

Chapter 11

CLEARING PROCEDURES RELATING TO THE SPECIAL CLEARING HOUSE PARTICIPANT

Northbound Swaps Clearing Services

11.1 Obligations of the Special Clearing House Participant

All obligations of the Special Clearing House Participant under these Clearing Procedures have been specified in, or otherwise incorporated by reference into Part VA of the Clearing Rules. For the avoidance of doubt, the Special Clearing House Participant shall have no other obligations under these Clearing Procedures other than as specified or incorporated in Part VA of the Clearing Rules.

11.2 Operation of the Clearing Link Services

The specified Approved Trade Registration System for Original Northbound Transactions (CFETS) will provide clearing data, settlement data and risk data of Original Northbound Transactions to OTC Clear and the Special Clearing House Participant from time to time between 09:00 hours Hong Kong time and 17:30 hours Hong Kong time on each Northbound Clearing Day.

Upon receipt of such data from CFETS, OTC Clear will, unless notified otherwise, between 09:00 hours Hong Kong time and 17:30 hours Hong Kong time on each Northbound Clearing Day:

- (i) if the Original Northbound Transaction is submitted by a Client, confirm that the relevant Clearing Member has agreed to offer Client Clearing Services for such transaction to such Client;
- (ii) check that the Original Northbound Transaction satisfies the product eligibility requirements set out in section 3.4.5 of these Clearing Procedures;
- (iii) run the Margin Process described in section 4.6 of these Clearing Procedures; and
- (iv) (if no SHCH Event of Default has occurred, or in OTC Clear's reasonable opinion is likely to occur), check that the Special Clearing House Participant would be within its single-day CCP risk exposure limit and total risk exposure limit upon registration of that Original Northbound Transaction in its House Position Account.

OTC Clear will communicate the result of such checks to the Special Clearing House Participant promptly on the same Northbound Clearing Day.

The Special Clearing House Participant shall then perform its own eligibility requirements pursuant to the SHCH Clearing Guidelines in respect of Original Northbound Transactions between 09:00 hours Hong Kong time and 17:30 hours Hong Kong time on each Northbound Clearing Day.

The Special Clearing House Participant shall consolidate and communicate the final clearing result to CFETS and OTC Clear promptly and in any case no later than 18:00 hours Hong Kong time on that Northbound Clearing Day.

If the Original Northbound Transaction has been accepted for clearing by both OTC Clear and the Special Clearing House Participant, such transaction will be registered between OTC Clear and the Special Clearing House Participant as an Inter-CCP Rates Derivatives Contract at the registration time specified by the Special Clearing House in its clearing report on that Northbound Clearing Day.

11.3 De-registration of Inter-CCP Rates Derivatives Contract

OTC Clear will not accept any de-registration request from the Special Clearing House Participant for any Inter-CCP Rates Derivatives Contract.

However, if a de-registration request in respect of a pair of Standard Northbound Rates Derivatives Contracts is approved and processed by OTC Clear as described in section 3.6.2 of the Clearing Procedures, the relevant Inter-CCP Rates Derivatives Contract with equal but opposite terms to (and which have been created to correspond to) Standard Northbound Rates Derivatives Contract will also be de-registered. Upon completing the de-registration process for the relevant Standard Northbound Rates Derivatives Contracts and the relevant Inter-CCP Rates Derivatives Contracts, OTC Clear will notify the Special Clearing House Participant and the relevant Approved Trade Registration System.

For the avoidance of doubt, no de-registration fee will be charged to the Special Clearing House Participant for the de-registration of any Inter-CCP Rates Derivatives Contracts.

11.4 Identifier

The Special Clearing House Participant will be identified in OTC Clear's Rates and FX Clearing System by way of a unique identifier assigned to it and mapped to its House Position Account and House Collateral Account.

11.5 Settlement

A. in respect of Inter-CCP Rates Derivatives Contracts

Payments in respect of Inter-CCP Rates Derivatives Contracts shall be calculated on each Northbound Clearing Day by reference to curves constructed by the Special Clearing House Participant based on the market data obtained at or around 16:00 hours Hong Kong time on such Northbound Clearing Day.

Any such payment to be made between OTC Clear and the Special Clearing House Participant on a Northbound Clearing Day shall be settled on that Northbound Clearing Day:

- (i) no later than 13:30 hours Hong Kong time for any payment to be made by OTC Clear to the Special Clearing House Participant; and
- (ii) no later than 15:30 hours Hong Kong time for any payment to be made by the Special Clearing House Participant to OTC Clear.

