

**Operational Clearing Procedures for Options Trading Exchange Participants**

**9. MARGIN REQUIREMENT**

**9.2.4 Additional Margin – Concentration Margin**

An additional margin will be imposed on a SEOCH Participant in respect of its open option positions and pending stock positions of the same or such similar underlying stock as determined by SEOCH and notified to SEOCH 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 SEOCH may determine:

- i. the projected aggregate loss (less any margin) arising from such open option positions and pending stock positions (“Concentrated Net Projected Loss”) of the SEOCH Participant is greater than 30 percent of the total Concentrated Net Projected Loss of all SEOCH Participants; and
- ii. the total Concentrated Net Projected Loss of all SEOCH Participants arising from such open option positions and pending stock positions based on the same or similar underlying stock exceeds HK\$500 million.

The additional margin to be imposed shall be a percentage of the otherwise applicable margin requirement based on the following, or such other percentage as SEOCH may consider appropriate:

Concentrated Net Projected Loss of the SEOCH Participant vs all SEOCH Participants	% of applicable margin rate
More than 30% and equal to or less than 40%	20%
More than 40% and equal to or less than 50%	25%
More than 50% and equal to or less than 60%	30%
More than 60% and equal to or less than 80%	40%
More than 80%	50%

Notwithstanding the above, a SEOCH Participant accounting for greater than 80% of the total Concentrated Net Projected Loss is only required to pay 40% (instead of 50%) of the applicable margin rate during the first five (5) Business Days when

such percentage remains greater than 80%. In the event that a SEOCH Participant's Concentrated Net Projected Loss remains at a level greater than 80% of the total Concentrated Net Projected Loss for six (6) consecutive Business Days or more, the SEOCH Participant must pay 50% of the applicable margin rate as additional margin from the sixth (6th) Business Days onwards.

#### **9.2.5 Additional Margin – Reserve Fund Additional Margin**

An additional margin will be imposed on a SEOCH Participant in respect of all its open positions and pending stock positions and notified to SEOCH 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 SEOCH may determine:

- (a) the projected aggregate loss (less General Collateral and any margin except additional margin collected under this section) arising from such open option positions and pending stock positions of the SEOCH Participant (“Reserve Fund Net Projected Loss”) exceeds the Reserve Fund Risk Predefined Limit, which is equal to 50% of the Reserve Fund Threshold or such other percentage as SEOCH may consider appropriate; and
- (b) the prevailing Reserve Fund size is equal to the Reserve Fund Threshold.

The additional margin to be imposed pursuant to this section shall be the amount by which the Reserve Fund Net Projected Loss exceeds the Reserve Fund Risk Predefined Limit.

For the avoidance of doubt, if the additional margin is required under two or more stressed market conditions, the higher or highest (as the case may be) additional margin amount shall be imposed.

Notwithstanding the above requirements of this section, should SEOCH accept the SEOCH Participant's request to waive the whole or part of the additional margin requirement, the SEOCH Participant must close out, hedge or transfer to any other SEOCH Participant such positions as may reduce the Reserve Fund Net Projected Loss to an amount which is less than the sum of the Reserve Fund Predefined Limit and additional margin set forth in this section maintained with SEOCH if any by the

end of the same Business Day as the additional margin requirement collection due date, failing which SEOCH may subsequently close out, hedge or transfer such positions on behalf of the SEOCH Participant.

## **9.6 Collection of Margin Requirement**

The daily margin requirement is settled not later than 9:15 a.m. (in the case of daily margin requirement other than additional margin required under 9.2.4, 9.2.5 or 12.5) and 11:00 a.m. (in the case of additional margin required under 9.2.4, 9.2.5 or 12.5) the next Business Day in clear funds through the SEOCH money settlement process. However, due to the time required for DCASS day end processing, the margin amount required by SEOCH will only be known **after** normal banking hours. This in turn means that the SEOCH Participant must have a good estimate of the total cash requirement that SEOCH will demand before the close of the bank.

