

**Rules and Procedures of HKFE Clearing Corporation Limited**

**CLEARING HOUSE PROCEDURES FOR FUTURES/OPTIONS CONTRACTS TRADED ON THE AUTOMATED TRADING SYSTEM OF THE EXCHANGE (“HKATS”)**

**Chapter 4 Reserve Fund Contribution**

4.1 HKCC Participant Additional Deposits

HKCC Participant Additional Deposits will be demanded such that 9580% of the existing aggregate value of the Reserve Fund after the injection of the HKCC Participant Additional Deposits, together with the maximum amount of funding that may be available under the HKCC Contingent Advance Capital (i.e. an amount which equals the total amount of HKCC Participant Additional Deposits after the injection), will cover all the risk exposures of the Reserve Fund throughout the most recent 20 Business Days.

The total HKCC Participant Additional Deposits required can be obtained using the following formula:

$$MEX = \underline{9580\%} \times (BEF + HPAD + CAC)$$

$$MEX = \underline{9580\%} \times (BEF + HPAD + HPAD)$$

$$HPAD = (MEX \div \underline{9580\%} - BEF) \div 2$$

Aside from the demands made under regular monthly assessments, HKCC Participant Additional Deposits will be recalculated and demanded in accordance with the abovementioned formula if the daily risk exposure of the Reserve Fund as calculated on each Business Day exceeds 9580% of the sum of (i) the existing aggregate value of the Reserve Fund (i.e. the basic elements of the Reserve Fund plus the total HKCC Participant Additional Deposits in the Reserve Fund); and (ii) the maximum amount of funding which may be made available under the HKCC Contingent Advance Capital ~~in three~~for two consecutive Business Days, provided unless the Chairman at his discretion determines that the Chairman may, at his sole discretion, waive the demand of HKCC Participant Additional Deposits ~~shall not be required~~ under one of the following circumstances:

- (a) where the relevant Business Day (i.e. day of calculation) falls on the last four Business Days of the month and the current risk exposure of the Reserve Fund does not exceed the existing aggregate value of the Reserve Fund and the HKCC Contingent Advance Capital by more than 30%; ~~or and~~
- (b) where the relevant Business Day does not fall on the last four Business Days of the month and the current risk exposure of the Reserve Fund does not exceed the existing aggregate value of the Reserve Fund and the HKCC Contingent Advance Capital by more than 15%.

Notwithstanding the above or any other provisions of these HKCC Rules, the Clearing House may assess the adequacy of the Reserve Fund and recalculate the requirements for HKCC Participant Additional Deposits based on the abovementioned formula or on such other basis as the Clearing House may consider appropriate at its absolute discretion from time to time ~~at such time as it may consider appropriate~~ and following an event of default, the Clearing House may further at its absolute discretion determine the appropriate aggregate value of the Reserve Fund for the purpose of calculating any HKCC Participant Additional Deposits required taking into account the estimated loss arising from any actions taken by the Clearing House in respect of such event of default under Chapter 5 of the HKCC Rules, and in each of the aforementioned circumstances, HKCC Participants shall pay to the Clearing House such HKCC Participant Additional Deposits as may from time to time be demanded by the Clearing House.

#### 4.4A Settlement Time

In the event HKCC Participant Additional Deposits are recalculated by the Clearing House on any Business Day, a clearing report showing the amount payable or that may be released will be distributed to each HKCC Participant on the same Business Day. Any HKCC Participant Additional Deposit payable by an HKCC Participant will be debited from its House CCMS Collateral Account via the Direct Margin Debiting System (DMDS) by 12:00 noon on the third Business Day, unless otherwise specified by the Clearing House, after the distribution of the clearing report. HKCC Participants shall ensure that sufficient funds are available in their DMDS House accounts to meet any HKCC Participant Additional Deposit payable by them as demanded in their clearing reports. Any surplus HKCC Participant Additional Deposit will be credited to its House CCMS Collateral Account via the DMDS on the same day ~~(i.e. the third Business Day after the distribution of the clearing report)~~. For the avoidance of doubt, any HKCC Participant Additional Deposit settled via the DMDS shall be in Hong Kong dollars or in any other currency prescribed by the Clearing House from time to time.

4.5 Illustration

The following example illustrates how HKCC Participant Additional Deposits are collected and released. For ~~the sake of simplicity~~illustration purposes only, the following parameters will be applied:

~~(i) a 3-day basis instead of a~~ the Reserve Fund is hypothetically sized to cover the maximum risk exposure throughout the most recent 3 Business Days instead of the prescribed 20-Business Days basis is used.;

~~(ii) a regular monthly assessment of the adequacy of the Reserve Fund falls on Day 4, being the first Business Day of the month; and~~

~~(iii) a Hypothetical Reserve Fund \$size: of~~ HK\$200,000,000 (comprising only the basic elements of the Reserve Fund with no HKCC Participant Additional Deposits).

