

OTC Clear Clearing Procedures

Chapter 1

Introduction to Clearing Procedures

1.2 Amendments

Subject to the SFO and the Articles of Association of OTC Clear:

- (i) the OTC Clear Board, after consultation with the Risk Management Committee, shall have the power to amend this section 1.2 and add to, vary or waive any of these Clearing Procedures set out in Chapter 2, Chapter 4, Chapter 5, Chapter 6, Chapter 8, Chapter 10 and Chapter 11 of these Clearing Procedures; and
- (ii) the OTC Clear Board shall have the power to amend, add to, vary or waive any of the remaining Clearing Procedures which are not referred to in sub-paragraph (i) above without first consulting the Risk Management Committee.

Without prejudice to the foregoing, OTC Clear recognizes that circumstances may arise which may require it to make ad hoc or urgent decisions on a case specific basis or where a meeting of the OTC Clear Board and/or the Risk Management Committee cannot be convened in a timely manner. Accordingly, the OTC Clear Board may delegate its powers under sub-paragraphs (i) and (ii) above to the chief executive or such other senior executives of OTC Clear as it considers appropriate provided that in respect of matters referred to in sub-paragraph (i) above, the chairman of the Risk Management Committee shall be consulted before a decision is made.

1.3 Operations of the Rates and FX Clearing Services and Clearing Link Services

Unless otherwise notified, the "Margin Process" described in section 4.6 of these Clearing Procedures and related curve construction or calculations will be performed during 08:30 – 19:00 hours Hong Kong time on each OTC Clear Clearing Day and on each Northbound Clearing Day (the "**Margin Process Hours**").

The product eligibility requirements check in respect of Original Transactions described in section 3.4 of these Clearing Procedures will be performed during 08:30 – 19:00 hours Hong Kong time on each OTC Clear Clearing Day.

Unless otherwise notified, the product eligibility requirements check in respect of Original Northbound Transactions described in section 3.4.5 of these Clearing Procedures will be performed during 09:00 – 17:30 hours Hong Kong time on each Northbound Clearing Day.

Chapter 2

Membership

2.1 Membership Application Process

2.1.5 Approval of Application

Once the application review process has been completed by OTC Clear, the application will be approved or rejected by the OTC Clear Board, in consultation with the Risk Management Committee (provided that such committee has been constituted).

Pursuant to Clearing Rule 308, the OTC Clear Board may, in consultation with the Risk Management Committee (provided that such committee has been constituted), also approve an application in principle subject to the Applicant's fulfilment of conditions set by the OTC Clear Board. Upon receipt of the conditional approval, the Clearing Member may submit Original Transactions and Original Northbound Transactions for registration by OTC Clear, provided that Clearing Rule 308 shall apply if a Clearing Member fails to fulfil the conditions within the specific time.

The OTC Clear Board's decision will be final and Applicants will be given written notice of approval or rejection. A failed Applicant may request OTC Clear to provide reasons for rejection of its application for Membership.

In accordance with Clearing Rule 405, Membership may not be assigned, transferred or sold without the prior written approval of OTC Clear Board.

2.1.7 Designated Person

A Designated Person may submit Original Transactions and Original Northbound Transactions for registration on behalf, and in the name, of its Clearing Member pursuant to the provisions of Chapter 7 of the Clearing Rules.

2.3 Clearing Members' On-going Requirements and Obligations

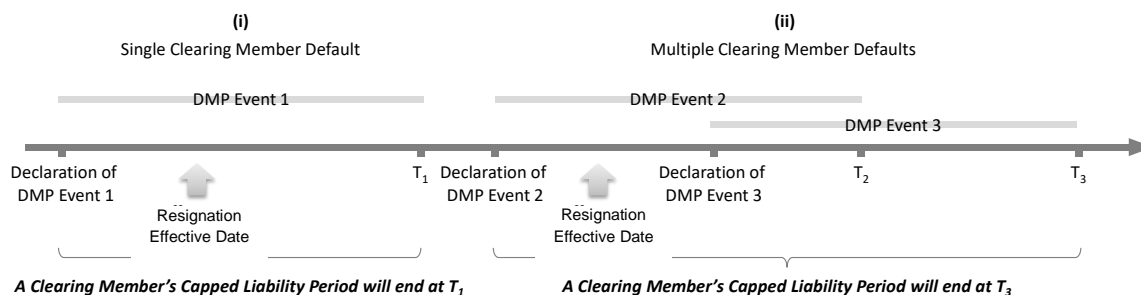
OTC Clear's requirements in respect of Clearing Members are designed to ensure Clearing Members have sufficient financial resources and the relevant infrastructure for submission of Original Transactions and Original Northbound Transactions for registration as Contracts with OTC Clear.

2.9 Capped Liability Period

In connection with Clearing Rules 609 and 1544, the following diagram illustrates how a Clearing Member's Maximum Current Liability is determined in respect of each Capped Liability Period:

- (i) if there is a single DMP Event (i.e. no other DMP Event has occurred in the period 20 OTC Clear Business Days prior or after such DMP Event), then the Capped Liability Period is the period from the declaration of such DMP Event to the 20th OTC Clear Business Day after such declaration; or
- (ii) if there are multiple DMP Events occurring in close succession and each of them occurred within 20 OTC Clear Business Days of another DMP Event, then the Capped Liability Period is the period from declaration of the first DMP Event (i.e. no other DMP Event has occurred

within 20 OTC Clear Business Days prior to such DMP Event) to the 20th OTC Clear Business Day after the last of such declared DMP Event.



Note: A Clearing Member's Maximum Current Liability will be capped at a predetermined amount (i.e. its Rates and FX Guarantee Fund Requirement plus its proportionate share of the Rates and FX Assessments)

■ 20 OTC Clear Business Days
T DMP Event + 20 OTC Clear Business Days

Chapter 3

Rates and FX Clearing Services and Clearing Link Services

3.1 Overview

Upon execution of an Original Transaction, Clearing Members or Clients who are parties to such Original Transaction and who wish to submit such Original Transaction for registration with OTC Clear shall submit such instructions to the same Approved Trade Registration System.

Upon execution of an Original Northbound Transaction, Clearing Members, Clients or PRC dealers who are parties to such Original Northbound Transaction and who wish to submit such Original Northbound Transaction for registration with OTC Clear and the Special Clearing House Participant through the Clearing Link Services shall submit such instructions to OTC Clear and the Special Clearing House Participant via the Approved Trade Registration System operated by CFETS.

Upon receipt of such instructions, the relevant Approved Trade Registration System will perform matching of the instructions. As described in section 3.2, each Approved Trade Registration System is a system provided by a third-party vendor and as such, OTC Clear will not be responsible or liable for any such trade matching performed by any such Approved Trade Registration System.

After an Original Transaction or Original Northbound Transaction is matched by an Approved Trade Registration System, the Approved Trade Registration System will submit such transaction to OTC Clear or, in the case of an Original Northbound Transaction, to OTC Clear and the Special Clearing House Participant, for registration.

Any Original Transaction and Original Northbound Transaction which is submitted for registration is required to fulfil the applicable product eligibility requirements set out in section 3.4 and “Margin Process” as described in section 4.6 of these Clearing Procedures. The results of the registration will be communicated to the relevant Approved Trade Registration System and/or indicated in the “OTC Clear Trade Report (Report Number TDRP01, TDRP02, TDRP03, TDRP04, TDRP05, TDRP06, TDRP11, TDRP12, TDRP13, TDRP16, TDRP17 or TDRP18)” in relation to any House Position Account or “OTC Clear Trade Report for Client (Report Number TDRP01_C, TDRP02_C, TDRP03_C, TDRP04_C, TDRP05_C, TDRP06_C, TDRP11_C, TDRP12_C or TDRP13_C, TDRP16_C, TDRP17_C or TDRP18_C)” in relation to any Client Position Account. All OTC Clear Trade Reports are available to the Clearing Members on the Web Portal.

In respect of Original Transactions only, the ISDA Definitions and FX Definitions are incorporated by reference into this Chapter 3. References to “Business Day(s)” as used in this Chapter 3 with respect to Original Transactions shall have the meaning given to it in the ISDA Definitions. For the avoidance of doubt, the meaning of “Business Day” incorporated by reference in Chapter 23, Chapter 24 and Chapter 26 of the Clearing Rules shall not be applicable in this Chapter 3.

3.2 Approved Trade Registration System

OTC Clear does not discriminate or distinguish between Original Transactions or Original Northbound Transactions based upon execution method or venue. However, Original Transactions or Original Northbound Transactions will be accepted only if they are submitted through an approved matching and confirmation service for over-the-counter derivatives transactions designated by OTC Clear from time to time and notified to Clearing Members via Clearing Notice (each an “**Approved**

Trade Registration System”). Any Original Transaction or Original Northbound Transaction submitted to OTC Clear through an Approved Trade Registration System shall be deemed to be submitted for or by the relevant Clearing Member. In circumstances where the registration of an Original Transaction or Original Northbound Transaction is conditional upon the consent of the relevant Clearing Member agreeing to take up the clearing of such transaction and offer Client Clearing Services to such Client, such transaction shall be deemed to have been submitted to OTC Clear by such Clearing Member if consent of such Clearing Member is obtained. Please refer to the ATRS Guide which sets out each data field on an Approved Trade Registration System accepted by OTC Clear for the purpose of submission of an Original Transaction or Original Northbound Transaction for registration as Contracts. The ATRS Guide will also provide the relevant values applied by OTC Clear in respect of certain data fields. Each Clearing Member agrees and acknowledges that it shall be bound by the ATRS Guide.

Each of the Approved Trade Registration Systems is a system provided by a third-party vendor. OTC Clear has no involvement in and does not guarantee the level of performance, integrity or efficiency in relation to any services provided by the providers of such Approved Trade Registration Systems. The service level agreements entered into between the provider of the relevant Approved Trade Registration System and the Clearing Members govern the terms and conditions of the provision of services by the provider of such Approved Trade Registration System to the relevant Clearing Members. OTC Clear accepts no liability arising from the usage of any Approved Trade Registration System by any Clearing Member.

