HKEX
香港交易所

Rules and Procedures of HKFE Clearing Corporation Limited

CHAPTER I

INTERPRETATION

Definitions

101. In these Rules, the definitions contained in the Exchange Rules (as hereinafter defined) shall where the context permits be incorporated herein by reference and the following expressions shall, unless the context otherwise requires, bear the following meanings:-

"Derivatives Pricing Methodology"	means the manual entitled "Derivatives Pricing Methodology" of the Clearing House setting forth, inter alia, details of the methodology for determining the Closing Quotation for each Futures/Options Contract, as may be in force from time to time;

Chapter 2 Clearing and Settlement Procedures

2.3 Variation Adjustment

After Market close on each Trading Day until and including the Trading Day immediately preceding the Last Trading Day or, for those Cash Settled Contracts whose Final Settlement Day is not the first Trading Day after the Last Trading Day, the Last Trading Day, all open positions held at the Clearing House, for the purpose of calculating variation adjustments, are treated as if they were closed out and re-opened at the relevant Closing Quotation. Profits and losses arising from this "mark to market" mechanism are credited to and debited from the relevant HKCC Participant's CCMS Collateral Account each Trading Day as the variation adjustment.

Subject to section 2.6A, variation adjustment arising from trades executed in all Markets shall be settled using cash in the Settlement Currency only, unless otherwise permitted by the Clearing House.

2.3.1 [Repealed]~~*Futures Contracts – Closing Quotation*~~

~~*2.3.1.1* Except for the Closing Quotation of (i) the Mini-Hang Seng Index Futures Contract, which shall be the Closing Quotation set for the Hang Seng Index Futures Contract; (ii) the Mini-Hang Seng China Enterprises Index Futures Contract, which shall be the Closing Quotation set for the Hang Seng China Enterprises Index Futures Contract; and (iii) a Futures Contract on a day which is not a Trading Day for such Futures Contract, which shall be the Closing Quotation set on the previous Trading Day for such Futures Contract, prices of Futures Contracts entered into during the final two minutes of trading prior to the Market close will normally be used by the Clearing House to determine the Closing Quotation for each Futures Contract. Unless otherwise determined by the Clearing House under special circumstances, the Closing Quotation of a Futures Contract, other than the Mini-Hang Seng Index Futures Contract and Mini-Hang Seng China Enterprises Index Futures Contract shall be calculated as follows:~~

~~(a) Subject to paragraph (d), if there was a trade during the final two-minute period the following will apply:~~

~~(1) if the last trade was at or below the best bid price amongst the last bid price(s) that had any corresponding offer price(s) during~~

~~the final two-minute period, the Closing Quotation will be such best bid price;~~

~~(2) if the last trade was at or above the best offer price amongst the last offer price(s) that had any corresponding bid price(s) during the final two-minute period, the Closing Quotation will be such best offer price;~~

~~(3) if the last trade was between the best bid price amongst the last bid price(s) that had any corresponding offer price(s) during the final two-minute period and the best corresponding offer price, then the Closing Quotation will be the price of such last trade; and~~

~~(4) if no pairs of bid and corresponding offer prices were available during the final two-minute period, then the Closing Quotation will be the price of such last trade.~~

~~(b) If there was no trade during the final two-minute period, the Closing Quotation will be calculated as the midpoint between the best bid price amongst the last bid price(s) that had any corresponding offer price(s) during the final two-minute period and the best corresponding offer price, rounded to the nearest tick. However, if the Clearing House determines that the bid-offer spread is not consistent with those of other expiries, and the resultant Closing Quotation does not reflect the true market conditions, the Clearing House will disregard this Closing Quotation and proceed to the procedures laid down in paragraph (ba).~~

~~(ba) If neither a trade nor a pair of bid and offer prices was available during the final two-minute period, or if the Clearing House determines according to paragraph (b) that the procedures laid down in this paragraph (ba) should be followed, the Closing Quotation will be set by the Clearing House with reference to the prices in the final two-minute period of a similar local/overseas instrument or commodity that the Clearing House considers appropriate.~~

~~(c) If the Clearing House considers that no similar local/overseas instrument or commodity is appropriate, or there were no appropriate prices in the final two-minute period for the similar local/overseas instrument or commodity that the Clearing House considers appropriate in paragraph (ba), the Closing Quotation will be set by the Clearing House with reference to the prices of the underlying instrument or commodity and the following:~~

~~(1) the last trade in the Futures Contract prior to the final two-minute period;~~

