weekly	VB(A-E)
Canadian Dollar Volatility-Quoted Options	American	Monthly	V6C
Canadian Dollar Volatility-Quoted Options	American	Weekly	VC(1-5)
Canadian Dollar Volatility-Quoted Options	European	Monthly	VXC
Canadian Dollar Volatility-Quoted Options	European	Weekly	VC(A-E)
Euro FX Volatility-Quoted Options	American	Monthly	V6E
Euro FX Volatility-Quoted Options	American	Weekly	VE(1-5)
Euro FX Volatility-Quoted Options	European	Monthly	VXT
Euro FX Volatility-Quoted Options	European	Weekly	VT(A-E)
Japanese Yen Volatility-Quoted Options	American	Monthly	V6J
Japanese Yen Volatility-Quoted Options	American	Weekly	VJ(1-5)
Japanese Yen Volatility-Quoted Options	European	Monthly	VXJ
Japanese Yen Volatility-Quoted Options	European	Weekly	VJ(A-E)
Swiss Franc Volatility-Quoted Options	American	Monthly	V6S
Swiss Franc Volatility-Quoted Options	American	Weekly	VS(1-5)
Swiss Franc Volatility-Quoted Options	European	Monthly	VXS
Swiss Franc Volatility-Quoted Options	European	Weekly	VS(A-E)

### **Sample FIXML messages**

A file of three sample FIXML messages is available at:

<ftp.cme.com/pub/span/data/cme/test/VolQuotedOptions>

There are two trade confirmation messages, showing a sample option and future resulting from a volatility-quoted order on Globex, and a sample allocation report indicating the giveup of the option leg.

### **For more information**

For more information about volatility-quoted options trading on CME Globex, please see:

<http://www.cme.com/trading/prd/fx/fxvoloptions.html>

For complete technical details about volatility-quoted options trading on CME Globex, please see the **Volatility-Quoted Options Client Impact Assessment** document, at:

<http://www.cme.com/trading/get/files/volquotedimpact.pdf>

For questions regarding this notice, please contact CME Clearing Services at (312) 207-2525. Thank you.