It is the responsibility of a Clearing Member, Client or PRC dealer to ensure that all Original Transactions or Original Northbound Transactions are submitted by its authorized personnel. Such persons are responsible for ensuring that they comply with the security and access procedures of the relevant Approved Trade Registration System. OTC Clear has no obligation to verify if the trade details are genuine and/or correctly reflect the trade which has been entered by the Clearing Member, Client or PRC dealer. OTC Clear is not liable for any losses suffered by any Clearing Member, Client or PRC dealer which are incurred by any unauthorized input of trade into the Approved Trade Registration System.

OTC Clear does not make any representation as to the accuracy of any data sent via an Approved Trade Registration System (whether by Clearing Members to OTC Clear, or by OTC Clear to Clearing Members, in each case, via an Approved Trade Registration System). A Clearing Member shall be bound by the terms and conditions of a Contract on the basis of the data sent by an Approved Trade Registration System to OTC Clear notwithstanding the existence of any incorrect or corrupted data being sent by such Approved Trade Registration System to OTC Clear. OTC Clear is not required to perform any rectification or re-registration of such Contract, and shall have no liability for any loss relating to registration of such Contract.

3.3 Process of Registration and Rejection

3.3.1 Creation of Contracts through Submission of Original Transactions or Original Northbound Transactions by Clearing Members - Status of Registration of a Transaction and Notification of Results

Each Original Transaction and Original Northbound Transaction submitted to OTC Clear for registration is required to satisfy all applicable Eligibility Requirements in order to be accepted for

clearing. Any Original Transaction or Original Northbound Transaction which contains any invalid or incomplete trade data will be rejected and will not be cleared.

Original Transactions submitted for registration before 19:00 hours Hong Kong time on an OTC Clear Clearing Day will be processed on the same day. Original Transactions submitted for registration on a day which is not an OTC Clear Clearing Day, or at or after 19:00 hours Hong Kong time on an OTC Clear Clearing Day, will be processed on the next OTC Clear Clearing Day. If the relevant Clearing Member does not have sufficient Margin in the relevant Collateral Account to satisfy the “Margin Process” check as set out in section 4.6 of these Clearing Procedures, the relevant Original Transaction will be put on “pending” status and flagged as “WAIT_MARGIN”, “LIMIT_FAILED” or “PROCESSING” in the “OTC Clear Trade Report (Report Number TDRP03, TDRP04, TDRP12 or TDRP17)” in relation to any House Position Account or “OTC Clear Trade Report for Client (Report Number TDRP03_C, TDRP04_C, TDRP12_C or TDRP17_C)” in relation to any Client Position Account.

If the relevant Clearing Member does not post sufficient Margin to satisfy the “Margin Process” check before 19:00 hours Hong Kong time on an OTC Clear Clearing Day, all Original Transactions on “pending” status at the 19:00 hours Hong Kong time on an OTC Clear Clearing Day will be rejected by OTC Clear. Successful or failed registration requests will be communicated to Clearing Members through the relevant Approved Trade Registration System.

Original Northbound Transactions submitted for registration before 17:30 hours Hong Kong time on a Northbound Clearing Day, will be processed on the same day. Original Northbound Transactions submitted to OTC Clear for registration on a day which is not a Northbound Clearing Day, or at or after 17:30 hours Hong Kong time on a Northbound Clearing Day will be rejected. If a Client of a Clearing Member submits an Original Northbound Transaction for registration with OTC Clear, the relevant Clearing Member must either (i) confirm its acceptance of the clearing of such Original Northbound Transaction as soon as practicable after being contacted by OTC Clear and in any case before 17:30 hours Hong Kong time on a Northbound Clearing Day, otherwise such Original Northbound Transaction will be rejected or, (ii) have provided an authenticated consent form^{*} to OTC Clear that it agrees to accept clearing of such Original Northbound Transaction so long as the aggregate risk exposure of all Standard Northbound Rates Derivatives Contracts booked into the relevant Client Position Account, including the relevant Standard Northbound Rates Derivatives Contract to be created upon the novation of such Original Northbound Transaction, does not exceed the pre-approved risk limit(s) specified by the relevant Clearing Member, based on the risk exposure calculated by OTC Clear at the time of submission of such Original Northbound Transaction; if such limit(s) will be exceeded, the relevant Clearing Member has instructed OTC Clear to reject such Original Northbound Transaction. If any of the Eligibility Requirements are not satisfied or if the Original Northbound Transaction is not also accepted for clearing by Special Clearing House Participant, such Original Northbound Transaction will be rejected. Successful or failed registration requests will be communicated by OTC Clear to the Special Clearing House Participant. The Special Clearing House Participant will subsequently run its own product eligibility and margin

^{*} Such consent form in respect of a particular Client and Client Account must have been received by OTC Clear at least one Northbound Clearing Day prior to submission of the first Original Northbound Transaction by such Client (and such consent must not have been subsequently revoked by the Clearing Member), otherwise such Original Northbound Transaction will be rejected.

checks and will notify the relevant Approved Trade Registration System if the Original Northbound Transaction is accepted or rejected for clearing through the Clearing Link Services.

Original Transactions and Original Northbound Transactions which have been rejected will be flagged as “REJECTED” in the “OTC Clear Trade Report (Report Number TDRP05, TDRP06, TDRP13 or TDRP18)” in relation to any House Position Account or “OTC Clear Trade Report for Client (Report Number TDRP05_C, TDRP06_C, TDRP13_C or TDRP18_C)” in relation to any Client Position Account. Both “OTC Clear Trade Report (Report Number TDRP05, TDRP06, TDRP13 or TDRP18)” and “OTC Clear Trade Report for Client (Report Number TDRP05_C, TDRP06_C, TDRP13_C or TDRP18_C)” are available to the Clearing Members on the Web Portal.

Original Transactions and Original Northbound Transactions which have been accepted will be registered by OTC Clear as two Contracts. A unique trade identification number will be assigned to each such Contract, and such trade identification number will be published in the “OTC Clear Trade Report (Report Number TDRP01, TDRP02, TDRP11 or TDRP16)” in relation to any House Position Account or “OTC Clear Trade Report for Client (Report Number TDRP01_C, TDRP02_C, TDRP11_C or TDRP16_C)” in relation to any Client Position Account. Both “OTC Clear Trade Report (Report Number TDRP01, TDRP02, TDRP11 or TDRP16)” and “OTC Clear Trade Report for Client (Report Number TDRP01_C, TDRP02_C, TDRP11_C or TDRP16_C)” are available to the Clearing Members on the Web Portal. In addition, Original Transactions and Original Northbound Transactions successful registered will be flagged as “CLEARED” in such “OTC Clear Trade Report (Report Number TDRP01, TDRP02 TDRP11 or TDRP16)” or “OTC Clear Trade Report for Client (Report Number TDRP01_C, TDRP02_C, TDRP11_C or TDRP16_C)”.

3.3.2 Creation of Contracts other than through Submission of Original Transactions or Original Northbound Transactions by Clearing Members

- (i) Pursuant to Clearing Rules 813 and 8A14, Contracts may also be created by OTC Clear registering a Contract on its system. In doing so, OTC Clear may waive any required checks for assessing whether or not the applicable Eligibility Requirements have been satisfied; or
- (ii) Pursuant to Clearing Rules 825 and 8A15, Contracts may also be created by OTC Clear registering a Contract on its system in accordance with sections 3.17 and 3.18 of these Clearing Procedures.

3.4 Product Eligibility Requirements

3.4.5 Product Eligibility requirements for Original Standard Northbound Rates Derivatives Transactions

OTC Clear will accept an Original Standard Northbound Rates Derivatives Transaction for registration only if such transaction satisfies the below requirements:

- (i) such Original Standard Northbound Rates Derivatives Transaction is of the type set out in the table as follows:

Instrument	Currency	Reference rate*	Time to Maturity*
Original Standard Northbound Rates Derivatives Transaction	CNY	SHIBOR_3M	10 years
		SHIBOR_O/N	3 years
		FR007	10 years

- (ii) no payments are due in respect of such Original Standard Northbound Rates Derivatives Transaction under the economic terms thereof within the next Northbound Clearing Day; and
- (iii) such Original Standard Northbound Rates Derivatives Transaction satisfies all the other product eligibility requirements prescribed in article 5.1 of the SHCH Clearing Guidelines and would be eligible for clearing by the Special Clearing House Participant.

3.4A Suspension of Product

In respect of all products except Original Standard Northbound Rates Derivatives Transactions, OTC Clear may from time to time, in its sole discretion and with prior consultation with the SFC, suspend clearing of a product or class of products. In respect of Original Standard Northbound Rates Derivatives Transactions, OTC Clear may suspend clearing of such products if the Participantship of the Special Clearing House Participant and/or if the Clearing Link Services is suspended as set out in Rule 21E01 (each, a **“Product Suspension Event”**).

In the event of the occurrence of a Product Suspension Event of a product, no Original Transactions or Original Northbound Transactions in such product will be accepted for registration and instead they will be rejected. In respect of all products except Original Standard Northbound Rates Derivatives Transactions, OTC Clear may also, with prior consultation with the SFC, require Clearing Members to unwind any Contracts in a product which is subject to a Product Suspension Event which were registered before the effective date of Product Suspension Event. If Clearing Members fail to do so, OTC Clear, at its sole discretion, will be entitled to terminate any such Contracts, and all prevailing obligations of OTC Clear and the relevant Clearing Member in respect

* Terms as defined in article 5.1 of the SHCH Clearing Guidelines

of such Contracts shall cease and be replaced with the obligation of OTC Clear or the relevant Clearing Member, as the case may be, to pay the close-out value determined in accordance with section 10.1(iii) of these Clearing Procedures. OTC Clear will, as soon as reasonably practicable on the Final Settlement Cycle Determination Date of such Product Suspension Event, notify the relevant Clearing Member of the close-out value determined in accordance with section 10.1(iii) of these Clearing Procedures payable by it, and the relevant Clearing Member shall pay OTC Clear such amount within one OTC Clear Business Day after the Final Settlement Cycle Determination Date. OTC Clear may, with prior consultation with the SFC, lift the suspension at any time.

