

Chapter 4

Reserve Fund Contribution

Pursuant to HKCC Rules, each HKCC Participant is required to contribute to the Reserve Fund in the form of an HKCC Participant's Deposit by cash in Hong Kong dollars or in any other currency prescribed by the Clearing House from time to time upon its HKCC Participantship application being approved. The HKCC Participant's Deposit required from each Clearing Participant is HK\$1.5 million while that required from each General Clearing Participant is HK\$7.5 million.

Pursuant to HKCC Rules, each HKCC Participant is also required to pay by way of HKCC Participant Additional Deposits such amounts as the Clearing House may from time to time determine to be necessary in response to market fluctuations and increased risk exposures. For the purpose of determining the HKCC Participant Additional Deposit or any other amount payable by an HKCC Participant in respect of the Reserve Fund, positions of the HKCC Participant arising from the T+1 Session on a Business Day will be incorporated in the determination on the next Business Day, unless otherwise determined by the Clearing House.

4.1 HKCC Participant Additional Deposits

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 20 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 and the prevailing market conditions.

HKCC Participant Additional Deposits will be demanded such that 80% 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:

$$MEX = 80\% \times (BEF + HPAD + CAC)$$

$$MEX = 80\% \times (BEF + HPAD + HPAD)$$

$$HPAD = (MEX \div 80\% - BEF) \div 2$$

where:

<i>MEX</i>	<i>denotes the maximum daily risk exposure of the Reserve Fund during the most recent 20 Business Days;</i>
<i>BEF</i>	<i>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);</i>
<i>HPAD</i>	<i>denotes the total HKCC Participant Additional Deposits; and</i>
<i>CAC</i>	<i>denotes the maximum amount which may be made available under the HKCC Contingent Advance Capital (which equals the total HKCC Participant Additional Deposits after the injection).</i>

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 80% 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 for two consecutive Business Days, 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 existing aggregate value of the Reserve Fund and the HKCC Contingent Advance Capital 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 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 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.

4.2 Calculation Methodology for each HKCC Participant's contribution to HKCC Participant Additional Deposits

After each assessment of the requirements for HKCC Participant Additional Deposits as stipulated in section 4.1 or if the Clearing House otherwise determines that HKCC Participant Additional Deposits shall be recalculated or further required from HKCC Participants, the Clearing House will calculate each HKCC Participant's contribution requirement based on each HKCC Participant's daily average risk exposure as follows and each HKCC Participant's share of the total Reserve Fund Deposits shall be proportionate to its relative weighting calculated under section 4.2.4:

4.2.1 The risk exposure of each HKCC Participant will be measured based on its total net margin liabilities. The net margin liabilities of each account shall be the sum of the net margin requirements for each Market in that account.

For comparison purpose, the net margin liabilities of all contracts will be measured in Hong Kong dollars or the equivalent based on the exchange rate determined by the Clearing House for each type of currency. The net margin liabilities of each of the Client, House, Sink and Market Maker account will be computed separately. The total net margin liabilities for each HKCC Participant shall be the sum of the net margin liabilities of each account. For the purpose of calculating the net margin liabilities of an HKCC Participant's Client accounts for each Market, positions in each Individual Client Account will be aggregated with positions in its Omnibus Client Account and Client Offset Claim Account for that Market and margined together on a net basis, and positions of an HKCC Participant's Sink Account in the same Market will be margined together on a net basis to determine the net margin liabilities of its Sink Account for each Market.

4.2.2 The Clearing House will calculate the daily average total net margin liabilities for each HKCC Participant during the most recent 20 Business Days as follows:

Daily average total net margin liabilities of an HKCC Participant

$$= \frac{\sum \text{Total net margin liabilities for the HKCC Participant on } j^{\text{th}} \text{ day}}{20}$$

where j = 1, 2, 3, ..., 19, 20

4.2.3 The daily average market total net margin liabilities will then be calculated as follows:

Daily average market total net margin liabilities

$$= \sum \frac{\text{Daily average total net margin liabilities for each HKCC Participant}}{\text{Participant}}$$

4.2.4 The relative weighting of each HKCC Participant's daily average total net margin liabilities as compared to the daily average market total net margin liabilities is then used to calculate the required contribution from the HKCC Participant based on the following formula, rounded up to the nearest dollar:

Required contribution from each HKCC Participant

$$= \frac{\text{Daily average total net margin liabilities for the HKCC Participant}}{\text{Daily average market total net margin liabilities}} \times \frac{\text{Total HKCC Participant Additional Deposits}}$$

4.2.5 Each HKCC Participant's required contribution as calculated under section 4.2.4 will be compared with its existing contribution amount. In determining its existing contribution amount, any HKCC Participant Additional Deposit that has been applied or that has been replenished from monies recovered from Defaulters preceding the calculation day shall be taken into account. HKCC Participants with increased contribution requirements will be required to pay any deficit to the Clearing House. HKCC Participants with decreased contribution requirements will be refunded any surplus contribution in accordance with section 4.4.