~~(2) the premiums/discounts of the Futures Contract to the spot month Futures Contract on the previous Trading Day or the closing price of a similar local/overseas instrument or commodity that the Clearing House considers appropriate on its previous trading day, whichever is later, if there was no trade prior to the final two-minute period; and~~

~~(3) other information provided by Market Makers in the relevant Market if premiums/discounts of the Futures Contract to the spot month Futures Contract on the previous Trading Day and the closing price of a similar local/overseas instrument or commodity that the Clearing House considers appropriate on its previous trading day were not available.~~

~~or if the Clearing House determines that reference to the prices of the underlying instrument or commodity is inappropriate, the Closing Quotation will be set with reference to the following:~~

~~(1) the last trade in the Futures Contract prior to the final two-minute period;~~

~~(2) the Closing Quotation of the Futures Contract on the previous Trading Day or the closing price of a similar local/overseas instrument or commodity that the Clearing House considers appropriate on its previous trading day, whichever is later, if there was no trade prior to the final two-minute period; and~~

~~(3) other information provided by Market Makers in the relevant Market if the Closing Quotation of the Futures Contract on the previous Trading Day and the closing price of a similar local/overseas instrument or commodity that the Clearing House considers appropriate on its previous trading day were not available.~~

~~(d) Block Trade prices and prices in the T+1 Session will not be used by the Clearing House in determining the Closing Quotation.~~

~~(da) The Closing Quotation so determined shall be within the Maximum Fluctuation of the Futures Contract where applicable.~~

~~(e) Notwithstanding the above, the Clearing House may, in its discretion, adjust or otherwise determine the Closing Quotation of a Futures Contract.~~

~~*2.3.1.2* [Repealed]~~

2.3.2 [Repealed]~~*Option Contracts – Closing Quotation*~~

~~Except for the Closing Quotation of (i) the Mini-Hang Seng Index Option Contract, which shall be the Closing Quotation set for the Hang Seng Index Option Contract; (ii) the Mini-Hang Seng China Enterprises Index Option Contract, which shall be the Closing Quotation set for the Hang Seng China Enterprises Index Option Contract; and (iii) an Option Contract on a day which is not a Trading Day for such Option Contract, which shall be the Closing Quotation determined based on the procedures laid down in paragraph (e), prices of Option Contracts entered into during the final fifteen minutes of trading prior to the Market close will normally be used by the Clearing House to determine the Closing Quotation for each Option Contract. Unless otherwise determined by the Clearing House under special circumstances, the Closing Quotation of an Option Contract, other than the Mini-Hang Seng Index Option Contract and the Mini-Hang Seng China Enterprises Index Option Contract, shall be calculated as follows:~~

~~(a) Subject to paragraph (e), if there was a trade during the final fifteen-minute period, the following will apply:~~

~~(1) if the last trade was at or below the best bid price amongst the last bid price(s) that had any corresponding offer price(s) during the final fifteen-minute period, the Closing Quotation will be such best bid price;~~

~~(2) if the last trade was at or above the best offer price amongst the last offer price(s) that had any corresponding bid price(s) during the final fifteen-minute period, the Closing Quotation will be such best offer price;~~

~~(3) if the last trade was between the best bid price amongst the last bid price(s) that had any corresponding offer price(s) during the final fifteen-minute period and the best corresponding offer price, then the Closing Quotation will be the price of such last trade; and~~

~~(4) if no pairs of bid and corresponding offer prices were available during the final fifteen-minute period, the Closing Quotation will be the price of such last trade.~~

~~(b) If there was no trade during the final fifteen-minute period, the Closing Quotation will be calculated as the midpoint between the best bid price~~

amongst the last bid price(s) that had any corresponding offer price(s) during the final fifteen-minute period and the best corresponding offer price, rounded to the nearest tick. However, if the Clearing House determines that the bid-offer spread is not consistent with those of other expiries with similar strike prices, and the resultant Closing Quotation does not reflect the true market conditions, the Clearing House will disregard this Closing Quotation and proceed to the procedures laid down in paragraph (c).