B. Settlement in respect of Inter-CCP Margin Amount

Payments in Eligible Inter-CCP Currency from OTCC to the Special Clearing House Participant for the purpose of satisfying the Inter-CCP OTCC Margin Amount in respect of each Northbound Clearing Day shall be settled by no later than 16:00 hours Hong Kong time on the immediately following Northbound Clearing Day. Payments in Eligible Inter-CCP Currency from the Special Clearing House Participant to OTC Clear for the purpose of satisfying the Inter-CCP SHCH Margin Amount in respect of each Northbound Clearing Day shall be settled by no later than 16:00 hours Hong Kong time on the immediately following Northbound Clearing Day.

Margin and Valuation

11.6 Inter-CCP Margin Amount

The Inter-CCP Margin Amount shall be calculated in respect of each Northbound Clearing Day, which shall be the higher of the values calculated by OTC Clear and the Special Clearing House Participant respectively after 16:00 hours China Standard Time on such Northbound Clearing Day.

OTCC shall perform its calculation of the Inter-CCP Margin Amount in accordance with the methodology set out in section 11.6.1 below. The Special Clearing House Participant shall perform its calculation of the Inter-CCP Margin Amount in accordance with the methodology set out in the SHCH Clearing Rules, the SHCH Clearing Guidelines and the Clearing Link Agreement.

11.6.1 OTC Clear's calculation of Inter-CCP Margin Amount

OTC Clear shall calculate the Inter-CCP Margin Amount in respect of a Northbound Clearing Day in accordance with the below:

- (i) OTC Clear's potential future exposure in normal market conditions in respect of all Inter-CCP Rates Derivatives Contracts registered to the Special Clearing House Participant's House Position Account using its own internally built value-at-risk model based on simulation of 5 years historical data on a rolling basis using: (x) in respect of Inter-CCP Margin Amount calculated on such Northbound Clearing Day which is also an OTC Clear Clearing Day, the prevailing market prices at or around 1600hrs Hong Kong time on such Northbound Clearing Day; or (y) in respect of Inter-CCP Margin Amount calculated on a Northbound Clearing Day which is not an OTC Clear Clearing Day, the prevailing market prices at or around 1600hrs Hong Kong time on the immediately preceding OTC Clear Clearing Day, in each case, with a single-tailed confidence interval of at least 99%, assuming over a close-out period of 5 OTC Clear Clearing Days (the "**IM Component**"), provided that in the event that the Expected Uncollateralized Loss of the Special Clearing House Participant on any two consecutive days which are OTC Clear Clearing Day(s) and/or Northbound Clearing Day(s) exceeds the Expected Uncollateralized Loss of the Special Clearing House Participant determined in respect of the immediately preceding calculation period by 10% or more and the value of the Expected Uncollateralized Loss of the Special Clearing House Participant is more than 50% of the value of the Rates and FX Guarantee Fund, the absolute value of such exceedance will be added to the IM Component (the "**IM Add-on**");

plus

- (ii) A buffer of CNY200 million or such other amount which has been mutually agreed between the Special Clearing House Participant and OTC Clear;

plus

- (iii) The relative pro-rata percentage share attributed to the Special Clearing House Participant of a hypothetical guarantee fund which is based on the Expected Uncollateralized Loss of all Clearing Members and the Expected Uncollateralized Loss of the Special Clearing House Participant (the "**GF Component**").

11.6.2 GF Component

The GF Component shall be calculated on the first or second OTC Clear Business Day of a calendar month and applied in respect of each of the remaining Northbound Clearing Days in that calendar month, unless the Rates and FX Guarantee Fund is subject to ad hoc resizing, in which case, the GF Component will be re-calculated on another OTC Clear Clearing Day and Northbound Clearing Day which is not a OTC Clear Clearing Day within that calendar month, on the date that the Expected Uncollateralized Loss of any Clearing Member or the Expected Uncollateralized Loss of the Special Clearing House Participant increases by 20% or more from the Max EUL determined in respect of the immediately preceding calculation period or 20 OTC Clear Business Days after the occurrence of a DMP Event. The GF Component re-calculated on such day will be applied for each of the remaining Northbound Clearing Days in that month.