## **11. RESERVE FUND**

### **11.1 Use of the Reserve Fund**

The Reserve Fund is financed primarily from the SEOCH Participants' own resources in the form of Initial Contributions and Variable Contributions, and the resources appropriated by SEOCH as contributions to the Reserve Fund, but insurance and other coverage may also be used from time to time. The size of the Reserve Fund is made up of the basic elements (including Initial Contributions, interest income, any guarantee, facility and insurance policy), the resources appropriated by SEOCH as contributions to the Reserve Fund and Variable Contributions.

### **11.2.2 Variable Contributions and Resources Appropriated by SEOCH as Contributions to the Reserve Fund**

In addition to making the Initial Contributions under 11.2.1, SEOCH may demand Variable Contributions from SEOCH Participants through a “Top-up” process such that the existing size of the Reserve Fund after making the Top-up payment will cover all the risk exposures of the Reserve Fund throughout the most recent 60 Business Days. It is designed to ensure that the existing size of the Reserve Fund, which shall be the sum of the basic elements of the Reserve Fund, the resources

appropriated by SEOCH as contributions to the Reserve Fund and the Variable Contributions, remains in proportion with the size and volatility of the market.

On the Top-up calculation date, SEOCH calculates the daily risk exposure of the Reserve Fund on each Business Day, which is the greater of the upside or downside risk exposure of the Reserve Fund on that day, and Variable Contributions and the resources appropriated by SEOCH as contributions to the Reserve Fund will be recalculated and demanded such that 90% of the size of the Reserve Fund after the injection of the Variable Contributions and the resources appropriated by SEOCH as contributions to the Reserve Fund will cover all the risk exposures of the Reserve Fund throughout the most recent 60 Business Days. If the size of Reserve Fund determined above is higher than the Reserve Fund Threshold, it shall be reduced to an amount equal to the Reserve Fund Threshold.

SEOCH will determine the resources appropriated by SEOCH as contributions to the Reserve Fund using the following formulae:

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

CHA = 10% of the Reserve Fund Threshold

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

CHA = 10% x (MEX ÷ 90%)

If MEX is lower than BEF:

CHA = 10% x (BEF ÷ 90%)

where

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

BEF = the basic elements of the Reserve Fund (including Initial Contributions, interest income, any guarantee, facility and insurance policy)

CHA = the resources appropriated by SEOCH as contributions to the

Reserve Fund, which should amount to 10% or such other percentage of the Reserve Fund size as determined by SEOCH from time to time, in which case the percentage in the formulae above shall be adjusted accordingly.

SEOCH will deduct the basic elements of the Reserve Fund and the total resources appropriated by SEOCH as contributions to the Reserve Fund from the Reserve Fund size to arrive at the Variable Contributions.

The share of the Variable Contributions that each SEOCH Participant must contribute will be calculated. Each SEOCH Participant's share of the Variable Contributions will be equal to that SEOCH Participant's share of the average **total margin requirement** and **net premium paid** over the most recent 60 Business Days. For the purpose of calculating the Variable Contribution of each SEOCH Participant, the total margin requirement and net premium of all Contracts will be measured in Hong Kong dollars or its non-Hong Kong dollar currency equivalent based on the exchange rate determined by SEOCH for each type of Settlement Currency. Any SEOCH Participant that is declared as a Defaulter on or preceding the Top-up calculation date will be excluded from the calculation.

For each SEOCH Participant, SEOCH will compare the share of the Variable Contributions *required* with the *actual* share currently provided, and determine the amount, if any, by which the SEOCH Participant's share should be increased. This amount will be the SEOCH Participant's Top-up payment to the Variable Contributions. For the avoidance of doubt, the size of the actual Variable Contribution of each SEOCH Participant shall take into account any Variable Contribution applied and any monies recovered from Defaulters that have been credited to the Reserve Fund as its Variable Contribution in accordance with the Clearing Rules preceding the Top-up calculation date.