(c) If neither a trade nor a pair of bid and offer prices was available during the final fifteen-minute period, or if the Clearing House determines according to paragraph (b) that the procedures laid down in this paragraph (c) should be followed, the Closing Quotation of an Option Contract shall be calculated by the Clearing House using the Black's Model as follows:

$$C = e^{-rT}[FN(d_1) - XN(d_2)]$$

$$P = e^{-rT}[XN(-d_2) - FN(-d_1)]$$

$$d_1 = \frac{\ln(F/X) + \frac{1}{2}\sigma^2 T}{\sigma\sqrt{T}}$$

$$d_2 = d_1 - \sigma\sqrt{T}$$

where C and P are the Closing Quotations of the call and put Options respectively; N(x) is the standard normal distribution function of x; X is the strike price; T is the time to maturity in a 365-day year; r is the annual risk-free rate; F is the price of the underlying; and σ is the volatility of the price of the underlying.

(1) The Clearing House will determine the price of the underlying of the Option Contract with reference to the Closing Quotation of the corresponding Futures Contract; or if the Option Contract does not have a Futures Contract with the same expiry, other information provided by Market Makers in the relevant Market; or the premiums/discounts of the

~~corresponding underlying of the Option Contract to the spot month Futures Contract on the previous Trading Day.~~

~~(2) The Clearing House will determine the volatility of each option series with reference to the prices of the underlying instrument or commodity and the following:~~

~~- the prices of the Futures and Option Contracts with the same expiry during the final fifteen-minute period;~~

~~- the prices of the Futures and Option Contracts with the same expiry prior to the final fifteen-minute period if no sufficient prices of the Futures and Option Contracts with the same expiry during the final fifteen-minute period were available to determine the volatility of such option series;~~

~~- the volatility and skewness of the Option Contracts with the same expiry on the previous Trading Day if no sufficient prices of the Futures and Option Contracts with the same expiry prior to the final fifteen-minute period were available to determine the volatility of such option series; and~~

~~- other information provided by the Market Makers in the relevant Market if no volatility or skewness of the Option Contracts with the same expiry on the previous Trading Day was available.~~

~~(d) The Clearing House will adjust, where appropriate, the Closing Quotation of an Option Contract calculated under paragraph (a), (b) or (c) according to the following and rounded to the nearest tick:~~

~~(1) if the Closing Quotation so determined is smaller than the intrinsic value of the option series, it will be adjusted to such intrinsic value;~~

~~(2) if the Closing Quotation so determined is greater than the upper boundary set by the Clearing House based on a prescribed percentage of the theoretical price of the option series calculated according to the procedures laid down in paragraph (c), it will be adjusted to such upper boundary;~~

~~(3) if the Closing Quotation so determined is smaller than the lower boundary set by the Clearing House based on a prescribed percentage of the theoretical price of the option series calculated according to the~~

~~procedures laid down in paragraph (c), it will be adjusted to such lower boundary;~~

~~(4) starting from the at-the-money to the most in-the-money option series of the same underlying instrument, expiry and call/put type, if the Closing Quotation is smaller than or equal to the Closing Quotation of the preceding option series, it will be adjusted to a value not lower than the Closing Quotation of such preceding option series; and~~

~~(5) starting from the at-the-money to the most out-of-the-money option series of the same underlying instrument, expiry and call/put type, if the Closing Quotation is greater than or equal to the Closing Quotation of the preceding option series, it will be adjusted to a value not higher than the Closing Quotation of such preceding option series.~~

~~(e) Block Trade prices will not be used by the Clearing House in determining the Closing Quotation.~~

~~(f) Notwithstanding the above, the Clearing House may, in its discretion, adjust or otherwise determine the Closing Quotation of an Option Contract.~~

2.3.2A Closing Quotation

2.3.2A.1 Unless otherwise determined by the Clearing House under special circumstances, the Closing Quotation of a Futures/Options Contract shall, subject to sections 2.3.2A.2 to 2.3.2A.5, be determined in accordance with the Derivatives Pricing Methodology.

2.3.2A.2 In determining the Closing Quotation of a Futures/Options Contract, the Clearing House may take into account such relevant factors as it considers appropriate, including any of the following:

(a) last traded price;

(b) bid and offer prices;

(c) volatilities prevailing in the market, where applicable;

(d) other price source deemed reliable by the Clearing House, such as the price of the underlying commodity or underlying instrument;

(e) any other input data that the Clearing House considers appropriate, such as data from third party providers and dividends.

2.3.2A.3 Block Trade prices and prices in the T+1 Session will not be used by the Clearing House in determining the Closing Quotation.

2.3.2A.4 The Closing Quotation so determined shall be within the Maximum Fluctuation of the Futures/Options Contract where applicable.

2.3.2A.5 Notwithstanding the above, the Clearing House may, in its discretion, adjust or otherwise determine the Closing Quotation of a Futures/Options Contract.