The GF Component shall be an amount calculated using the following formula:

Relative Pro-rata Percentage Share of Special Clearing House Participant x Max EUL x 110%

Below is an illustrative example to show how the GF Component determined for the Special Clearing House Participant on OTC Clear Clearing Day “X”:

In the illustrated example, the GF Component is 67.1 (being 500 x 12.20% X 110%) on OTC Clear Clearing Day “X”.

Clearing Member / Special Clearing House Participant	Position Account STV ^(a)	Position Account Stress Addition ^(b)	Margin Balance ^(c)	Expected Uncollateralized Loss ^(d)	Relative pro-rata percentage share ^(e)	GF Component
Clearing Member A	1,000	80	630	450	21.95%	
Clearing Member B	300	20	120	200	9.76%	
Clearing Member C	500	50	300	250	12.20%	
Clearing Member D	800	100	400	500	24.39%	
Clearing Member E	600	60	460	200	9.76%	
Clearing Member F	400	20	220	200	9.76%	
Special Clearing House Participant	420	30	200	250	12.20%	67.1
Total				2,050		

(a) Position Account STV

In respect of each Clearing Member and the Special Clearing House Participant and an OTC Clear Clearing Day and a Northbound Clearing Day which is not a OTC Clear Clearing Day, OTC Clear will determine, at the End-of-Day Cut Off Time on such 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 and on a Northbound Clearing Day which is not a 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**”.

(b) Position Account Stress Add-on

In respect of each Clearing Member or Special Clearing House Participant and an OTC Clear Clearing Day and a Northbound Clearing Day which is not a OTC Clear Clearing Day, OTC Clear will determine, at the End-of-Day Cut Off Time on such 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 and on a Northbound Clearing Day which is not a 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 and on a Northbound Clearing Day which is not a 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(vii), 4.5.2(viii) and 4.5.3, at the End of Day Cut Off Time on each OTC Clear Clearing Day and on each Northbound Clearing Day which is not a OTC Clear Clearing Day. The aggregate of any Collateral Stress Add-on and such other stress add-ons in respect of each Position Account shall be regarded as the **“Position Account Stress Add-on”**.

(c) Margin Balance (for the purpose of GF Component 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, any IM Add-on and the GF Component calculated in respect of the previous calculation period.

(d) Expected Uncollateralized Loss

On each OTC Clear Clearing Day and each Northbound Clearing Day which is not a OTC Clear Clearing Day, OTC Clear will 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 or a Northbound Clearing Day which is not a 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 included¹, (ii) any additional Collateral provided under Clearing Rule 1510

¹ 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.

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 day; or

- (ii) the House Position Account of the Special Clearing House Participant and an OTC Clear Clearing Day or a Northbound Clearing Day which is not a OTC Clear Clearing Day equals 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, IM Add-on and the GF Component calculated in respect of the previous calculation period), each determined as of the End-of-Day Cut Off Time on such day.

(e) Relative pro-rata percentage share

The “**relative pro-rata percentage share**” means:

- (i) with respect to a Clearing Member and an OTC Clear Clearing Day and a Northbound Clearing Day which is not a OTC Clear Clearing Day, the Expected Uncollateralized Loss of such Clearing Member on such day divided by the aggregate of the Expected Uncollateralized Loss of all Clearing Members and the Expected Uncollateralized Loss of the Special Clearing House Participant on such day; and
- (ii) with respect to the Special Clearing House Participant and an OTC Clear Clearing Day and a Northbound Clearing Day which is not a OTC Clear Clearing Day, the Expected Uncollateralized Loss of the Special Clearing House Participant on such day divided by the aggregate of the Expected Uncollateralized Loss of all Clearing Members and the Expected Uncollateralized Loss of the Special Clearing House Participant on such day.

In the illustrative example, since the aggregate of the Expected Uncollateralized Loss of all Clearing Members and the Expected Uncollateralized Loss of the Special Clearing House Participant is 2050, the relative pro-rata percentage share of the Special Clearing House Participant will be a percentage equal to the Special Clearing House Participant’s Expected Uncollateralized Loss divided by the aggregate Expected Uncollateralized Loss of 2,050 – i.e. $250/2050 = 12.20\%$ on OTC Clear Clearing Day “X”.

For avoidance of doubt, the relative pro-rata percentage share for the other Clearing Members is illustrated here for reference only in respect of a hypothetical Rates and FX Guarantee Fund where the Special Clearing House Participant would be making Rates and FX Contributions. Section 6 of these Clearing Procedures shall apply in determining the relative pro-rata percentage share for each Clearing Member and the amount of their Rates and FX Liability.

