

Rules and Procedures of HKFE Clearing Corporation Limited

CHAPTER IV

**CLEARING HOUSE MARGIN, VARIATION ADJUSTMENT,
COVER FOR MARGIN AND ACCOUNTS**

Additional margin and intra-day variation adjustment

411. (aa) The Clearing House may also call for additional margin on any Business Day (i) if according to its assessment of the liabilities arising from the open Contracts of an HKCC Participant which are based on the same or similar underlying instruments, any concentration or specified threshold imposed on the HKCC Participant in accordance with the Clearing House Procedures has been exceeded; or (ii) if the projected aggregate loss (less General Collateral **(excluding any excess collateral)** and any margin except additional margin collected under section 2.2.8 of the Clearing House Procedures) arising from the open Contracts of an HKCC Participant exceeds the Reserve Fund Risk Predefined Limit; or (iii) under such other circumstances as may be specified in the Clearing House Procedures.

CHAPTER VII

THE RESERVE FUND AND LOSS DISTRIBUTION PROCESS

Resignation of HKCC Particpantship for limiting liability following the expiry of the Capped Liability Period

- 707D. (a) (iii) either: (a) successfully close out, trade out, transfer, settle or otherwise discharge its liabilities in respect of all open Contracts registered in its Client clearing accounts and any clearing account which is of a Client nature in accordance with the Rules prior to the expiry of the applicable Capped Liability Period or (b) notify the Clearing House that it wishes to extend the period for the winding down of open Contracts registered in its Client clearing accounts and any clearing account which is of a Client nature until the date which falls 5 Business Days from the date of expiry of the applicable Capped Liability Period. If an HKCC Participant sends a notification pursuant to Rule 707D(a)(iii)(b) above it must provide collateral, by way of additional margin, which is at least equal to the net projected loss (projected aggregate loss less General Collateral **(excluding any excess collateral)** and any margin) arising from such open Contracts registered in the Client clearing accounts and any clearing account which is of a Client nature as communicated by the Clearing House until the time at which any remaining open positions in its Client clearing accounts and any clearing account which is of a Client nature have been successfully closed out, traded out, transferred, settled or any liabilities in respect of such open positions have been discharged in accordance with the Rules.

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

Chapter 2 Clearing and Settlement Procedures

2.2.8 Additional Clearing House Margin – Reserve Fund additional margin

2.2.8.1 An additional Clearing House margin will be imposed on an HKCC Participant in respect of all its open Futures and Options Contracts and notified to HKCC Participants from time to time in the event that when assessed by reference to the historical data from each of the realized stressed market conditions and/or hypothetical data for each of the unrealized stressed market conditions as the Clearing House may determine:

- (a) the projected aggregate loss (less General Collateral (excluding any excess collateral) and any margin except additional Clearing House margin collected under this section 2.2.8) arising from all its open Futures and Options Contracts of the HKCC Participant (“Reserve Fund Net Projected Loss”) exceeds the Reserve Fund Risk Predefined Limit; and
- (b) the prevailing Reserve Fund size is equal to the Reserve Fund Threshold.

Chapter 4 Reserve Fund Contribution

4.1 HKCC Participant Additional Deposits

Subject to Rule 707B, on the first Business Day of every month, the Clearing House will assess the adequacy of the Reserve Fund to cover the maximum daily risk exposure of the Reserve Fund during the most recent 60 Business Days and will determine whether any HKCC Participant Additional Deposits would be required from HKCC Participants, taking into consideration the risk exposure of the Reserve Fund, the Reserve Fund Threshold and the prevailing market conditions.

As part of such monthly assessment of the adequacy of the Reserve Fund, HKCC Participant Additional Deposits will be recalculated and demanded such that ~~90%~~ ~~of~~ the sum of (i) the existing aggregate value of the Reserve Fund after the injection of the HKCC Participant Additional Deposits and resources which may be appropriated by the Clearing House as contributions to the Reserve Fund; and (ii) the aggregate HKCC Participant Additional Deposits Credit utilized by all the HKCC Participants, will cover ~~at least~~ at least 115% of the risk exposures of the Reserve Fund throughout the most recent 60 Business Days. If the sum determined above is higher than the Reserve Fund Threshold, it shall be reduced to an amount equal to the Reserve Fund Threshold.