Prior written notice of a Product Suspension Event or a resumption of clearing of a product previously subject to a Product Suspension Event shall be given to Clearing Members, the Special Clearing House Participant and the SFC. OTC Clear shall give notice to Clearing Members and the Special Clearing House Participant by means of a Clearing Notice.

3.6 De-registration

The de-registration process described below is only available in respect of Contracts entered into with Clearing Members. De-registration is not available to the Special Clearing House Participant.

Subsequent to the registration of an Original Transaction or an Original Northbound Transaction as two Contracts with OTC Clear, any proposed amendments to the terms of such Contracts, or termination or novation of such Contracts other than any transfer of Contracts relating to Clients in accordance with Clearing Rule 825, may only be effected by first de-registering the Contracts through submission of a de-registration request to OTC Clear.

OTC Clear will perform the de-registration process described in this section 3.6 and the “Margin Process” as described in section 4.6 of these Clearing Procedures with respect to any Contract which is the subject of a de-registration request.

3.6.2 Process of De-registration

In respect of de-registration requests which fulfil the conditions set out in section 3.6.1 (ii), the following procedures shall apply:

- (i) prior to submitting the de-registration request to OTC Clear, the Clearing Member shall identify and select the relevant Contracts for de-registration from the “OTC Clear Compression Report (Report Number COMP01 and COMP01_C)” published at approximately 20:30 hours Hong Kong time on such OTC Clear Clearing Day available to the Clearing Members on the Web Portal;
- (ii) the Clearing Member shall submit a request for de-registration to OTC Clear before 11:30 hours Hong Kong time on an OTC Clear Clearing Day. Any request which is submitted (a) on a day other than an OTC Clear Clearing Day or (b) after 11:30 hours Hong Kong time on such OTC Clear Clearing Day will be rejected;
- (iii) Clearing Members are able to check the status of the de-registration requests through the Web Portal. The relevant information will be updated in “OTC Clear Compression Report

(Report Number COMP02 and COMP02_C)" available at the Web Portal by 14:30 hours Hong Kong time on each OTC Clear Clearing Day; and

- (iv) if such request is approved by OTC Clear, the de-registration request will be processed by OTC Clear on the same day.

If a de-registration request does not satisfy the conditions set out in section 3.6.1, or if it contains any invalid or incomplete trade data, such de-registration request will be rejected and will not go through the "Margin Process" as set out in section 4.6 of these Clearing Procedures. The result will be communicated to Clearing Members via an acceptable medium designated by OTC Clear from time to time and notified to Clearing Members via Clearing Notice but will not be made available to the Clearing Members on the Web Portal.

If a de-registration request satisfies all conditions set out in section 3.6.1 and "Margin Process" as set out in section 4.6 of these Clearing Procedures, such Contracts, or in the case of Standard Northbound Rates Derivatives Contract, the Contracts from the same Original Standard Northbound Rates Derivatives Transaction will be de-registered by OTC Clear. The result will be communicated to Clearing Members via an acceptable medium designated by OTC Clear from time to time and notified to Clearing Members via Clearing Notice but will not be made available to Clearing Members on the Web Portal. In addition, the relevant Contracts submitted for de-registration will be flagged as "DECLARED" in such "OTC Clear Trade Report (Report Number TDRP01, TDRP02 or TDRP11)" in relation to any House Position Account or "OTC Clear Trade Report for Client (Report Number TDRP01_C, TDRP02_C or TDRP11_C)" in relation to any Client Position Account.

Save and except for the operation of section 3.8.1 and any fees due but unpaid by the relevant Clearing Member to OTC Clear (including the de-registration fee):

- (i) any Contract that has been de-registered shall have no further force or effect thereafter; and
- (ii) the rights and obligations of each of OTC Clear and the relevant Clearing Member under the Contract being de-registered shall be fully relinquished and discharged with effect from the time such Contract is de-registered.

Any de-registered transaction can be submitted for registration again, and subject to the Eligibility Requirements applicable to the relevant transaction.

Cancellation, novation or any other fees which have been agreed between the relevant Clearing Members who are counterparties to the particular Contract in connection with a de-registration request shall not be processed by OTC Clear.

3.6A Multilateral Compression

The multilateral compression service described below is only available in respect of Contracts entered into with Clearing Members which are not Standard Northbound Rates Derivatives Contracts. Multilateral compression is not available to the Special Clearing House Participant.

Each Multilateral Compression Cycle shall be implemented in accordance with the processes set out in the relevant Compression Documentation.

In addition to the circumstances set out in the Clearing Rules and the Compression Documentation, OTC Clear may, at its sole and absolute discretion, decline to implement the Unwind Proposal relating to a Multilateral Compression Cycle, if:

- (i) any participating Compression Clearing Member fails to satisfy its increased Initial Margin requirements by the time(s) set out in the relevant Compression Documentation;
- (ii) the Unwind Proposal would result in any participating Compression Clearing Member breaching its Position Limit or Notional Exchange Risk Limit; or
- (iii) OTC Clear determines that an Event of Default has occurred or is likely to occur with respect to any participating Compression Clearing Member.

If OTC Clear agrees to proceed with the implementation of an Unwind Proposal, it will settle the Compression Cash Settlement Payments due to each relevant participating Compression Clearing Member at the time set out in the relevant Compression Documentation.

Collateral received from participating Compression Clearing Members to satisfy Initial Margin requirements shall form part of the relevant Clearing Member's Margin Balance and such Clearing Members may subsequently request that OTC Clear redeliver such Collateral to the extent that it constitutes Excess Margin.

3.7 Accounts

Pursuant to Chapter 9 of the Clearing Rules, the following accounts may be opened for a Clearing Member on OTC Clear's books and records: (i) one House Position Account and one or more Client Position Accounts may be established for a Clearing Member, (ii) one House Collateral Account, one Participating Margin Collateral Account and one or more Client Collateral Accounts may be established for a Clearing Member, (iii) but only one GF Account will be established for a Clearing Member. Each Clearing Member will be individually identified in OTC Clear Rates and FX Clearing System by way of designation of a bank identifier code (BIC) for each such Clearing Member. In addition, a unique identifier will be assigned to each Clearing Member and mapped to each of the accounts.

3.8 Settlement Components

A **"Settlement Component"** consists of daily settlement components (as set out in section 3.8.1) and fees and interest (as set out in section 3.8.2).

Pursuant to Clearing Rule 226, the calculations made by OTC Clear shall be conclusive and binding on all Clearing Members. If a Clearing Member notifies OTC Clear of any alleged error in any calculations performed by OTC Clear pursuant to Clearing Rule 226, such Clearing Member is still obligated to settle the full amounts as stated in the "OTC Clear Settlement Reports" and "OTC Clear Settlement Reports for Client" (if applicable) on the payment due date pending investigation, resolution or (if applicable) rectification of the alleged error by OTC Clear.

For the avoidance of doubt, OTC Clear will only be responsible for settlement of any Settlement Component of a Contract if the Payment Date of such Settlement Component is in compliance with the terms set out in sections 3.4.2.12, 3.4.4.4 and fulfil the requirements specified in section 3.4.5.

The terms and provisions included in an ISDA Credit Support Annex published by ISDA will not form part of the Contract Terms of a Contract. As such, the Independent Amount (as defined in paragraph 10 of the ISDA Credit Support Annex (Bilateral Form-Transfer) published by ISDA) is not, and does

not form part of the Settlement Component. OTC Clear is not responsible for, and will not be processing any transfer of Independent Amount and Clearing Member shall be responsible to put in place any relevant Collateral management procedures for processing any Independent Amount.

3.8.1 Daily Settlement Components

OTC Clear will determine the daily settlement components on each OTC Clear Clearing Day. Daily settlement components consist of (i) coupon payment for a Standard Rates Derivatives Contract, Standard Northbound Rates Derivatives Contract, Standard Cross-currency Rates Derivatives Contract and Non Deliverable Rates Derivatives Contract, (ii) settlement amount for a Non Deliverable FX Derivatives Contract, (iii) Additional Payment, (iv) Additional Amount, (v) Initial Margin, (vi) Additional Margin, (vii) Variation Margin, (viii) Rates and FX Contribution, (ix) Initial Exchange Amount and Final Exchange Amount for a Standard Cross-currency Rates Derivatives Contract, (x) Notional Amounts for a Deliverable FX Forward Contract, Deliverable FX Swap Contract, (xi) Compression Cash Settlement Payments, (xii) Participating Margin and any other components which may be specified by OTC Clear from time to time.

Market data (such as non-business days for different financial centers, any interest rate, exchange rate or price) which are applied to determine the daily settlement components will be published in the "OTC Clear Market Data Reports (Report Number MKDR01, MKDR02, MKDR03 and MKDR10)". The amount of daily settlement components to be settled by a Clearing Member will be published in the "OTC Clear Settlement Report (Report Number STRP01)" in respect of any payment relevant to a House Account or "OTC Clear Settlement Report for Client (Report Number STRP01_C)" in respect of any payment relevant to a Client Account. Such reports are available to the Clearing Members on the Web Portal. The daily settlement components published in the "OTC Clear Settlement Report (Report Number STRP01)" and "OTC Clear Settlement Report for Client (Report Number STRP01_C)" shall be final and conclusive, and shall be settled on the relevant "Value Date" as stipulated in the "OTC Clear Settlement Report (Report Number STRP01)" and "OTC Clear Settlement Report for Client (Report Number STRP01_C)" in accordance with section 3.12. Any de-registration request that is accepted by OTC Clear after the publication of the "OTC Clear Settlement Report (Report Number STRP01)" or "OTC Clear Settlement Report for Client (Report Number STRP01_C)" for any relevant "Value Date" shall not have any effect on the payment obligation of a Clearing Member to settle the daily settlement components set out in the relevant "OTC Clear Settlement Report (Report Number STRP01)" or "OTC Clear Settlement Report for Client (Report Number STRP01_C)" for such "Value Date".

3.8.1.1A Coupon Payment for a Standard Northbound Rates Derivatives Contract

The Coupon Payment for a Standard Northbound Rates Derivatives Contract shall either be one payment calculated from the beginning day to the termination day, or calculated one coupon payment per quarter.