Notwithstanding the above, each HKCC Participant must maintain at least its HKCC Participant's Deposit (i.e. HK\$1.5 million for Clearing Participants and HK\$7.5 million for General Clearing Participants) with the Clearing House.

4.2.6 Since the HKCC Participant's Deposit for General Clearing Participants is HK\$6 million higher than that for Clearing Participants, this HK\$6 million will be taken into account in the calculation of a General Clearing Participant's contributions and a contribution will only be collected if its requirement for HKCC Participant Additional Deposit exceeds HK\$6 million.

4.2.7 For the purpose of calculation under this section, the HKCC Participant Additional Deposit of any HKCC Participant which has been declared as a Defaulter or whose HKCC Participants have been effectively

terminated or revoked on or preceding the calculation day shall be excluded.

4.3 (deleted)

4.4 Release of HKCC Participant Additional Deposits

If, after each assessment of the requirements for HKCC Participant Additional Deposits as stipulated in section 4.1 or if the Clearing House otherwise determines that HKCC Participant Additional Deposits shall be recalculated, the existing resources in the Reserve Fund are determined to be sufficient, and if the total amount of HKCC Participant Additional Deposits calculated according to the formula stipulated in section 4.1 is less than the existing total HKCC Participant Additional Deposits, the Clearing House will refund to HKCC Participants any surplus contribution in accordance with the calculation methodology set forth in section 4.2 above, subject to their HKCC Participants' Deposits being maintained and subject to the right of the Clearing House to withhold the release of any such surplus for such period as it in its absolute discretion considers appropriate.

In the event HKCC Participant Additional Deposits collected from HKCC Participants have been applied towards any payment in accordance with HKCC Rule 706 after the determination of any surplus contributions, the amount of HKCC Participant Additional Deposits which can be refunded to HKCC Participants will be reduced by an equivalent amount.

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. 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 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 20 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; 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	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	262,200,000	50,000,000	30,000,000	20,000,000
Day 4	150,500,000	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	292,600,000	10,000,000	60,000,000	30,000,000

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

$$= \text{HK\$}262,200,000$$

Total requirements for HKCC Participant Additional Deposits

$$= \text{HK\$} (262,200,000 \div 0.80 - 200,000,000) \div 2$$

$$= \text{HK\$}63,875,000$$

4.5.2 Daily average total net margin liabilities of HKCC Participant A

$$= \text{HK\$ } (50,000,000 + 50,000,000 + 50,000,000) / 3$$

$$= \text{HK\$ } 50,000,000$$

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

4.5.3 Daily average market total net margin liabilities

$$= \text{HK\$ } (50,000,000 + 30,000,000 + 20,000,000)$$

$$= \text{HK\$ } 100,000,000$$

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\$63,875,000.

Contribution from HKCC Participant A

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

$$= \text{HK\$ } 34,937,500$$

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\$28,937,500.

Similarly, the HKCC Participant Additional Deposits required from HKCC Participants B and C are HK\$20,962,500 and HK\$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\$63,875,000, which is the amount required to cover the risk exposure as calculated in section 4.5.1.

4.5.5 (deleted)

4.5.6 On Day 7, the condition for recalculation stipulated in section 4.1 is triggered. The maximum risk exposure 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:

$$= \text{HK\$} (292,600,000 \div 0.8 - 200,000,000) \div 2$$

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

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\$8,887,500, 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\$28,937,500	HK\$2,887,500	(HK\$26,050,000)
B	HK\$20,962,500	HK\$53,325,000	HK\$32,362,500
C	HK\$13,975,000	HK\$26,662,500	HK\$12,687,500

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

4.6 Termination of HKCC Participantship

The HKCC Participantship of any HKCC Participant can be terminated in any of the following ways:

4.6.1 Resignation

- a) As required by HKCC Rule 217, any HKCC Participant wishing to resign from HKCC Participantship must give the Clearing House notice in writing of such intention.

