

OTC Clear Clearing Procedures

Chapter 6

Rates and FX Guarantee Resources

6.1 Rates and FX Guarantee Resources

6.1.1 Rates and FX Guarantee Fund

The CM Funded Contribution Amount for each Clearing Member will be determined by OTC Clear on each Rates and FX Contribution Determination Date, being an amount equal to the greater of:

- (i) HK\$ 25 million or equivalent (after applying Collateral Haircuts on Collateral), being the Rates and FX Minimum Contribution Amount; and
- (ii) the product of:
 - (a) 110% of the highest Max EUL value amongst the Max EUL values determined on each OTC Clear Clearing Day falling within the GF Calculation Period relating to such Rates and FX Contribution Determination Date (Max EUL is defined and determined pursuant to section 6.1.1(6), as modified by section 6.1.1(8) if Client Clearing Services are provided by one or more Clearing Members on OTC Clear Clearing Days falling within the GF Calculation Period relating to such Rates and FX Contribution Determination Date); and
 - (b) the average of the relative pro-rata percentage shares relating to such Clearing Member determined in respect of each OTC Clear Clearing Day falling within the GF Calculation Period relating to such Rates and FX Contribution Determination Date, where:

“GF Calculation Period” means, with respect to a Rates and FX Contribution Determination Date occurring on the first or second OTC Clear Business Day of a calendar month pursuant to Clearing Rule 1503(1), each OTC Clear Clearing Day falling within the immediately preceding calendar month; and with respect to a Rates and FX Contribution Determination Date occurring on any other day pursuant to Clearing Rule 1503(2) or 1503(3), each OTC Clear Clearing Day falling within the calendar month in which such Rates and FX Contribution Determination Date falls up to (but excluding) such Rates and FX Contribution Determination Date.

While the resizing of the CM Funded Contribution Amount for each Clearing Member will only be performed on each Rates and FX Contribution Determination Date as defined in, and pursuant to, Clearing Rule 1503, OTC Clear will perform, for risk monitoring purposes, stress testing and calculation of the relevant pro-rata percentage share and the Daily GF Value with Reserve in respect of each Clearing Member on each OTC Clear Clearing Day.

Below is an illustrative example to show how the relative pro-rata percentage share and the Daily GF Value with Reserve are determined for each Clearing Member on OTC Clear Clearing Day “X”:

Clearing Member / Special Clearing House Participant	Position Account STV ^(2a)	Position Account Stress Add-on ^(2b)	Margin Balance ⁽³⁾	Expected Uncollateralized Loss ⁽⁴⁾	Relative pro-rata percentage share ⁽⁵⁾	Daily GF Value ⁽⁶⁾	Daily GF Value with Reserve ⁽⁷⁾
Clearing Member A	1,000	80	630	450	25.00%	125.00	137.50
Clearing Member B	300	20	120	200	11.11%	55.56	61.11
Clearing Member C	500	50	300	250	13.89%	69.44	76.39
Clearing Member D	800	100	400	500	27.78%	138.89	152.78
Clearing Member E	600	60	460	200	11.11%	55.56	61.11
Clearing Member F	400	20	220	200	11.11%	55.56	61.11
Special Clearing House Participant	420	30	180	270	Not Applicable	Not Applicable	Not Applicable
Total (Excluding Special Clearing House Participant)				1,800	100%	500	550

(1) Assumptions

There are six Clearing Members A, B, C, D, E, F and the Special Clearing House Participant, and none of the six Clearing Members engages in Client Clearing Services. As such, in this illustrative example, in respect of each Clearing Member and the Special Clearing House Participant, OTC Clear will perform the calculations set out in parameters (2a), (2b), (3) and (4) below on such Clearing Member's and Special Clearing House Participant's House Position Account.

Parameter (8) below explains how the Expected Uncollateralized Loss with respect to a Clearing Member may be different in case a Clearing Member engages in Client Clearing Services.

(2a) Position Account STV

In respect of each Clearing Member and the Special Clearing House Participant and an OTC Clear Clearing Day, OTC Clear will determine, at the End-of-Day Cut Off Time on such OTC Clear Clearing Day:

- (i) the net present value of each Position Account of each Clearing Member and the Special Clearing House Participant (the “**Base NPV**”); and
- (ii) the net present value of each Position Account of each Clearing Member and the Special Clearing House Participant under each stress scenario prescribed by the stress test model prescribed by OTC Clear as described further in section 6.3. The stress test value derived for 6.3 (each a “**Stress NPV**”).