If the payment date or period end date of a Standard Northbound Rates Derivatives Contract is specified to be the 31st of a calendar month, the relevant payment date or period end date shall be deemed to fall on the last calendar day of the relevant calendar month, and be subject to adjustment in accordance with the business day convention specified in the contract terms relating to such Standard Northbound Rates Derivatives Contract.

3.8.1.1.1 Calculation of the Fixed Amount

Calculation of the Fixed Amount is based on the methodologies stipulated in Sections 5.2, 5.3 and 5.4 of the ISDA Definitions and the Economic Terms specified in the relevant Contract except for Standard Northbound Rates Derivatives Contracts.

In respect of a Standard Northbound Rates Derivatives Contract, calculation of the fixed interest amount shall be based on the Economic Terms specified in the relevant Contract and calculated in accordance with the formula stated in articles 5.5.2.1(1) of the SHCH Clearing Guidelines.

For the avoidance of doubt, irrespective of the Registration Time of a Contract, the Calculation Period of a Fixed Amount of such Contract is the period from and including the immediately preceding Period End Date (or the Effective Date if such Calculation Period is the initial Calculation Period of that particular Contract) to but excluding the Period End Date of the relevant Calculation Period (or the Termination Date if such Calculation Period is the final Calculation Period of that particular Contract). Same calculation logic applies to Standard Northbound Rates Derivatives Contracts.

3.8.1.1.2 Calculation of the Floating Amount

- (i) In respect of a Standard Rates Derivatives Contract, calculation of the Floating Amount is based on the methodologies stipulated in Section 6.2 of the ISDA Definitions and the Economic Terms specified in the relevant Standard Rates Derivatives Contract;
- (ii) in respect of a Non Deliverable Rates Derivatives Contract which is denominated in CNY, calculation of the Floating Amount is based on the methodologies stipulated in Section 4.9.5 of the ISDA Definitions and the Economic Terms specified in the relevant Non Deliverable Rates Derivatives Contract and the Compounding Date is deemed to be each relevant CNY 7-Repo Compounding Date in accordance with Section 4.9.3 of the ISDA Definitions;
- (iii) in respect of a Non Deliverable Rates Derivatives Contract which is denominated in INR, KRW, MYR, THB or TWD, calculation of the Floating Amount is based on the methodologies stipulated in Section 6.2 of the ISDA Definitions and the Economic Terms specified in the relevant Non Deliverable Rates Derivatives Contract;
- (iv) in respect of a Standard Cross-currency Rates Derivatives Contract, calculation of the Floating Amount is based on the methodologies stipulated in Section 6.2 of the ISDA Definitions and the Economic Terms specified in the relevant Standard Cross-currency Rates Derivatives Contract; and
- (v) in respect of a Standard Northbound Rates Derivatives Contract, calculation of the floating interest amount is based on the economic terms specified in the relevant Standard Northbound Rates Derivatives Contract and the methodologies stipulated as follows:
 - (a) If the method of interest accrual is simple interest, the interest amount of each calculation period is equal to the sum of the interest amount for each fixing period. For the avoidance of doubt, please refer to article 5.5.2.1(2)1) of the SHCH Clearing Guidelines for the detailed formula.

- (b) If the method of interest accrual is compound interest, the interest amount of each calculation period is equal to the sum of the interest amount for each fixing period. For the avoidance of doubt, please refer to article 5.2.2.1(2)2) of the SHCH Clearing Guidelines for the detailed formula.

For the avoidance of doubt, irrespective of the Registration Time of a Contract, the Calculation Period of a Floating Amount of such Contract is the period from and including the immediately preceding Period End Date (or the Effective Date if such Calculation Period is the initial Calculation Period of that particular Contract) to but excluding the Period End Date of the relevant Calculation Period (or the Termination Date if such Calculation Period is the final Calculation Period of that particular Contract). Same calculation logic applies to Standard Northbound Rates Derivatives Contracts.

A Clearing Member should note the provisions set out in Clearing Rules 2222, 2319 and 2518 in relation to the applicability of the "Floating Negative Interest Rate Method" to a Standard Rates Derivatives Contract, Standard Cross-currency Rates Derivatives Contract or Non Deliverable Rates Derivatives Contract, as applicable.

3.8.1.1.3 Determination of the Rate for a Reset Date

- (i) In respect of a Standard Rates Derivatives Contract which is denominated in CNY (offshore) or USD, Standard Cross-currency Rates Derivatives Contract and Non Deliverable Rates Derivatives Contract which is denominated in MYR or TWD, the rate for a Reset Date, including the source and the time at which such source is obtained from the relevant provider, is determined by reference to the Floating Rate Matrix except that if a different Fixing Days Offset is elected by the Clearing Members for the initial Calculation Period in respect of a Floating Amount Payer than that prescribed in the Floating Rate Matrix it shall be amended to make reference to the Fixing Days Offset elected by the Clearing Members;
- (ii) in respect of a Non Deliverable Rates Derivatives Contract which is denominated in CNY, the rate for a Reset Date, including the source and the time at which such source is obtained from the relevant provider, is determined by reference to the Floating Rate Matrix except that if a different Fixing Days Offset is elected by the Clearing Members for the initial Compounding Period in respect of a Floating Amount Payer than that prescribed in the Floating Rate Matrix it shall be amended to make reference to the Fixing Days Offset elected by the Clearing Members;
- (iii) in respect of a Standard Rates Derivatives Contract which is denominated in EUR or HK\$ and a Non Deliverable Rates Derivatives Contract which is denominated in INR, KRW or THB, the rate for a Reset Date, including the source and the time at which such source is obtained from the relevant provider, is determined by reference to the Floating Rate Matrix; or
- (iv) in respect of a Standard Northbound Rates Derivatives Contract, the rate for a fixing date, shall be refer to follows:

Reference rate	Reference rate value:	Fixing Time:
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SHIBOR_O/N	The Shanghai Interbank Offered Rate that People's Bank of China authorized the National Interbank Funding Center to release on http://www.shibor.org/	11:00 UTC+8
FR007	The 7-day Interbank Repo Fixing Rate that People's Bank of China authorized the National Interbank Funding Center to release on http://www.chinamoney.com.cn	11:30 UTC+8
SHIBOR_3M	The Shanghai Interbank Offered Rate that People's Bank of China authorized the National Interbank Funding Center to release on http://www.shibor.org/	11:00 UTC+8

For the avoidance of doubt, (a) if Linear Interpolation is elected to be applicable to a Calculation Period, the relevant rate for the Reset Date in respect of that Calculation Period will be calculated by OTC Clear in accordance with Section 6.10 of the ISDA Definitions; and (b) if the Floating Rate has been designated by the Clearing Members for the initial Calculation Period or initial Compounding Period, as the case may be, in respect of a Floating Amount Payer of a Contract, such Floating Rate is deemed to be the rate for the Reset Date for the initial Calculation Period or initial Compounding Period, as the case may be, in respect of the relevant Floating Amount Payer of such Contract.

3.8.1.1.4 Adjustment to the Initial Exchange Date, the Final Exchange Date, the Payment Date and the Period End Date

OTC Clear uses Copp Clark as the data provider for information on holiday observances affecting world financial markets. OTC Clear will provide Clearing Members with regular updates of holidays affecting Currency Days and Business Days through the "OTC Clear Market Data Report (Report Number MKDR03)". Any ad-hoc update of such holidays will be notified to the Clearing Members.

- (i) In respect of a Standard Rates Derivatives Contract, a Standard Northbound Rates Derivatives Contract or a Non Deliverable Rates Derivatives Contract:

If a holiday declaration affects a scheduled Payment Date and/or a Period End Date (if applicable) of the relevant Calculation Period of a Contract, an adjustment to the Payment Date and/or the amount of the settlement (if applicable) shall be made in accordance with the Contract Terms, provided that, in the event of a holiday declaration in respect of a particular day which would otherwise have been a Currency Day or a Business Day after 19:00 hours Hong Kong time on the OTC Clear Clearing Day immediately preceding such Currency Day or Business Day on which a Payment Date and/or Period End Date is scheduled to fall, no adjustment shall be made to such Payment Date and/or Period End Date of any Contract unless such declaration or curtailment affects the financial center or the foreign exchange market of the Contractual Currency of that Contract.

(ii) In respect of a Standard Cross-currency Rates Derivatives Contract:

If a holiday declaration affects a scheduled Initial Exchange Date (if applicable), a Final Exchange Date (if applicable), a Payment Date and/or a Period End Date (if applicable) of the relevant Calculation Period of a Contract, an adjustment to the Initial Exchange Date (if applicable), the Final Exchange Date (if applicable), the Payment Date and/or the amount of the settlement (if applicable) shall be made in accordance with the Contract Terms, provided that, in the event of a holiday declaration in respect of a particular day which would otherwise have been a Currency Day or a Business Day after 19:00 hours Hong Kong time on the OTC Clear Clearing Day immediately preceding such Currency Day or Business Day on which an Initial Exchange Date (if applicable), a Final Exchange Date (if applicable), a Payment Date and/or Period End Date (if applicable) is scheduled to fall, no adjustment shall be made to such Initial Exchange Date, Final Exchange Date, Payment Date and/or Period End Date of any Contract unless such declaration or curtailment affects the financial center or the foreign exchange market of any one of the Contractual Currencies of that Contract.

Any update to the Payment Date and/or amount of the settlement of a forthcoming payment is reflected in the "OTC Clear Settlement Report (Report Number STRP04, STRP06 or STRP09)" in respect of any payment relevant to a House Position Account or "OTC Clear Settlement Report for Client (Report Number STRP04_C, STRP06_C or STRP09_C)" in respect of any payment relevant to a Client Position Account. Both "OTC Clear Settlement Report (Report Number STRP04, STRP06 or STRP09)" and "OTC Clear Settlement Report for Client (Report Number STRP04_C, STRP06_C or STRP09_C)" will be made available to the Clearing Members on the Web Portal.

OTC Clear has no involvement in Copp Clark's business and therefore does not guarantee and is not responsible for the accuracy of any data provided by Copp Clark.

