



## Special Executive Report

S-4681

February 26, 2008

### **NEW DAILY VOLUME-WEIGHTED AVERAGE SETTLEMENT PRICES / 2:00 PM FIXING PRICES FOR SELECTED NEARBY FX FUTURES CONTRACTS TO START MONDAY, MARCH 3, 2008**

As you were notified previously in CME Member Updates February 2008, Volume 2 and January 2008, Volume 1, and in CME Group Special Executive Report, S-4653, dated Thursday, December 20, 2007, CME Group is adopting measures to enhance its FX product line, including volume-weighted average prices ("VWAP") from CME Globex® during a new 30-second closing range to determine daily settlement prices for the nearby Australian Dollar, British Pound, Canadian Dollar, Euro FX, Japanese Yen and Swiss Franc futures contracts. The new settlement price mechanism will be implemented on Monday, March 3, 2008. These settlement prices will be available on Merquote, the CME Upper Trading Floor wallboards and on a CME Group Web site page described as "2:00 PM FX Fixings" as soon after the 2:00 p.m. close as is practicable. The exchange plans at a later date to introduce real-time calculation and display of these settlement / fixing prices.

Please note also that the new VWAP settlement price mechanism will be used to determine which associated FX options contracts are in- or out-of-the-money at termination, beginning with the expirations of the March 2008 American-style exercise Australian Dollar, British Pound, Canadian Dollar, Euro FX, Japanese Yen and Swiss Franc options on futures contracts on Friday, March 7, 2008. Please be reminded also, that effective with the expiration of the March 2008 CME Group American-style FX options, submission of contrary instructions to CME Clearing are no longer allowed on the last day of trading.

**BACKGROUND:** To make daily "settlement prices" more robust and transaction based, the exchange is changing daily settlement price determination procedures for selected contracts to a volume-weighted average price ("VWAP") instead of the current provisions of Rule 813 – **SETTLEMENT PRICE** for an average of the CME Globex high and low trade prices (or higher bid, lower offer, where applicable) during the closing range. Therefore, CME Group adopted changes to Rule 813 – **SETTLEMENT PRICE** to allow CME Globex sourced, volume-weighted average price ("VWAP") calculations to determine daily settlement prices for selected FX futures nearby contracts (Australian dollar, British pound, Canadian dollar, Euro FX, Japanese yen and Swiss franc futures). The closing range for these more actively-traded FX futures will decrease from a one-minute to 30 seconds interval (1:59:30 to 1:59:59) to better represent a 2:00 p.m. price. The amendments to Rule 813 appear in Appendix 1 with additions underlined and deletions bracketed and overstruck.

#### **Volume-Weighted FX Futures Settlement Prices Details**

The more volume traded at a given price during the new 30-second closing range, the more influence that particular price has on the calculation of the settlement price. This method applies rational economic principles to determination of settlement prices. The subsequent section describes in detail the new method for determining FX futures settlement prices. In brief, if no

transactions occur in the closing range (*i.e.*, no sales) such that there are no VWAP determined settlement prices (under the descriptions labeled “Tier 1”), then the settlement price is determined by the average of the CME Globex bid / ask spreads over the 30-second closing range (“Tier 2”). If no CME Globex bid / offer spreads exist (and no sales), then CME Group Operations staff replicates current settlement procedures to use quote vendor spot rates and forward points to IMM dates to determine the nearby contract synthetic daily settlements (“Tier 3”). Then, also mirroring current procedures, the previous daily spread differentials, from the nearby futures contract settlement price to the deferred contract months, are used to set all deferred FX futures contract month settlement prices.

- a. Changes to CME Rule 813 – **SETTLEMENT PRICE** provide for tiers of operational procedures. (See approved CME Rule 813 changes in Appendix 1)
- b. 30 second (closing range) window (1:59:30 to 1:59:59)\*
- c. Tier 1: Volume-weighted average price from CME Globex sales during the 30 second interval, calculated initially on a look-back basis (real-time calculation to be added at a later date). However, if less than three trades by the end of the interval, then go to Tier 2 for Globex bid/ask data.\*\* The Tier 1 calculation is analogous to the Tier 1 calculation for the “CME currency fixing price,” with the added provision that there must be at least three trades for Tier 1 to apply (therefore, for 2, 1 or zero trades in 30 second closing range, then Tier 2 applies).
- d. Tier 2: Calculate the midpoint of the bid/ask spread during the 30 seconds on a look-back basis (real-time calculation to be added at a later date). Sample at least once per second (minimum of 30 observations). Settlement price is the average of the midpoints. For liquid contracts, most of the time settlement prices will be determined at 2:00 p.m. via the Tier 1 procedures. The Tier 2 calculation is analogous to the Tier 2 calculation for the “9:00 a.m. CME currency fixing price for exercising European-style options,” but with the inputted maximum allowable bid / ask differential value disabled.
- e. Tier 3: Use over-the-counter (OTC) vendor contributed spot rates and forward points to calculate synthetic futures “settlement price” (via “Operations settlement price programs”). This is essentially what CME Group does now if there are no sales in the 60 seconds before 2:00 p.m., no prior sale during the day, and no standing bids and offers on CME Globex.