In respect of each Position Account of a Clearing Member and the Special Clearing House Participant on an OTC Clear Clearing Day, the absolute value of the largest decrease in net present value (determined by comparing each Stress NPV against the Base NPV) for that Position Account on that day is referred to as the “**Position Account STV**”.

(2b) Position Account Stress Add-on

In respect of each Clearing Member or Special Clearing House Participant and an OTC Clear Clearing Day, OTC Clear will determine, at the End-of-Day Cut Off Time on such OTC Clear Clearing Day:

- (i) the net present value of each Position Account and Collateral Account of each Clearing Member and the Special Clearing House Participant (the “**Base XNPV**”); and
- (ii) the net present value of each Position Account and Collateral Account of each Clearing Member and the Special Clearing House Participant, under each stress scenario prescribed by the stress test model prescribed by OTC Clear as described further in section 6.3. The stress test value derived for section 6.3 (the “**Stress XNPV**”);

in respect of a Clearing Member, its Collateral Account means the Margin Balance excluding the value of any Excess Margin;

in respect of the Special Clearing House Participant, its Collateral Account means the aggregate of the cash Collateral standing to the credit of the Hong Kong Collateral Account and the amount standing to the credit of the PRC Collateral Account, excluding any Excess Inter-CCP SHCH Margin and any excess collateral posted by OTC Clear.

In respect of each Position Account and Collateral Account on an OTC Clear Clearing Day, the absolute value of the largest decrease in net present value (determined by comparing each Stress XNPV against the Base XNPV) for that Position Account on that day is referred to as the “**Position and Collateral Account STV**”.

Unless a Clearing Member has opted to utilize its Excess Margin to reduce the Expected Uncollateralized Loss in respect of any of its Position Accounts in

accordance with Clearing Rule 1218A, Excess Margin shall be excluded in the calculation of Stress XNPV and Position and Collateral Account STV. For the avoidance of doubt, if such Clearing Member has submitted a Withdrawal/Porting Notice or a Non-cash Collateral Withdrawal/Porting Notice, the amount set out in such notice shall be excluded from such calculation from the date of such notice.

In respect of each Position Account on an OTC Clear Clearing Day, the increase in the largest net present value (determined by comparing Position and Collateral Account STV against the Position Account STV) for that Position Account after taking Collateral Account into account on that day is referred to as the **“Collateral Stress Add-on”**.

In addition to the Collateral Stress Add-on, OTC Clear may apply other stress add-ons, including but not limited to those relating to the risk parameters under Clearing Procedures 4.2.3, 4.5.2(viii) and 4.5.3, at the End of Day Cut Off Time on each OTC Clear Clearing Day. The aggregate of any Collateral Stress Add-on and such other stress add-ons in respect of each Position Account of a Clearing Member shall be regarded as the **“Position Account Stress Add-on”**.

(3) Margin Balance (for the purpose of Rates and FX Guarantee Fund calculation)

With respect to a Clearing Member, OTC Clear shall exclude from the Margin Balance any additional Collateral provided under Clearing Rule 1510 and any Additional Margin provided to cure any exceedance of or reduce utilisation of a Notional Exchange Risk Limit and it is assumed that there is no Excess Margin with respect to the Clearing Member's House Position Account.

With respect to the Special Clearing House Participant, such balance refers to the aggregate of the cash Collateral standing to the credit of the Hong Kong Collateral Account and the amount standing to the credit of the PRC Collateral Account, excluding any Excess Inter-CCP SHCH Margin, any excess collateral posted by OTC Clear and any IM Add-on as defined in section 11.6 of these Clearing Procedures.

(4) Expected Uncollateralized Loss

On each OTC Clear Clearing Day, OTC Clear will then determine the Position Account EUL for each Position Account of each Clearing Member and the Position Account EUL for the House Position Account of the Special Clearing House Participant, where:

“Position Account EUL” means, with respect to:

- (i) a Position Account of a Clearing Member and an OTC Clear Clearing Day, an amount equal to (A) the Position Account STV plus (B) Position Account Stress Add-on less (C) the Margin Balance (excluding (i) any Excess Margin, unless a Clearing Member has opted to utilize its Excess Margin to reduce the Expected Uncollateralized Loss in respect of any of its Position Accounts in accordance with Clearing Rule 1218A, in which

case Excess Margin shall be included*, (ii) any additional Collateral provided under Clearing Rule 1510 and (iii) any Additional Margin provided to cure any exceedance of or reduce utilisation of a Notional Exchange Risk Limit) recorded to the Collateral Account relating to such Position Account, each determined as of the End-of-Day Cut Off Time on such OTC Clear Clearing Day; or

- (ii) the House Position Account of the Special Clearing House Participant and an OTC Clear Clearing Day an amount equal to (A) the Position Account STV plus (B) Position Account Stress Add-on less (C) the aggregate of the cash Collateral standing to the credit of the Hong Kong Collateral Account and the amount standing to the credit of the PRC Collateral Account, excluding any Excess Inter-CCP SHCH Margin, any excess collateral posted by OTC Clear and any IM Add-on as defined in section 11.6 of these Clearing Procedures, each determined as of the End-of-Day Cut Off Time on such OTC Clear Clearing Day.