3.9 Procedures for Voluntary Deposit of Cash Collateral, porting of Cash Collateral representing Excess Margin and Withdrawal of Cash Collateral representing Excess Margin, Excess Participating Margin and Rates and FX Contribution Excess

This section 3.9 sets out the arrangement for any voluntary withdrawal, porting or deposit of cash Collateral by a Clearing Member. The arrangement for satisfying a Margin demand by a Clearing Member is governed by Chapter 4 and, in particular, section 4.7 of these Clearing Procedures. In respect of any cash settlement as a result of voluntary withdrawal or deposit of cash Collateral for satisfaction of Margin requirements or Rates and FX Liability, such cash settlement must be made via RTGS system as further described in section 3.11.1.

3.9.1 Procedure for Voluntary Withdrawal of Cash Collateral representing Excess Margin, Excess Participating Margin and Rates and FX Contribution Excess

The following procedures apply to voluntary withdrawal of cash Collateral by a Clearing Member in respect of its Excess Margin, Excess Participating Margin and Rates and FX Contribution Excess:

- (i) prior to requesting withdrawal of any cash Collateral then deposited with OTC Clear, the Clearing Member should check and ensure there is a positive cash balance (after taking into account any Collateral Concentration Limit(s) set out in section 7.4 of these Clearing Procedures) standing to the credit of its relevant House Collateral Account, Participating

Margin Collateral Account or Client Collateral Account, as the case may be, representing Excess Margin and/or Excess Participating Margin, as applicable;

- (ii) prior to requesting withdrawal of any cash Collateral then deposited with OTC Clear for the purpose of satisfying its Rates and FX Liability, the Clearing Member should check and ensure there is a positive cash balance standing to the credit of its GF Account representing Rates and FX Contribution Excess;
- (iii) the Clearing Member shall input a request for withdrawal via the collateral management window of the Web Portal before 12:00 hours Hong Kong time on a day that is both a Currency Day relating to the relevant cash Collateral and an OTC Clear Business Day; provided that if the 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, it must give OTC Clear no less than three Business Days' prior notice (or such shorter notice period as determined by OTC Clear at its absolute discretion) (each a "**Withdrawal Notice**") via the collateral management window of the Web Portal that it wishes to withdraw any part of such Excess Margin under this section 3.9.1(iii).

Any request which is submitted on a day other than a day that is both a Currency Day relating to the relevant cash Collateral and an OTC Clear Business Day or after 12:00 hours Hong Kong time on such day will be rejected;

- (iv) if such withdrawal is approved by OTC Clear:
 - (a) the amount of withdrawal will be deducted from the cash balance of the House Collateral Account, Participating Margin Collateral Account, Client Collateral Account or the GF Account, as the case may be, relating to the Clearing Member once such request is processed by OTC Clear; and
 - (b) OTC Clear will make the payment for value on the same day by the cash settlement method described in section 3.11.1.

For the avoidance of doubt, any request for withdrawal of cash Collateral which is designated with a value date for settlement other than the date on which such request is made will not be accepted or processed by OTC Clear.

Clearing Members are able to monitor the progress of their withdrawal requests on a daily basis through the Web Portal. The relevant information will be updated on the Web Portal by 19:00 hours Hong Kong time on each OTC Clear Business Day.

3.9.2 Procedure for Voluntary Deposit of Cash Collateral

The following procedures apply to voluntary deposit of cash Collateral by a Clearing Member in respect of its Margin requirements and its Rates and FX Liability:

- (i) the Clearing Member shall input a request for deposit via the collateral management window of the Web Portal before 17:00 hours Hong Kong time on a day that is both a Currency Day relating to the relevant cash Collateral and an OTC Clear Clearing Day. Any request which is submitted (a) on a day other than a day that is both a Currency Day relating to the relevant cash Collateral and an OTC Clear Clearing Day or (b) after 17:00 hours Hong Kong time on such day will be rejected, except on a Northbound Clearing Day, OTC Clear will accept

requests for deposit of CNY (offshore) input before 17:00 hours Hong Kong time on such day;

- (ii) the amount of deposit will be settled by the cash settlement method described in section 3.11.1;
- (iii) the Clearing Member should ensure that the amount of deposit can be credited to OTC Clear by 17:15 hours Hong Kong time on the day such request is submitted. Otherwise such request will be deemed to be rejected by OTC Clear; and
- (iv) upon receipt of confirmation by OTC Clear from its settlement bank that the amount of deposit has been credited to OTC Clear, it will be reflected in the cash balance of the House Collateral Account, Participating Margin Collateral Account, Client Collateral Account or the GF Account, as the case may be, relating to the Clearing Member.

For the avoidance of doubt, any request for deposit of cash Collateral which is designated with a value date for settlement other than the date on which such request is made will not be accepted or processed by OTC Clear.

Clearing Members are able to monitor the progress of their deposit requests on a daily basis through the Web Portal. The relevant information will be updated on the Web Portal by 19:00 hours Hong Kong time on each OTC Clear Clearing Day.

3.9.3 Procedure for porting of Cash Collateral representing Excess Margin and Excess Participating Margin

The following procedures apply to (a) porting of cash Collateral by a Clearing Member representing Excess Margin in its House Collateral Account to its Participating Margin Collateral Account or any of its Client Collateral Accounts and (b) porting of cash Collateral by a Clearing Member representing Excess Participating Margin in its Participating Margin Collateral Account to its House Collateral Account or any of its Client Collateral Accounts:

- (i) prior to requesting porting, a Clearing Member should check and ensure that there is a positive cash balance (after taking into account any Collateral Concentration Limit(s) set out in section 7.4 of these Clearing Procedures) standing to the credit of its House Collateral Account representing Excess Margin or Participating Margin Collateral Account representing Excess Participating Margin;
- (ii) a Clearing Member with cash Collateral representing Excess Margin in its House Collateral Account may input a request for porting of such Excess Margin, to its Participating Margin Collateral Account and any of its Client Collateral Accounts via the collateral management window of the Web Portal before 12:00 hours Hong Kong time on a day that is both a Currency Day for the currency of the relevant cash Collateral and an OTC Clear Business Day; provided that if the 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, it must give OTC Clear no less than three Business Days' prior notice (or such shorter notice period as determined by OTC Clear at its absolute discretion) (each a **"Porting Notice"**) via the collateral management window of the Web Portal that it wishes to port any part of such Excess Margin under this section 3.9.3(ii).

- (iii) a Clearing Member with cash Collateral representing Excess Participating Margin in its Participating Margin Collateral Account may input a request for porting of such Excess Participating Margin, to its House Collateral Account and any of its Client Collateral Accounts via the collateral management window of the Web Portal before 12:00 hours Hong Kong time on a day that is both a Currency Day for the currency of the relevant cash Collateral and an OTC Clear Business Day.

Any request which is submitted after 12:00 hours Hong Kong time will be rejected and must be re-submitted on the next day that is both a Currency Day for the currency of the relevant cash Collateral and an OTC Clear Business Day. For the avoidance of doubt, any request for porting of cash Collateral with a value date for settlement other than the date on which such request is made will not be accepted or processed by OTC Clear;

- (iv) if such porting is approved by OTC Clear, the amount to be ported will be deducted from the cash balance of the relevant Clearing Member's House Collateral Account and/or Participating Margin Collateral Account, as the case may be, once such request has been processed by OTC Clear;
- (v) OTC Clear will endeavour to effect the porting for value on the same day; and
- (vi) upon receipt of confirmation by OTC Clear from its settlement bank that the transfer has been completed, OTC Clear will reflect the cash increase in the balance of the House Collateral Account, Participating Margin Collateral Account and relevant Client Collateral Account of the relevant Clearing Member, as applicable.

Porting of cash Collateral: (a) from the GF Account to the House Collateral Account, Participating Margin Collateral Account or any Client Collateral Account, (b) from any Client Collateral Account to the House Collateral Account, Participating Margin Collateral Account or the GF Account, (c) from the House Collateral Account or Participating Margin Collateral Account to the GF Account or (d) amongst Client Collateral Accounts is not allowed.

Cash Collateral ported on a particular OTC Clear Clearing Day will not be available in time to satisfy Margin calls made on that OTC Clear Clearing Day.

Clearing Members are able to monitor the progress of their transfer requests on a daily basis through the Web Portal. The relevant information will be updated on the Web Portal by 19:00 hours Hong Kong time on each OTC Clear Business Day.

3.10 Types of Securities Acceptable as Non-cash Collateral and Procedures for Voluntary Deposit of Non-Cash Collateral, porting of Non-Cash Collateral representing Excess Margin and Withdrawal of Non-Cash Collateral representing Excess Margin

OTC Clear only accepts non-cash Collateral delivered to it at its account at the relevant Custodian specified for the relevant type of eligible non-cash Collateral. Non-cash Collateral deposited for the purpose of satisfying Margin requirements in respect of a particular Position Account will not form part of the Margin Balance recorded to the corresponding Collateral Account until such non-cash Collateral is received by OTC Clear at its account at such relevant Custodian. OTC Clear publishes the Custodian and its standard delivery instruction for each type of eligible non-cash Collateral on the HKEX website and updates it from time to time. For the avoidance of doubt, OTC Clear does

not accept non-cash Collateral for the purpose of satisfying a Clearing Member's Participating Margin requirements.

Delivery of non-cash Collateral to OTC Clear must be executed free of payment.

Clearing Members are each required to open 2 accounts with their respective custodian(s) for the relevant type of eligible non-cash Collateral – one account for settlement of non-cash Collateral relating to House Business and the other account for settlement of non-cash Collateral relating to Contracts recorded in the Client Position Account of a Clearing Member ("**Client Business**"). Clearing Members must specify only one standard delivery instruction for House Business and only one standard delivery instruction for Client Business.

The relevant Custodian matches the details submitted by each Clearing Member via the Web Portal before accepting delivery of the relevant non-cash Collateral to OTC Clear's account with it. In the event of a discrepancy, delivery will fail. Each Clearing Member must also indicate in the relevant payment message that the settlement mode is real time.

In respect of each request for withdrawal of non-cash Collateral which has been accepted by OTC Clear, OTC Clear will instruct the relevant Custodian to deliver the relevant non-cash Collateral to each Clearing Member in accordance with the standard delivery instructions provided by such Clearing Member.