The total HKCC Participant Additional Deposits required and the resources which may be appropriated by the Clearing House as contributions to the Reserve Fund

can be obtained using the following formulae:

If 115% of MEX is lower than MINBEF:

$$\begin{aligned}CHA &= 10\% \times (BEF \div 90\%) \\HPAD &= 0\end{aligned}$$

If 115% of MEX is higher than or equal to MINBEF but lower than ~~90% of~~ the Reserve Fund Threshold:

$$\begin{aligned}CHA &= 10\% \times (MEX \times \underline{115 \div 90\%}) \\HPAD &= (MEX \times \underline{115 \div 90\%} - BEF - CHA)\end{aligned}$$

If 115% of MEX is higher than ~~90% of~~ the Reserve Fund Threshold:

$$\begin{aligned}CHA &= 10\% \text{ of Reserve Fund Threshold} \\HPAD &= \text{Reserve Fund Threshold} - BEF - CHA\end{aligned}$$

where:

MEX denotes the maximum daily risk exposure of the Reserve Fund during the most recent 60 Business Days;

MIN denotes the minimum size of the Reserve Fund (i.e. the basic elements of the Reserve Fund and the resources which may be appropriated by the Clearing House as contributions to the Reserve Fund), which should amount to $BEF \div 90\%$;

BEF denotes the basic elements of the Reserve Fund (i.e. the existing aggregate value of the Reserve Fund less the total HKCC Participant Additional Deposits and resources which may be appropriated by the Clearing House as contributions to the Reserved Fund);

HPAD denotes the total HKCC Participant Additional Deposits required; and

CHA denotes the resources which may be appropriated by the Clearing House as contributions to the Reserve Fund, which should amount to 10% or such other percentage of the Reserve Fund size as the Clearing House may determine from time to time, in which case the percentage in the formulae above shall be adjusted accordingly.

Aside from the demands made under regular monthly assessments, subject to Rule 707B, HKCC Participant Additional Deposits will be recalculated and demanded in accordance with the abovementioned formula if

- (a) the daily risk exposure of the Reserve Fund as calculated on each Business Day exceeds 90% of; and
- (b) Reserve Fund Threshold is higher than

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

and the resources which may be appropriated by the Clearing House as contributions to the Reserve Fund); and (ii) the aggregate HKCC Participant Additional Deposits Credit utilized by all the HKCC Participants, provided that the Chairman may, at his sole discretion, waive the demand of HKCC Participant Additional Deposits ~~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 sum of (i) the existing aggregate value of the Reserve Fund; and (ii) the aggregate HKCC Participant Additional Deposits Credit utilized by all the HKCC Participants by more than 30%; 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 sum of (i) the existing aggregate value of the Reserve Fund; and (ii) the aggregate HKCC Participant Additional Deposits Credit utilized by all the HKCC Participants by more than 15%.~~

4.5 Illustration

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

- (i) the Reserve Fund is hypothetically sized to cover the maximum risk exposure throughout the most recent 3 Business Days instead of the prescribed 60 Business Days;
- (ii) a regular monthly assessment of the adequacy of the Reserve Fund falls on Day 4, being the first Business Day of the month;
- (iii) a hypothetical Reserve Fund size of HK\$200,000,000 (comprising the basic elements of the Reserve Fund of HK\$180,000,000 and HK\$20,000,000 which may be appropriated by the Clearing House to the Reserve Fund with no HKCC Participant Additional Deposits);
- (iv) an HKCC Participant Additional Deposits Credit of HK\$1,000,000 is allowed to each HKCC Participant; and
- (v) a Reserve Fund Threshold of HK\$320,000,000.

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	150,000,000	50,000,000	30,000,000	20,000,000
Day 2	150,250,000	50,000,000	30,000,000	20,000,000
Day 3	279,000,000 269,565,217	50,000,000	30,000,000	20,000,000
Day 4	306,000,000	200,000,000	180,000,000	20,000,000

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

4.5.1 On Day 4, the maximum risk exposure during the most recent 3 Business Days

$$= \text{HK\$} \frac{269,565,217}{279,000,000}$$

The resources which may be appropriated by the Clearing House

$$= \text{HK\$} (\frac{269,565,217}{279,000,000} \times 0.9) \times 10\%$$

$$= \text{HK\$}31,000,000$$

Hence, Clearing House shall make available HK\$(31,000,000- 20,000,000) = HK\$11,000,000 more for appropriation to the Reserve Fund on Day 4.

Total requirements for HKCC Participant Additional Deposits

$$= \text{HK\$} (\frac{279,000,000}{279,000,000} \times 0.9269,565,217 \times 1.15 - 180,000,000 - 31,000,000)$$

$$= \text{HK\$}99,000,000$$

4.5.6 On Day 5, the condition for recalculation stipulated in section 4.1 is triggered. The maximum risk exposure during the most recent 3 Business Days is HK\$306,000,000

Since 115% of the maximum risk exposure is above ~~90%~~ of the Reserve Fund Threshold (i.e. HK\$306,000,000 \times 115% > ~~90%~~ \times HK\$320,000,000), by applying the formula in section 4.1, the resources which may be appropriated by the Clearing House

$$= \text{HK\$}320,000,000 \times 10\%$$

$$= \text{HK\$}32,000,000$$

Hence, Clearing House shall make available HK\$(32,000,000- 31,000,000) = HK\$1,000,000 more for appropriation to the Reserve Fund on Day 5.

The new total requirement for HKCC Participant Additional Deposits is:

$$= \text{HK\$} (320,000,000 - 180,000,000 - 32,000,000)$$

$$= \text{HK\$}108,000,000$$