- aa) Any demand for the payment of Reserve Fund Deposits or the repayment of the HKCC Contingent Advance Capital made by the Clearing House on or preceding the Business Day the Clearing House receives a Resignation Notice from an HKCC Participant must be met in full by the resigning HKCC Participant. Any demand made by the Clearing House for Replenishment Contribution must also be met in full by an HKCC Participant unless within three Business Days after the demand is made, the Clearing House receives a Resignation Notice from the HKCC Participant, in which case its liability will be limited in the manner prescribed in paragraph (ab) below.
- ab) Where an HKCC Participant has submitted a Resignation Notice to the Clearing House, its liability to provide Reserve Fund Deposits, to make Replenishment Contributions and to repay the Clearing House in respect of the HKCC Contingent Advance Capital pursuant to any demands made by the Clearing House (i) for Reserve Fund Deposits and repayment of the HKCC Contingent Advance Capital from the Business Day following receipt of its Resignation Notice and (ii) for Replenishment Contributions from three Business Days before the Business Day the Clearing House receives the Resignation Notice shall be limited to an amount which equals the aggregate of its Reserve Fund Deposits requirement and its HKCC Contingent Advance Capital repayment requirement (equivalent to its requirement for HKCC Participant Additional Deposit) on the Business Day the Clearing House receives the Resignation Notice, plus two times such aggregated amount.

For example, assume that (i) the Clearing House issues a notice demanding Replenishment Contribution of HK\$7,000,000 from an HKCC Participant on a particular Business Day; (ii) the Clearing House receives a Resignation Notice from the HKCC Participant on the following Business Day; (iii) on the Business Day the Clearing House receives the Resignation Notice, its HKCC Participant's Deposit is HK\$1,500,000 and the HKCC Participant Additional Deposit already demanded by the Clearing House but remains to be settled by the resigning HKCC Participant is HK\$500,000 (which amount is equivalent to its HKCC Contingent Advance Capital repayment requirement). In this case, the maximum liability of the resigning HKCC Participant to contribute to the Reserve Fund and to repay the HKCC Contingent

Advance Capital would be HK\$7,500,000 (i.e. three times the aggregate of its HKCC Participant's Deposit of HK\$1,500,000, HKCC Participant Additional Deposit requirement of HK\$500,000 and HKCC Contingent Advance Capital repayment requirement of HK\$500,000). In other words, it would only be obliged to contribute a further amount of HK\$5,500,000 in addition to its existing Reserve Fund Deposits requirement of HK\$2,000,000.

- b) A resigning HKCC Participant shall be entitled to reimbursement of its HKCC Participant Additional Deposit only to the extent it is entitled to a release of such HKCC Participant Additional Deposit under section.
- c) (deleted)
- d) (deleted)
- e) Two months after the effective date of termination of its HKCC Participantship, the resigning HKCC Participant has the right to reimbursement of any remaining balance of its HKCC Participant Additional Deposit.
- f) (deleted)

4.6.2 *Revocation of HKCC Participantship*

The HKCC Participantship of an HKCC Participant may be revoked pursuant to disciplinary powers exercised against the HKCC Participant under HKCC Rule 517 or by the Clearing House under HKCC Rule 519(e).

The HKCC Participant Additional Deposit of the HKCC Participant will be refunded according to the conditions described in section 4.6.1 provided that no such refund shall be made until after the Clearing House has determined if all or part of the HKCC Participant Additional Deposit of the HKCC Participant shall be applied under HKCC Rule 706(c)(i).

4.7 Interest on HKCC Participant Additional Deposits

HKCC Participants may be paid or charged interest on HKCC Participant Additional Deposits made in cash at such positive or negative rate as the Clearing House may determine from time to time. Interest will be calculated daily and will be posted to HKCC Participants' House CCMS Collateral Accounts on the first Business

Day of each month according to their contributions maintained during the immediately preceding month.

4.8 Other Means of Contribution to HKCC Participant Additional Deposits

HKCC Participant Additional Deposits may be contributed in the form of non-cash collateral including Exchange Fund Bills and Notes which satisfy or are subject to the same requirements and criteria as those set forth in section 2.6.4 for Exchange Fund Bills and Notes that are provided as a means of cover for Clearing House margin liability.