If a Clearing Member wishes to change its standard delivery instruction in respect of settlement in relation to its House Collateral Account and/or its Client Collateral Accounts (if applicable), it must provide at least 10 OTC Clear Business Days' advance notice to OTC Clear pursuant to section 2.6 of these Clearing Procedures prior to effecting such change.

OTC Clear will not be liable for any failure, hindrance or delay in the performance (in whole or in part) of any of its obligations to Clearing Members relating to the deposit, withdrawal or porting of non-cash Collateral where such failure, hindrance or delay arises from causes beyond the control of OTC Clear, such as, but not limited to, the failure (whether partial or total), interruption or suspension of any depository, Custodian or other depository service that OTC Clear uses, the termination or suspension of OTC Clear's membership or use of a Custodian or any variation of a Custodian's operational timetable, whether or not occasioned by the action of the Custodian or other party, or any embargo, unavailability or restriction of bank transfer systems or wires, malfunction or overload of the depository or any other emergency.

3.10.3 Procedures for Voluntary Deposit of Non-Cash Collateral

The following procedures apply to voluntary deposit of non-cash Collateral by a Clearing Member to satisfy the Margin requirements except Participating Margin requirements relating to its House Position Account and Client Position Account(s):

- (i) prior to requesting deposit of any security as non-cash Collateral, the Clearing Member should ensure that any Collateral Concentration Limits imposed on it would not be exceeded upon the acceptance of such security as Collateral;
- (ii) if the ISIN code of such security stipulated in section 3.10.1 is not currently listed in the collateral management window of the Web Portal, prior to submitting a deposit request via the collateral management window of the Web Portal, the Clearing Member must give OTC Clear nine OTC Clear Business Days advance notice of the security that it wishes to deposit,

providing OTC Clear with the ISIN code of the relevant security, subsequent to such notice, OTC Clear will list the ISIN code of such security in the collateral management window of the Web Portal;

- (iii) the Clearing Member shall input a deposit request via the collateral management window of the Web Portal before 17:00 hours Hong Kong time on an OTC Clear Clearing Day. Such deposit request must specify: (a) the ISIN code of each relevant security that it is seeking to deposit as Collateral, (b) the notional amount of each such security that it is seeking to deposit as Collateral and (c) the value date for settlement;
- (iv) in addition, each deposit request must comply with the following parameters:

Type of security to be deposited as non-cash Collateral	Value Date for Settlement to be specified in each deposit request	Minimum deposit amount
US Treasury Bills	one New York Business Day following the day on which such request is submitted, provided that such value date shall not fall on or after the maturity date of the relevant security.	USD100 and integral multiples of USD100 in excess thereof
US Treasury Notes	Where, " New York Business Day " means a day (other than Saturday and Sunday) on which commercial banks in New York City are open for general business.	USD100 and integral multiples of USD100 in excess thereof
Hong Kong Exchange Fund Bills	one Hong Kong Business Day following the day on which such request is submitted, provided that such value date shall not fall on or after the maturity date of the relevant security.	HKD500,000 and integral multiples of HKD500,000 in excess thereof
Hong Kong Exchange Fund Notes	Where, " Hong Kong Business Day " means a day (other than Saturday and Sunday) on which commercial banks in Hong Kong are open for general business.	HKD50,000 and integral multiples of HKD50,000 in excess thereof
Bonds issued by the Ministry of Finance of the People's Republic of China denominated in CNY(offshore)	one day (which is both a Hong Kong Business Day and a Beijing Business Day) following the day on which such request is submitted, provided that such value date shall not fall on or after the maturity date of the relevant security.	CNY (offshore) 500,000 and integral multiples of CNY (offshore) 500,000 in excess thereof

Type of security to be deposited as non-cash Collateral	Value Date for Settlement to be specified in each deposit request	Minimum deposit amount
	Where, " Beijing Business Day " means a day (other than Saturday and Sunday) on which commercial banks in Beijing are open for general business.	

- (v) a deposit request which seeks to request the deposit of a security whose ISIN code is not currently listed as eligible Collateral in the collateral management window of the Web Portal will be rejected;
- (vi) a deposit request which if processed would result in the Clearing Member breaching a Concentration Limit imposed on it will be rejected;
- (vii) a deposit request which does not comply with the above parameters or which is submitted after 17:00 hours Hong Kong time on an OTC Clear Clearing Day will be rejected and must be re-submitted on the next OTC Clear Clearing Day with the necessary amendments;
- (viii) if such deposit request is rejected by OTC Clear, it will inform the Clearing Member via the Web Portal; and
- (ix) upon confirmation from CMU that the relevant securities have been received in OTC Clear's relevant account(s), OTC Clear will update the Margin Balance of the Clearing Member's House Collateral Account or Client Collateral Account(s), as the case may be, provided that, if CMU notifies OTC Clear that the relevant securities have been received in OTC Clear's relevant account(s) after 19:00 hours Hong Kong time on an OTC Clear Clearing Day, OTC Clear will only update the Margin Balance of the Clearing Member's House Collateral Account or Client Collateral Account(s), as the case may be, at 12:00 hours Hong Kong time on the next OTC Clear Clearing Day. For the avoidance of doubt, the Clearing Member will continue to be responsible for complying with any Margin calls until the Margin Balance of the relevant Collateral Account has been updated, regardless of the value date on which such securities are delivered.

3.11 Cash Settlement Method

- (i) In respect of a particular payment date, payments in respect of Initial Margin, Additional Margin and Participating Margin will be settled separately from and will not be netted with any other payments.
- (ii) In respect of a particular payment date, payments in respect of Rates and FX Contribution will be settled separately from and will not be netted with any other payments.
- (iii) In respect of a particular payment date, settlements of coupon payments of a Standard Rates Derivatives Contract, a Standard Cross-currency Rates Derivatives Contract, a Non Deliverable Rates Derivatives Contract and a Standard Northbound Rates Derivatives Contract, settlement amounts due in respect of an FX Derivatives Contract, except Notional Amounts of any Deliverable FX Derivatives Contract in the same Currency Pair (swap and FX), Additional Payments and Variation Margin in the same currency:
 - (a) in respect of a Clearing Member's House Business will be netted together;

- (b) in respect of a Clearing Member's Client Business, except in relation to any SSM Payment Amounts referred to in sub-paragraph (c) below (where applicable), will be netted together (for the avoidance of doubt, payments of such amounts in respect of Client Business will not be netted with amounts due in respect of House Business); and
 - (c) in respect of a Clearing Member's Client Business and in relation to SSM Payment Amounts pertaining to the Position Account of a particular Sponsored Settlement Member (if applicable), will be netted together (for the avoidance of doubt, payments of such amounts will not be netted across different Sponsored Settlement Members).
- (iv) In respect of a particular payment date, settlements of Additional Amount, fees due to OTC Clear, interest payable by OTC Clear in respect of cash Collateral and any other components in the same currency:
 - (a) in respect of a Clearing Member's House Business will be netted together;
 - (b) in respect of a Clearing Member's Client Business will be netted together (for the avoidance of doubt, payments of such amounts in respect of Client Business will not be netted with amounts due in respect of House Business).
- (v) In respect of a particular payment date, settlements of Initial Exchange Amount and/or Final Exchange Amount of any Standard Cross-currency Rates Derivatives Contract and Notional Amounts of any Deliverable FX Derivatives Contract in the same Currency Pair (swap and FX):
 - (a) in respect of a Clearing Member's House Business will be netted together;
 - (b) in respect of a Clearing Member's Client Business, except in relation to any SSM Payment Amounts referred to in sub-paragraph (c) below (where applicable), will be netted together (for the avoidance of doubt, payments of such amounts in respect of Client Business will not be netted with amounts due in respect of House Business); and
 - (c) in respect of a Clearing Member's Client Business and in relation to SSM Payment Amounts pertaining to the Position Account of a particular Sponsored Settlement Member (if applicable), will be netted together (for the avoidance of doubt, payments of such amounts will not be netted across different Sponsored Settlement Members).

Clearing Members are required to maintain different settlement accounts for payments in respect of House Business and Client Business.

All cash settlements must be made in accordance with section 3.11.

In relation to its House Business, each Clearing Member is allowed to elect only one settlement account for each Contractual Currency in respect of each of the payment categories specified in sections 3.11(i) to (v) above.

In relation to its Client Business, other than in respect of any SSM Payment Amounts (where applicable), each Clearing Member is allowed to elect only one settlement account for each

Contractual Currency in respect of each of the payment categories specified in sections 3.11(i) to (v) above.

In relation to its Client Business, solely in respect of any SSM Payment Amounts pertaining to a particular Sponsored Settlement Member (where applicable), the relevant Sponsored Settlement Member is allowed to elect only one settlement account for each Contractual Currency in respect of each of the payment categories specified in sections 3.11(iii) and (v) above.

For the avoidance of doubt, with regard to each Contractual Currency, the settlement account which is elected by the Clearing Member in relation to its House Business must be different from the settlement account which is elected by such Clearing Member in relation to its Client Business.

If there is any change to the standard settlement instruction used by OTC Clear, such change will be notified to the Clearing Members and their Sponsored Settlement Members (where applicable). If a Clearing Member wishes to change its standard settlement instruction in respect of cash payments relevant to its House Position Account and House Collateral Account and/or its Client Position Accounts and Client Collateral Accounts (if applicable) and/or Participating Margin Collateral Account, it must provide at least 10 OTC Clear Business Days' advance notice to OTC Clear pursuant to section 2.6 of these Clearing Procedures prior to effecting such change. If a Sponsored Settlement Member wishes to change its standard settlement instruction in respect of cash payments relevant to its Client Position Account and Client Collateral Account, its relevant sponsoring Clearing Member must provide at least 10 OTC Clear Business Days' advance notice to OTC Clear pursuant to section 2.6 of these Clearing Procedures prior to effecting such change.