The SEOCH Participant will be required to pay on demand the difference if the size of the actual Variable Contribution currently in place is lower than the required level. The Top-up payment which maintains the SEOCH Participant's share of the Variable Contributions may be in cash or in such other form of non-cash collateral as approved by SEOCH from time to time. If the size of the actual Variable Contribution currently in place exceeds the new required level, Variable Contribution will be reduced and the excess refunded.

### 11.2.3 Maintenance of the Reserve Fund

Ad hoc recalculation of the Variable Contributions, and associated demands for payment, may be made from time to time separate from the regular monthly calculations, if:

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

the existing Reserve Fund size or if SEOCH considers it appropriate to do so in any other circumstances. If the ad hoc recalculation is required, Variable Contributions and the resources appropriated by SEOCH as contributions to the Reserve Fund will be recalculated and demanded such that 90% of the existing size of the Reserve Fund after the injection of the Variable Contributions and the resources appropriated by SEOCH as contributions to the Reserve Fund will cover all the risk exposures of the Reserve Fund throughout the most recent 60 Business Days. If the size of Reserve Fund determined above is higher than the Reserve Fund Threshold, it shall be reduced to an amount equal to the Reserve Fund Threshold.

### 11.3 Methods of Contribution

<b>Fig. 1: Examples of the Top-up Process</b>	
<u>Prior to the Top-up Calculation</u>	
Current Size of Basic Elements of the Reserve Fund:	HK\$130 million
Current Resources appropriated by SEOCH as contributions to the Reserve Fund:	HK\$20 million
Current Size of Variable Contributions:	HK\$50 million
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Current SEOCH Reserve Fund Size:	HK\$200 million
Total Number of SEOCH Participants:	100
<u>Example 1: Size of Reserve Fund Below Reserve Fund Threshold After Top-up Calculation</u>	

The Top-up calculation concludes that the Reserve Fund size should be increased to HK\$220 million. There is no change to the basic elements of the Reserve Fund. Therefore the new construction of the Reserve Fund should be as follows:

Required Reserve Fund Size:	HK\$220 million
Less: Size of Basic Elements of the Reserve Fund:	HK\$130 million
Less: Resources appropriated by SEOCH as contributions to the Reserve Fund:	HK\$22 million

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Required Size of Variable Contributions:	HK\$68 million
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Total Number of SEOCH Participants:	100
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This HK\$68 million will be shared among the 100 SEOCH Participants pro rata on the basis of each SEOCH Participant's share of the average total margin requirement and net premium paid over the most recent 60 Business Days.

If SEOCH Participant A's share of the newly calculated Variable Contribution is HK\$3 million and its current Variable Contribution is HK\$2.5 million, the Top-up payment will be:

$$\text{HK\$3 million minus HK\$2.5 million} = \text{HK\$500,000}$$

If SEOCH Participant's B's share of the newly calculated Variable Contributions is HK\$1.8 million and its current Variable Contribution is HK\$2 million, SEOCH will reimburse the excess as follows:

$$\text{HK\$2million minus HK\$1.8 million} = \text{HK\$200,000}$$

Example 2: Size of Reserve Fund Above Reserve Fund Threshold After Top-up Calculation

Using Example 1, if the Reserve Fund Threshold is HK\$210 million, the new construction of the Reserve Fund should be as follows:

Required Reserve Fund Size:	HK\$210 million
Less: Size of Basic Elements of the Reserve Fund:	HK\$130 million
Less: Resources appropriated by SEOCH as contributions	

to the Reserve Fund:	HK\$21 million
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Required Size of Variable Contributions:	HK\$59 million
<u>The Top-up payment / excess of each SEOCH Participant will then be calculated and demanded from / reimbursed to the SEOCH Participant accordingly.</u>	

## **11.9 SEOCH Appropriation**

If as a result of a Top-up calculation described in 11.2.2, additional resources should be appropriated by SEOCH as contributions to the Reserve Fund or surplus resources should be returned to SEOCH, such appropriation or return will under normal circumstances be effected on the same day as the day of collection from or return to SEOCH Participants of Variable Contributions following such Top-up calculation.