Total net margin liabilities (HK\$ equivalent)

<u>Date</u>	<u>Exposure</u>	<u>HKCC Participant A (GCP)</u>	<u>HKCC Participant B (CP)</u>	<u>HKCC Participant C (CP)</u>
Day 1	<del>210,000,000</del> <u>150,000,000</u>	50,000,000	30,000,000	20,000,000
Day 2	<del>125,250,000</del>	50,000,000	30,000,000	20,000,000
Day 3	<b>262,200,000</b>	50,000,000	30,000,000	20,000,000
Day 4	<del>289,900,000</del> <u>150,500,000</u>	10,000,000	60,000,000	30,000,000
Day 5	289,850,000	10,000,000	60,000,000	30,000,000
Day 6	<b>292,600,000</b>	10,000,000	60,000,000	30,000,000

~~Assuming Day 3 is the first Business Day of the month.~~

The requirements for HKCC Participant Additional Deposits will be calculated as follows:

4.5.1 On Day ~~34~~, the maximum risk exposure during the most recent 3 Business Days

= HK\$262,200,000

Total requirements for HKCC Participant Additional Deposits

= HK\$ (262,200,000 ÷ ~~-0.950.80~~ - 200,000,000) ÷ 2

= HK\$~~38,000,000~~63,875,000

- 4.5.2 Daily average total net margin liabilities of HKCC Participant A ~~on Day 3~~  
 = HK\$ (50,000,000 + 50,000,000+ 50,000,000)/3  
 = HK\$50,000,000

Similarly, the daily average total net margin liabilities of HKCC Participants B and C ~~on Day 3~~ are HK\$30,000,000 and HK\$20,000,000 respectively.

- 4.5.4 Since HKCC Participant A is a General Clearing Participant which is only required to contribute when its contribution requirement is greater than HK\$6 million, the sum of HK\$6 million will need to be added to the total HKCC Participant Additional Deposits figure in the formula set forth in section 4.2.4 in order to obtain the additional HKCC Participant Additional Deposits of HK\$~~38,000,000~~63,875,000.

Contribution from HKCC Participant A

$$= \text{HK\$} \frac{(50,000,000 \times \del{44,000,000} \u{69,875,000})}{100,000,000}$$

$$= \text{HK\$} \del{22,000,000} \u{34,937,500}$$

Since HKCC Participant A is a General Clearing Participant, it will in effect receive HK\$6,000,000 credit and its requirement for HKCC Participant Additional Deposit will be HK\$~~16,000,000~~28,937,500.

Similarly, the HKCC Participant Additional Deposits required from HKCC Participants B and C are HK\$~~13,200,000~~20,962,500 and HK\$~~8,800,000~~13,975,000 respectively.

The total amount of HKCC Participant Additional Deposits that will be demanded from HKCC Participants A, B and C is HK\$~~38,000,000~~63,875,000, which is the amount required to cover the risk exposure ~~on Day 3~~ as calculated in section 4.5.1.

- 4.5.6 On Day ~~6~~7, the condition for recalculation stipulated in section 4.1 is triggered. The maximum risk exposure ~~in~~ during the most recent 3 Business Days is HK\$292,600,000.

Applying the formula in section 4.1, the new total requirement for HKCC Participant Additional Deposits is:

$$= \text{HK\$} (292,600,000 \div 0.9508 - 200,000,000) \div 2$$

$$= \text{HK\$} \underline{54,000,000} \underline{82,875,000}$$

Using the most recent 3 Business Days' total net margin liabilities of each HKCC Participant, the required margin contributions from HKCC Participants A, B and C are HK\$10,000,000, HK\$60,000,000 and HK\$30,000,000 respectively.

Since HKCC Participant A is a General Clearing Participant, up to HK\$6,000,000 of the required amount can be waived. In this case, since its HKCC Participant Additional Deposit is equal to HK\$~~6,000,000~~8,887,500, ~~no~~ contribution in the amount of HK\$2,887,500 will be required from HKCC Participant A.

HKCC Participant	Existing Contribution	Contribution Requirement	Amount to be Collected/(Released)
A	HK\$ <del>16,000,000</del> <u>28,937,500</u>	<del>Nil</del> -HK\$ <u>2,887,500</u>	(HK\$ <del>16,000,000</del> <u>26,050,000</u> )
B	HK\$ <del>13,200,000</del> <u>20,962,500</u>	HK\$ <del>36,000,000</del> <u>53,325,000</u>	HK\$ <del>22,800,000</del> <u>32,362,500</u>
C	HK\$ <del>8,800,000</del> <u>13,975,000</u>	HK\$ <del>18,000,000</del> <u>26,662,500</u>	HK\$ <del>9,200,000</del> <u>12,687,500</u>

By comparing each HKCC Participant's new contribution requirement with its existing contribution, HKCC Participant A will be refunded HK\$~~16,000,000~~26,050,000 and HKCC Participants B and C will be required to pay HK\$~~22,800,000~~32,362,500 and HK\$~~9,200,000~~12,687,500 respectively.