3.12 Cash Settlement Time

- (i) Save and except the Initial Exchange Amount and the Final Exchange Amount of any Standard Cross-currency Rates Derivatives Contract and the Notional Amounts of any Deliverable FX Derivatives Contract, any cash settlement to be payable by a Clearing Member or by a Sponsored Settlement Member (where applicable) on a particular payment date must be settled by the Clearing Member or by the Sponsored Settlement Member (where applicable):
 - (a) no later than 11:00 hours Hong Kong time on the relevant payment due date if the "OTC Clear Settlement Report (Report Number STRP01)" and/or "OTC Clear Settlement Report for Client (Report Number STRP01_C)" (if applicable) relating to that particular payment date is published at or prior to 08:30 hours Hong Kong time on such day; or
 - (b) in all other cases, within two hours following the "OTC Clear Settlement Report (Report Number STRP01)" and/or "OTC Clear Settlement Report for Client (Report Number STRP01_C)" (if applicable) relating to that particular payment date is published or information equivalent to that which would be set out in such reports is communicated to Clearing Member by OTC Clear, subject to the availability of RTGS services.
- (ii) In respect of the Initial Exchange Amount and the Final Exchange Amount of any Standard Cross-currency Rates Derivatives Contract and Notional Amounts of any Deliverable FX Derivatives Contract:
 - (a) the Clearing Member or the Sponsored Settlement Member (where applicable) must be operationally ready to settle the relevant cash settlement on a particular payment

date by reserving sufficient funding for the relevant cash settlement no later than the Notional Exchange USD/HKD Settlement Ready Time for the Currency Pair (swap and FX) of USD and HKD and the Notional Exchange USD/CNY (offshore) Settlement Ready Time for the Currency Pair (swap and FX) of USD and CNY (offshore), on the relevant payment due date regardless of whether the “OTC Clear Settlement Report (Report Number STRP01)” and/or “OTC Clear Settlement Report for Client (Report Number STRP01_C)” (if applicable) relating to that particular payment date is published at or prior to 08:30 hours Hong Kong time on such day or not;

- (b) the cash settlement process for the Initial Exchange Amount and the Final Exchange Amount of any Standard Cross-currency Rates Derivatives Contract and Notional Amounts of any Deliverable FX Derivatives Contract must be completed by both the Clearing Member or the Sponsored Settlement Member (where applicable) and OTC Clear no later than: (A) the Notional Exchange USD/HKD Settlement Cutoff Time for the Currency Pair (swap and FX) of USD and HKD and the Notional Exchange USD/CNY (offshore) Settlement Cutoff Time for the Currency Pair (swap and FX) of USD and CNY (offshore) or (B) if OTC Clear determines to continue to settle any amount pursuant to section 3.19(ii)(a) of these Clearing Procedures by means of other methods as determined by OTC Clear, then in respect of such amount only, 16:00 hours Hong Kong time, in each case on the relevant payment due date regardless of whether the “OTC Clear Settlement Report (Report Number STRP01)” and/or “OTC Clear Settlement Report for Client (Report Number STRP01_C)” (if applicable) relating to that particular payment date is published at or prior to 08:30 hours Hong Kong time on such day or not but provided that if such reports are not published information equivalent to that which would be set out in such reports is communicated to Clearing Member and/or the Sponsored Settlement Member (where applicable) by OTC Clear no later than the Notional Exchange USD/HKD Settlement Ready Time for the Currency Pair (swap and FX) of USD and HKD, and the Notional Exchange USD/CNY (offshore) Settlement Ready Time for the Currency Pair (swap and FX) of USD and CNY (offshore); and
 - (c) If a Black Rainstorm Warning or a Typhoon Signal Number 8 or above is issued by The Hong Kong Observatory or Extreme Conditions are announced, the special arrangements as set out in section 9.6 of these Clearing Procedures will apply and the operation of the procedures set out in this section 3.12(ii) shall be construed accordingly.
- (iii) Save and except the Initial Exchange Amount and the Final Exchange Amount of any Standard Cross-currency Rates Derivatives Contract and Notional Amounts of any Deliverable FX Derivatives Contract and the interest amount (coupon) received from OTC Clear’s Custodian in respect of the relevant non-cash Collateral and payable to the relevant Clearing Member, any cash settlement to be payable by OTC Clear on a particular payment date must be settled by OTC Clear:
- (a) except for CNH, no later than 14:30 hours Hong Kong time on the relevant payment due date if the “OTC Clear Settlement Report (Report Number STRP01)” and/or “OTC Clear Settlement Report for Client (Report Number STRP01_C)” (if applicable) relating to that particular payment date is published at or prior to 08:30 hours Hong Kong time on such day or information equivalent to that which would

be set out in the reports is available to OTC Clear no later than 12:00 hours Hong Kong time; and

- (b) For CNH, no later than 17:00 hours Hong Kong time on the relevant payment due date if the “OTC Clear Settlement Report (Report Number STRP01)” and/or “OTC Clear Settlement Report for Client (Report Number STRP01_C)” (if applicable) relating to that particular payment date is published at or prior to 08:30 hours Hong Kong time on such day or information equivalent to that which would be set out in the reports is available to OTC Clear no later than 12:00 hours Hong Kong time; or
- (c) in all other cases within two hours following the “OTC Clear Settlement Report (Report Number STRP01)” and/or “OTC Clear Settlement Report for Client (Report Number STRP01_C)” (if applicable) relating to that particular payment date is published, or information equivalent to that which would be set out in such reports is available to OTC Clear, subject to the availability of RTGS services.

Any Margin requirements must be satisfied in accordance with the timing set out in section 4.7.2 of these Clearing Procedures; and a Clearing Member's request for voluntary withdrawal, porting or deposit of cash Collateral will be governed by section 3.9.

For the avoidance of doubt, OTC Clear will pay the interest amount (coupon) in respect of the relevant non-cash Collateral to the Clearing Member on the appropriate value date only after OTC Clear has been credited with such interest amount (coupon) by its Custodian.

“Notional Exchange USD/HKD Settlement Ready Time” means 11:40 hours Hong Kong time, provided that, where section 3.12(ii)(c) applies, it has the meaning given to it in section 9.6.

“Notional Exchange USD/CNY (offshore) Settlement Ready Time” means 12:00 hours Hong Kong time, provided that, where section 3.12(ii)(c) applies, it has the meaning given to it in section 9.6.

“Notional Exchange Settlement Cutoff Time” means the Notional Exchange USD/HKD Settlement Cutoff Time or Notional Exchange USD/CNY (offshore) Settlement Cutoff Time.

“Notional Exchange USD/HKD Settlement Cutoff Time” means, for the Bulk Settlement Run process for the Currency Pair (swap and FX) of USD and HKD:

- (a) subject to sub-sections (b) and (c) below, the time which is 15 minutes after the Commencement Time of such Bulk Settlement Run process;
- (b) subject to sub-section (c) below, where OTC Clear requires any Transaction File Replacement in relation to such Bulk Settlement Run process, the time which is 60 minutes after the Commencement Time of such Bulk Settlement Run process; or
- (c) where section 3.12(ii)(c) applies, the meaning given to it in section 9.6.

“Notional Exchange USD/CNY (offshore) Settlement Cutoff Time” means, for a Bulk Settlement Run process for the Currency Pair (swap and FX) of USD and CNY (offshore):

- (a) subject to sub-sections (b) and (c) below, the time which is 15 minutes after the Commencement Time of such Bulk Settlement Run process;

- (b) subject to sub-section (c) below, where OTC Clear requires any Transaction File Replacement in relation to such Bulk Settlement Run process, the time which is 60 minutes after the Commencement Time of such Bulk Settlement Run process; or
- (c) where section 3.12(ii)(c) applies, the meaning given to it in section 9.6.

“Transaction File Replacement” means, in relation to any Bulk Settlement Run process in any Currency Pair (swap and FX) on a particular payment date, where OTC Clear has already submitted a transaction file to HKICL, OTC Clear requires to replace such transaction file with an amended transaction file containing an amended list of transactions to be settled through the Bulk Settlement Run process in such Currency Pair (swap and FX) on such date.

Chapter 4

Margin and Valuation

4.1 Margin Requirement

A Clearing Member must at all times satisfy its Margin requirements calculated by OTC Clear in respect of all Contracts registered in its name. Except for Participating Margin, the Margin requirements in respect of Contracts recorded to a Clearing Member's House Position Account may be netted against each other, and the Margin requirement in respect of Contracts recorded to a Clearing Member's Client Position Account may be netted against each other, but not against Contracts recorded to such Clearing Member's House Position Account or other Client Position Account(s). With respect to a Clearing Member, Participating Margin is calculated in respect of the Inter-CCP Rates Derivatives Contracts with equal but opposite terms to (and which have been created to correspond to) the Standard Northbound Rates Derivatives Contracts recorded in all Position Accounts of that Clearing Member.

The types of Margin that may be demanded by OTC Clear in respect of each Clearing Member are summarised below:

- (i) Initial Margin (see section 4.2) – which in most circumstances is calculated during the End-of-Day Settlement Process in respect of each Position Account. Initial Margin will be calculated and presented in the Base Currency, and a Clearing Member may satisfy its Initial Margin requirements either in cash in any Eligible Currency or, subject to any Collateral Concentration Limit imposed by OTC Clear, any non-cash assets specified pursuant to section 7.3 of these Clearing Procedures. OTC Clear may, at any time during an OTC Clear Clearing Day and a Northbound Clearing Day, demand ad hoc intra-day Initial Margin from each Clearing Member if it determines that the then market conditions warrant this. Ad hoc intra-day Initial Margin requirement will apply to each Clearing Member with respect to each Position Account then registered in its name (including both its House Position Account and Client Position Account(s), if any). With respect to each such Position Account, ad hoc intra-day Initial Margin will be determined and presented in the Base Currency, and the Clearing Member may satisfy such demand either in cash in any Eligible Currency or any non-cash assets specified in section 7.3 of these Clearing Procedures;
- (ii) Variation Margin
 - (a) End-of-day Variation Margin (see section 4.3) – which is calculated during the End-of-Day Settlement Process in respect of each Contract. End-of-day Variation Margin will be calculated and presented in the Contractual Currency of the Contract, and a Clearing Member shall satisfy the end-of-day Variation Margin requirements in cash in the relevant Contractual Currency;
 - (b) Routine Intra-day VM Call (see section 4.4.2) – which may be made by OTC Clear at the Routine VM Call Time during an OTC Clear Business Day. At regular intervals during an OTC Clear Clearing Day and a Northbound Clearing Day, OTC Clear will determine the aggregate Initial Margin and Additional Margin requirements in respect of all the Contracts then recorded to a Clearing Member's House Position Account, taking into consideration any Variation Margin requirements reflecting intra-day market movements, and compare

the same with the then Margin Balance relating to such Clearing Member's House Position Account. If the Initial Margin and Additional Margin requirements relating to a Clearing Member's House Position Account, taking into consideration any intra-day market movements, exceed the then Margin Balance relating to such Clearing Member's House Position Account by an amount equal to or greater than the Intra-day VM Limit set for such Clearing Member, then OTC Clear will make a Routine Intra-day VM Call with respect to such Clearing Member.

