**Settlement Procedures**

The procedures for determining the Settlement Price and Post Close Price for futures contracts and the Options Settlement Premium and Options Post Close Premium for options contracts listed by DME (the "Procedures") are intended to supplement Rule 6.27 of the DME Rulebook.

References to "Futures Contract" shall be taken to refer to the DME Oman Crude Oil Futures Contract and references to “Options Contract” shall mean the DME Oman Crude Oil European Style Option Contract.

Terms not otherwise defined in these Procedures shall have the meanings given to them in the DME Rulebook. To the extent that there is any inconsistency between these Procedures and the DME Rulebook, the DME Rulebook shall take precedence.

**A. Daily Settlement Prices for Futures Contracts**

A.1- In these Procedures, the "Closing Range" in respect of a Trading Day means the price range bounded between the highest price at which a trade was executed (the "High") and the lowest price at which a trade was executed (the "Low") occurring during the following time periods:

(a) in the case of the final Trading Day of a Contract Month, the fifteen (15) minutes ending at 16.30 (Singapore time); and

(b) in the case of any other Trading Day in a Contract Month, the five (5) minutes ending at 16.30 (Singapore time),

provided that (in each case) the Exchange may designate that a shorter period ending at 16.30 (Singapore time) be used for determining the Closing Range by publishing such period on its website at least 24 hours prior to effecting the change.

A.2- The Exchange shall determine a Settlement Price for each Trading Day of a Contract Month of the Futures Contract.

The Settlement Price for each Trading Day of a Contract Month (including the last Trading Day of such Contract Month) which is the current Contract Month shall be the average weighted price ("AWP") of all outright transactions in that Contract Month which occurs during the Closing Range rounded to the nearest minimum fluctuation.

A.3 - Where a Contract Month:

(a) as of the opening of business for that Trading Day, has at least ten per cent (10%) of the total open interest for all Contract Months of the Futures Contract; and

(b) Fifteen per cent (15%) of the volume of all trading during the Closing Range for that Trading Day across all Contract Months is performed in that Contract Month,

then the Settlement Price for each Trading Day of that Contract Month (including the last Trading Day of such Contract Month) shall be the average weighted price ("AWP"), of all outright transactions in that Contract Month which occur during the Closing Range for that Trading Day, rounded to the nearest minimum fluctuation.

A.4- For Contract Months which do not satisfy the criteria set out in paragraph A.3 above, the daily Settlement Price shall be determined at the discretion of the exchange provided that, in any circumstance where the Exchange is considering bids and offers for Spread Transactions, it shall consider the mid-point of the best bid and best offer and not the individual best bid or best offer.

In exercising its discretion, the Exchange will consider the spread between Contract Months, with:

(a) greatest weight given to Spread Transactions executed late in the Trading Day in large volumes, and

(b) lesser weight given to:

(i) Spread Transactions traded in lesser volumes;

(ii) Spread Transactions that have bids and offers entered late in the trading day; and

(iii) Spread Transactions, and bids and offers from early in the trading day.

A.5- For the purposes of these Procedures, a "Price Spike in the Closing Range" shall be considered to have occurred if, in the sole discretion of the Exchange, there is a significant and aberrational price movement in a Contract Month without correlative price movements in the immediately preceding and subsequent Contract Months and that significant and aberrational price movement occurred during the Closing Range.
In the event of a Price Spike in the Closing Range in any Contract Month where the daily Settlement Price is determined in accordance with paragraph A.2 or A.3 above, the Exchange may disregard the executions which contribute to the Price Spike in the Closing Range for such Contract Month when considering the daily Settlement Price.

A.6- Notwithstanding the foregoing, no daily Settlement Price shall be established that would be lower than the best bid, or higher than the best offer, where that best bid or offer:

(a) was for at least fifty (50) outright contracts or at least one hundred (100) contracts for Spread Transactions in Futures Contracts; and

(b) had been posted with the Exchange and remained available but unexecuted during the final fifteen (15) minutes of the Trading before commencement of trading in the Closing Range.

A.7- If any daily Settlement Price is inconsistent with executions that occurred during the Closing Range in other Contract Months or with other market information known to the Exchange, then the Exchange may establish an alternate daily Settlement Price ("Alternate Price") at a level consistent with such other transactions or market information. Examples of market information which may lead the Exchange to establish an Alternate Price may include, but is not limited to:
(a) Executions prior to the Closing Range,

(b) Bids or offers which were entered prior to commencement of the Closing Range, but not executed during the Closing Range; (c) Bids, offers or Strip Transactions which were entered but not executed during the Closing Range; and

A.8- In the event that the Exchange establishes a daily Settlement Price in accordance with paragraph A.7 or determines that a Price Spike in the Closing Range occurred in accordance with paragraph A.5, then the Exchange shall retain internal working papers which demonstrate the basis of calculation for daily Settlement Prices and any decisions made with respect a Price Spike in the Closing Range or an Alternate Price.