(f) Max EUL

“**Max EUL**” means, on any given OTC Clear Clearing Day and Northbound Clearing Day which is not a 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 same period the GF Component is calculated; 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 same period the GF Component is calculated, 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.

In the illustrated example, the Max EUL is 500 on OTC Clear Clearing Day “X”.

11.7 Variation Margin

Variation Margin covers the amount that is required to settle the daily diminution in the net present value (if any) of the Inter-CCP Rates Derivatives Contracts in the Special Clearing House Participant’s House Position Account. Collection of Variation Margin helps to ensure that the risk exposure assumed by OTC Clear is constantly monitored and that OTC Clear remains risk neutral.

Any payment of Variation Margin on any Northbound Clearing Day (i) to be made by OTC Clear to the Special Clearing House Participant shall be made by 13:30 hrs China Standard Time and (ii) to be made by the Special Clearing House Participant to OTC Clear shall be made by 15:30 hrs China Standard Time, on such Northbound Clearing Day.

11.8 Product specific terms and calculation methodologies

The product specific terms of Inter-CCP Rates Derivatives Contracts, including the applicable calculation methodologies, are set out in the SHCH Clearing Rules and SHCH Clearing Guidelines.

11.8.1 Calculation and Valuation Process

The net present value and market price movements of each Inter-CCP Rates Derivatives Contract shall be calculated using zero coupon curves constructed by the Special Clearing House Participant.

11.8.2 Price Alignment Interest

Variation Margin will be adjusted by application of price alignment interest (“PAI”) calculated by the Special Clearing House Participant. Without a PAI, the pricing of a Contract registered with OTC Clear would be distorted from that of equivalent transactions which are not registered with OTC Clear. PAI for an Inter-CCP Rates Derivatives Contract is intended to settle the internal rate of return on the cumulative Variation Margin payments transferred in respect of each Northbound Clearing Day.

Collateral

11.9 Cash Collateral

Variation Margin requirements must be satisfied in cash in the Contractual Currency.

Inter-CCP SHCH Margin Amount must be satisfied in cash in any Eligible Inter-CCP Currency. The Special Clearing House Participant must:

- (i) have entered into a valid Inter-CCP SHCH Charge Agreement in the terms as appended to Part VA of the Clearing Rules; and
- (ii) complete all perfection requirements in all relevant jurisdictions to the satisfaction of OTC Clear.

Any interest on the Collateral in the Hong Kong Collateral Account will be credited by the relevant custodian bank to the Hong Kong Collateral Account at the then prevailing interest rate agreed between OTC Clear, the Special Clearing House Participant and such custodian bank. If OTC Clear is charged negative interest in respect of the Collateral in the Hong Kong Collateral Account (including any income on such Collateral), OTC Clear shall be entitled to demand reimbursement of such amounts from the Special Clearing House Participant.

11.10 Non-cash Collateral

Non-cash Collateral will not be accepted from the Special Clearing House Participant.

11.11 Collateral Valuation

11.11.1 Collateral Haircuts

When determining whether the Special Clearing House Participant's Margin Balance is sufficient to cover its Inter-CCP SHCH Margin Amount, OTC Clear will value the cash Collateral in the Hong Kong Collateral Account and apply the valuation discount or haircut stipulated by OTC Clear. OTC Clear may apply and/or modify any valuation procedures or haircuts on each type of Eligible Inter-CCP Currency in accordance with its risk management rules and policies and notified to the Special Clearing House Participant from time to time. For the avoidance of doubt, where the currency of the cash Collateral deposited in the Hong Kong Collateral Account is the same as the denomination currency of the Inter-CCP SHCH Margin Amount, the haircut percentage of such currency shall be zero.

11.11.2 Valuation

All Collateral will be valued or marked-to-market at least once a day using current market data and quotes, and any such valuation will take into account the application of collateral haircuts referred to in section 7.3.1 of this Chapter. At any given time, any cash Collateral denominated in an Eligible Inter-CCP Currency other than CNY (offshore) will be valued at the CNY (offshore) equivalent at the prevailing rate at the time of valuation as OTC Clear shall reasonably select.

The Special Clearing House Participant may be required to transfer additional cash Collateral to OTC Clear if the Margin Balance decreases due to change in the applicable collateral haircut.