Therefore, at 2:00 p.m., CME Group will calculate settlement prices based on either sales or the bid/ask spreads. As soon as practical after 2:00 p.m., the exchange will print the price based upon sales, if there were any (*i.e.*, 3 or more deals); or print the price based upon bid/ask spreads, if there were not the requisite number of sales. OTC based synthetic settlement prices will be used, in the event they are needed (at 2:00 p.m. there are no sales, bids or asks).

\* Current closing range is 60 seconds from 1:59:00 to 2:00:00.

\*\* Select simulations indicated current Tier 1 Settlement Prices apply to EC, JY, BP, CD, SF and AD (by virtue of typically having more than two trades on CME Globex in the 30 second closing range). New settlement price procedures apply to these six futures contracts initially.

## Appendix 1.

### Proposed Changes to Rule 813 – Settlement Price

#### 813. SETTLEMENT PRICE<sup>1</sup>

The settlement price shall be a price consistent with the minimum fluctuations of a commodity. Settlement prices shall be determined each business day for each commodity pursuant to the procedures set forth below. The procedure used to determine the settlement price of a commodity will depend on the product group, level of closing range activity and

<sup>1</sup> Revised January 1981; March 1981; April 1982; July 1982; September 1989; September 1992; November 1995; November 2000; November 2001.

liquidity, and the bid – ask width and size, if settled to Globex.

1. The time and sales procedure is used when a trade occurs in the closing range (either the last 30 or 60 seconds). The first trade and every subsequent quote (trade, bid, offer) in the closing range are included in the calculation. The midpoint of the high and low quotes is the settlement price. If a midpoint cannot be determined, the settlement price is the price closer to the prior day's settlement price.
2. The last quote procedure is used when no trades occur in the closing range (either the last 30 or 60 seconds). The last valid quote of the day (trade, higher bid or lower offer) is the settlement price. In the event there are no valid quotes during the day, the settlement price will be the prior day's settlement price.
3. The bid-ask midpoint procedure is used for transactions that occur on Globex. The midpoint of the low bid and the high offer of the Globex closing range (either the last 30 or 60 seconds) is the settlement price. If a midpoint cannot be determined, the settlement price is the price closer to the prior day's settlement price.
4. When relevant spread trading information is available, it may also be used to assist in the calculation of settlement prices. (For example, Front and Red Eurodollars may be adjusted for calendar or fly spreads.)
5. In illiquid commodities, where there is no relevant market activity, any applicable market information, such as spot or cash markets, may be used to determine the settlement price.
6. Notwithstanding any of the foregoing and applicable for Australian Dollar, British Pound, Canadian Dollar, Euro, Japanese Yen and Swiss Franc futures contracts initially, the settlement price for the nearby liquid Currency Futures contract month shall equal the volume-weighted average price of sales on CME Globex during the 30-second closing range (usually 1:59:30 to 1:59:59 PM Central Time), provided such volume weighted average price is based upon at least three transactions ("Tier 1"). If less than three transactions or no sales occur in the 30-second closing range, then the settlement price shall be determined by the average of the nearby liquid futures contract month bid and offer spread during the 30-second closing range ("Tier 2"). If a settlement price cannot be determined by procedures given in the previous two sentences, then the settlement price for the nearby liquid Currency Futures contract month shall be determined by referencing as appropriate underlying spot prices and forward points ("Tier 3").  
Then, all other Currency Futures contract month settlement prices shall be determined by applying the previous day's settlement price spread differentials as appropriate to the nearby liquid Currency Futures contract month settlement price as determined by the prior three sentences.
- ~~[6]~~ 7. Notwithstanding any of the foregoing, settlement prices for the E-Mini Standard and Poor's 500 Stock Price Index Futures, the E-Mini Standard and Poor's SmallCap 600 Index Futures, the E-Mini Nasdaq 100 Index Futures, the E-mini Three-month Eurodollar futures and the E-Mini Currency Futures contract months shall equal the settlement prices for the corresponding contract months of the Standard and Poor's 500 Stock Price Index Futures, the Standard and Poor's SmallCap 600 Index Futures, the Nasdaq 100 Index Futures, Three-month Eurodollar Futures and the Currency Futures, respectively. Further, the settlement price for the E-mini Five-Year Eurodollar Bundle Futures shall be the average of the settlement price for the underlying Eurodollar futures, rounded to the nearest 0.00001 IMM Index Points<sup>2</sup>
- ~~[7]~~ 8. Options settlements are derived utilizing key market information, such as; outright bids and offers, implied volatility, the underlying futures movement, and relevant spread orders.
- ~~[8]~~ 9. Notwithstanding the above, if a settlement price in any product, as derived by the normal methodology used for that product, is inconsistent with trades, bids or offers in other months during the closing range or with other market information, an Exchange official may establish a settlement price that best reflects the true market valuation at the time of the close.
- ~~[9]~~ 10. For products cleared by the Clearing House on behalf of another exchange, market or Marketplace other than the Exchange, the settlement price shall be determined according to the rules of such entity.
- ~~[40]~~ 11. Notwithstanding the above, in the case of inaccuracy or unavailability of a settlement price from the Exchange, another exchange, market or Marketplace, or if such settlement price would create risk management concerns for the Clearing House, the Clearing House reserves the right to calculate settlement variation using an alternate price determined by the Clearing House<sup>3</sup>

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<sup>2</sup> Adopted September 1997. Revised September 1999; May 2000; July 2000; June 2003, October 2006.

<sup>3</sup> Adopted April 2002. Revised June 2003.