A.9- This section applies in the event that the Trading Platform exhibits systemic problems or otherwise

malfunctions in a manner which impairs the ability of market participants to access the Trading Platform during the Closing Range ("System Outage").
The daily Settlement Price shall be calculated by the DME Compliance Department in accordance with the following formula ("Settlement Price Formula"):
1. Identify the last execution in the Contract prior to the System Outage (the "Last Trade")

2. Identify the time of the Last Trade in the Contract prior to the System Outage (the "Strike Time")

3. Calculate the weighted average price of trades in the Contract executed during the 5 minutes prior to the Strike Time (the "Average Price")

4. Identify the price of the execution in ICE Brent Crude Futures - North Sea ("Brent") which occurred closest in time to the Strike Time ("Brent Price")*

5. Calculate the price differential between the Average Price and the Brent Price (the "Differential Amount")**

6. Calculate the weighted average price of all executions which occurred in Brent on ICE during the time period which would be used for determining the Closing Range for the Contract if there was not a System Outage ("Weighted Brent Price")

7. The daily Settlement Price is equal to the Weighted Brent Price, plus or minus the Differential Amount.
* Note that all references to Brent should be for the same contract month as the contract month of OQD for which the daily Settlement Price is being calculated.

** In the event that the Last Trade did not occur on the same trading day as the day for which the daily Settlement Price is being calculated, then the Differential Amount shall be the price differential between the daily Settlement Price for the Contract on the previous day and the execution in Brent which occurred closest to 12.30pm (Dubai time) on the previous day. Once the Differential Amount has been calculated, follow steps 6 & 7 of the Settlement Price Formula above.
The Settlement Price Oversight Committee ("SPOC") shall review application of the Settlement Price Formula in determining the daily Settlement Price. Composition of SPOC shall include:

- Chief Executive Officer (or delegate)
- Chief Compliance Officer (or delegate)
- Chief Liaison Officer (or delegate)

The CCO shall use best endeavours to ensure that the daily Settlement Price is reviewed by SPOC and then published on the DME website as soon as practicable on the same day as the day on which the System Outage occurs and in time for settlement procedures to be conducted by the Clearing House.

**B. Daily Post Close Prices for Futures Contracts**

B.1- In these Procedures, the Post Close Range in respect of a Trading Day means, the price range bounded between the highest price at which a trade was executed (the "High") and the lowest price at which a trade was executed ("Low") occurring during the five (5) minutes ending at 14.30 (New York time) provided that the Exchange may on occasion apply a shorter time period up until 14.30 (New York time) if the Exchange considers this to be necessary taking into account the volume of trading on the Trading Platform.

B.2- The Exchange shall determine a Post Close Price for each Trading Day of a Contract Month which is the front month of the Futures Contract. The procedures for determining the Post Close Prices for Contract Months of the Futures Contract shall be the same as those set out in section A. above for determining the daily Settlement Prices for the Futures Contract except that references in A. above to the Closing Range shall be construed as references to the Post Close Range.

**C. Options Contracts**

CME Group settlement staff shall calculate an Options Post Close Premium (sometimes known as the post close price) at 14.30 (New York time) each Trading Day and an Options Settlement Premium (sometimes known as the final settlement price) following the expiration of each option series.

The Options Post Close Premium and the Options Settlement Premium (collectively, “Settlement Prices”) are derived from a range of available market information including, but not limited to outright trades, bids or offers during the close, relevant spread trades, the settlement price of the underlying future and relevant relationships based on option pricing theory using option pricing models employed by the CME Group settlement staff.

CME Group settlement staff, in consultation with market participants, will establish the at-the-money volatility and create the volatility surface for the out-of-the money puts and calls for all options series based on traded/quoted outrights and spreads, which is then entered into an options pricing model to determine the Settlement Prices for all strikes. Settlement Prices may be adjusted to accommodate relevant orders.

As a crude oil stream, option volatility surfaces are related to other crudes, but closest to Brent crude oil. Consequently, the following approach (in their order of priority) will generally be adopted for settling the Options Contract:

1. Midpoint broker bids/offers in OTC market;
2. Midpoint Globex bids/offers;
3. Brent crude oil volatility surfaces staggered to appropriate expiration (Since the Oman futures contract expires approximately 1 month subsequent to “New” Brent by delivery month, this would imply February Brent surfaces align with January Oman, March Brent aligns with February Oman, etc.)
4. WTI volatility surfaces with same staggering as with Brent; and
5. Historical volatility.

**D. General Comments**

For all contract months not determined by one of the methods set forth above, relevant spread relationships between contract months will be used to derive the settlement.

The settlement price shall be a price consistent with the minimum tick increment for the product. If the calculated settlement price is not a standard tick increment, the calculated settlement price will be rounded either to the nearest tick or to the tick closer to the previous day’s settlement price.

The procedure used to determine the settlement price of a product will depend on the product group, level of activity and liquidity during the defined closing time period, and the trading venue(s) used to derive the settlement.

Unless otherwise specified in the contract terms or settled pursuant to one of the methods set forth above, settlement of contracts cleared through ClearPort Clearing will be based upon relevant market data including, but not limited to, cleared prices in the contract, pricing data obtained from market participants, the settlement prices of related products and any other pricing data from sources deemed to be reliable.

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/ strikes during the closing range, or other relevant market information, or if there is no relevant market activity, an Exchange official may establish a settlement price that best reflects the true market valuation at the time of the close.

Notwithstanding the above, in the case of inaccuracy or unavailability of a settlement price, or if a settlement price creates 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.

If you have any questions, please call DME or the CME Globex Control Center at 312.456.2391.