In this illustrative example where none of the Clearing Members engages in Client Clearing Services, the “**Expected Uncollateralized Loss**” for each such Clearing Member is the Position Account EUL relating to its House Position Account. If a Clearing Member engages in Client Clearing Services, the “**Expected Uncollateralized Loss**” for such Clearing Member is the sum of the Position Account EUL relating to its House Position Account and the aggregate of the Position Account EULs with positive values relating to all such Clearing Member’s Client Accounts.

- (5) Relative pro-rata percentage share

The “**relative pro-rata percentage share**” means, with respect to a Clearing Member and an OTC Clear Clearing Day, the Expected Uncollateralized Loss with respect to such Clearing Member on such day divided by the total Expected Uncollateralized Loss with respect to all Clearing Members on such day. In the illustrative example, since the total Expected Uncollateralized Loss for all six Clearing Members is 1,800, the relative pro-rata percentage share of each Clearing Member will be a percentage equal to such Clearing Member’s Expected Uncollateralized Loss divided by the total Expected Uncollateralized Loss of 1,800. In the case of Clearing Member A, its relative pro-rata percentage share is 25% (being 450/1800) on OTC Clear Clearing Day “X”. For avoidance of doubt, the relative pro-rata percentage share for the Special Clearing House Participant is not illustrated as the Special Clearing House Participant is exempted from Rates and FX Contribution.

- (6) Daily GF Value

In respect of each Clearing Member and an OTC Clear Clearing Day, OTC Clear will determine the “**Daily GF Value**” for such Clearing Member on such day to be the product of the Max EUL and the relative pro-rata percentage share on such day,

* For the avoidance of doubt, if such Clearing Member has submitted a Withdrawal/ Porting Notice or a Non-cash Collateral Withdrawal/ Porting Notice, the amount set out in such notice shall be excluded from the Margin Balance from the date of such notice.

where “**Max EUL**” means, on any given OTC Clear Clearing Day, an amount equal to the greater of:

- (i) the largest Expected Uncollateralized Loss amount amongst all the Expected Uncollateralized Loss amounts calculated with respect to all Clearing Members and the Special Clearing House Participant under the same stress scenario within the GF Calculation Period; and
- (ii) the largest Expected Uncollateralized Loss amount amongst all the Expected Uncollateralized Loss amounts calculated with respect to all Clearing Members under the same stress scenario within the GF Calculation Period, with the following modifications:
 - (a) the Expected Uncollateralized Loss amount of all Clearing Members who are Affiliates of one another shall be aggregated with the Expected Uncollateralized Loss amount of the largest Affiliate; and
 - (b) the selection of the largest Expected Uncollateralized Loss amount is made on a revised pool excluding the Expected Uncollateralized Loss amounts determined in respect of the smaller Affiliated Clearing Members.

For avoidance of doubt, the Daily GF Value for the Special Clearing House Participant is not illustrated as the Special Clearing House Participant is exempted from Rates and FX Contribution.

(7) Daily GF Value with Reserve

The “**Daily GF Value with Reserve**” in respect of a Clearing Member will be calculated on each OTC Clear Clearing Day by multiplying the Daily GF Value of such Clearing Member determined on such day by 110%. In the case of Clearing Member A, its Daily GF Value with Reserve is 137.5 (being 125 X 110%) on OTC Clear Clearing Day “X”.

(8) Client Clearing Services

With respect to any Clearing Member who engages in Client Clearing Services:

- (i) OTC Clear will determine the Position Account STV, Position Account Stress Add-on, Margin Balance and Position Account EUL for each Client Position Account of such Clearing Member in exactly the same manner as described in parameters (2a), (2b), (3) and (4) above;
- (ii) the “**Expected Uncollateralized Loss**” for such Clearing Member shall be the sum of:
 - (a) the Position Account EUL relating to its House Position Account; and
 - (b) the aggregate of the Position Account EULs with positive values relating to all Clearing Member’s Client Accounts.