Routine Intra-day VM Call will be determined and presented in the Base Currency, and a Clearing Member may satisfy the Routine Intra-day VM Call either in cash in any Eligible Currency, or any non-cash assets specified pursuant to section 7.3 of these Clearing Procedures under the circumstances described in Clearing Rule 1211.

References to "intra-day market movements" as used in this section 4.1(ii)(b) means, with respect to an OTC Clear Clearing Day, any mark-to-market movements during the period from the completion of the End-of-Day Settlement Process on the immediately preceding OTC Clear Clearing Day to the time preceding the Routine VM Call Time, taking into account the latest market data then available, on such OTC Clear Clearing Day; and

- (c) Ad Hoc Intra-day VM Call (see section 4.4.3) – which may be made by OTC Clear at anytime on an OTC Clear Clearing Day and a Northbound Clearing Day if it determines that the then market conditions warrant an Ad Hoc Intra-day VM Call. The imposition of an Ad Hoc Intra-day VM Call, if applicable, will apply to each Clearing Member with respect to each Contract then registered in its name (including both House Position Account and Client Position Account, if any). With respect to each such Contract, Ad Hoc Intra-day VM Call will be determined and presented in the Contractual Currency of the relevant Contract, and the Clearing Member shall satisfy the Ad Hoc Intra-day VM Call in cash in any Eligible Currency and non-cash assets eligible as Collateral.

(iii) Additional Margin

- (a) Holiday Margin (see section 4.5.1) – OTC Clear may impose Holiday Margin in the circumstances described in section 4.5.1. Holiday Margin will be determined and presented in the Base Currency, and a Clearing Member may satisfy its Holiday Margin requirements either in cash in any Eligible Currency or any non-cash assets specified pursuant to section 7.3 of these Clearing Procedures;
- (b) Others (see section 4.5.2) – OTC Clear may also impose additional Margin in the circumstances described in section 4.5.2. Each of Holiday Margin, Notional Exchange Failure Margin and any additional Margin imposed by OTC Clear in the circumstances described in section 4.5.2 shall be "**Additional Margin**". Additional Margin will be determined and presented in the Base Currency, and a Clearing Member may satisfy its Additional Margin requirements either in cash in any Eligible Currency (provided that if a specific Eligible Currency is demanded by OTC Clear, the relevant Additional Margin requirement may only be satisfied in that Eligible Currency) or any non-cash assets specified pursuant to section 7.3 of these Clearing Procedures. OTC Clear may demand Additional Margin on each OTC Clear Clearing Day: at 08:30 hours Hong Kong time, at 14:15 hours Hong Kong time and at any other time determined by OTC Clear between 08:30 hours Hong Kong time and 15:00 hours Hong Kong time; and

- (c) Notional Exchange Failure Margin (see section 4.5.3) – OTC Clear may also demand Notional Exchange Failure Margin in the circumstances described in section 4.5.3.

- (iv) Participating Margin

Participating Margin (see section 4.5A) covers the aggregate of: (i) the potential future exposure that OTC Clear could face in normal market conditions in the interval between its last Variation Margin collection in respect of each Inter-CCP Rates Derivatives Contract recorded to the Special Clearing House Participant's House Position Account and the close-out of such Contracts following the occurrence of a DMP Event with respect to the Special Clearing House Participant and OTC Clear; and (ii) the IM Add-on (as defined in section 11.6.1(i) of these Clearing Procedures).

Pricing and market data for calculating Margin (including construction of curves used in such calculations) will be obtained by OTC Clear from external quotes and third party sources throughout an OTC Clear Clearing Day and a Northbound Clearing Day. Details of the relevant pricing and market data, as well as curve construction methodology, for Rates Derivatives Contracts and FX Derivatives Contracts are set out in sections 5.1 and 5.2 of these Clearing Procedures, respectively.

In respect of any Margin requirements determined and presented in the Base Currency that may be satisfied by a Clearing Member in an Eligible Currency other than the Base Currency or non-cash assets denominated in a currency other than the Base Currency, satisfaction of such Margin requirements will be determined by OTC Clear by reference to relevant exchange rate(s) using third party data sources available on the latest practicable Currency Day.

In respect of Participating Margin requirements which are determined and presented in the Base Currency that may be satisfied by a Clearing Member in another Eligible Inter-CCP Currency, subject to a Collateral Concentration Limit specified in section 7.4A. Satisfaction of such Participating Margin requirements will be determined by OTC Clear by reference to relevant exchange rate(s) using third party data sources available on the latest practicable Currency Day. The relevant exchange rate(s) will be notified to Clearing Members.

4.2 Initial Margin

Initial Margin in respect of a Position Account covers the potential future exposure that OTC Clear could face in normal market conditions in the interval between its last Variation Margin collection in respect of such Position Account and the close-out of all Contracts recorded to such Position Account following the occurrence of a DMP Event with respect to the relevant Clearing Member. Pursuant to Clearing Rule 1205, OTC Clear may, at any time during an OTC Clear Clearing Day and Northbound Clearing Day, demand ad hoc intra-day Initial Margin from each Clearing Member if it determines that the then market conditions warrant this. OTC Clear will, to the extent reasonably practicable, consult with the Risk Management Committee prior to determining whether the market conditions at the relevant time warrant a demand for ad hoc intra-day Initial Margin. If OTC Clear is unable to consult with the Risk Management Committee sufficiently promptly in the circumstances, OTC Clear will consult with the chief executive of OTC Clear. In the event that the chief executive of OTC Clear is unavailable at the time for any reason, OTC Clear will consult with any Representative of OTC Clear designated by the OTC Clear Board from time to time for purposes of the applicable consultation. In determining the amount of Collateral required with respect to each Position Account as a result of a demand for ad hoc intra-day Initial Margin, OTC Clear will perform

a process substantially similar to the End-of-Day Settlement Process that relates to the determination of end-of-day Initial Margin. In addition to issuing the relevant call for ad hoc intra-day Initial Margin, OTC Clear will also use reasonable endeavours to notify each Clearing Member of such demand by telephone call or electronic mail.

4.2.3.1 Liquidity Risk Multiplier

Liquidity risk multiplier (the “**Liquidity Risk Multiplier**”) is one type of risk multipliers that may be imposed by OTC Clear. OTC Clear will apply the Liquidity Risk Multiplier to the Initial Margin calculation of a Clearing Member’s Position Account if a Clearing Member’s portfolio of Contracts in its House Position Account or any of its Client Position Accounts have exposures above set thresholds in a particular parameter, including but without limitation to currency, curve or underlying rate or in respect of the aggregate portfolio risk.

In order to determine the calibration of the levels of Liquidity Risk Multiplier to be applied to the Initial Margin calculations of a Clearing Member’s Position Account, OTC Clear may solicit bid/ask spread data or request other information from Clearing Members and the Special Clearing House Participant. The level of the Liquidity Risk Multiplier may vary from time to time, and OTC Clear will notify the Clearing Members of the updated level of the Liquidity Risk Multiplier.

As a result of the application of a Liquidity Risk Multiplier to the Initial Margin calculation with respect to a Position Account, additional Initial Margin will be required in respect of such Position Account.

4.3.1 Calculation and Valuation Process

OTC Clear will calculate, regularly, during the Margin Process Hours, the net present value and market price movements of each Contract using zero coupon curves constructed in accordance with Chapter 5 of these Clearing Procedures based on the latest market prices available from market sources. The latest market prices utilised in such calculations will be published on the Web Portal on each OTC Clear Clearing Day and Northbound Clearing Day.

4.3.2 Price Alignment Interest

Variation Margin will be adjusted by application of price alignment interest (“**PAI**”). 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 is intended to settle the internal rate of return on the cumulative Variation Margin payments transferred in respect of each OTC Clear Clearing Day and Northbound Clearing Day.

In respect of each Clearing Member and its House Position Account and Client Position Account(s) (for such purpose, each Client Position Account shall be treated separately), PAI will be calculated separately in respect of all Contracts (except Standard Northbound Rates Derivatives Contracts) with the same Contractual Currency in each such Position Account during the End-of-Day Settlement Process on each OTC Clear Business Day from (and including) the first OTC Clear Business Day after the trade date of the relevant Contract to (and including) the OTC Clear Business Day prior to the settlement date of the relevant Contract (each, “**T₀**”). PAI is calculated by OTC Clear in accordance with the following formula:

$$PAI_{T_0} = NPV_{T-1} \times PAI \text{ Rate}_{T_{PAI}} \times \text{Accrual Factor}$$

where,

- (i) NPV_{T-1} is the net present value determined as at 19:00 hours Hong Kong time on $T-1$ or such other time on $T-1$ as OTC Clear considers appropriate and notifies to the Clearing Members from time to time, where “ T_0 ” is an OTC Clear Business Day and “ $T-1$ ” is the OTC Clear Business Day immediately preceding T_0 ;
- (ii) “**PAI Rate**” means the annual percentage rate is determined by OTC Clear by reference to the relevant end-of-day overnight index swap (“**OIS**”) curves calculated on T_{PAI} , where “ T_{PAI} ” is the Currency Day (for the relevant Contractual Currency) immediately preceding T_0 if the relevant OIS curves are available on such day ($T-1$), or if the relevant OIS curves are not available on $T-1$, the last relevant OIS curves available (for the avoidance of doubt, if T_{PAI} falls on a day other than a Currency Day, the relevant OIS curves the nearest immediately preceding Currency Day will be used); and
- (iii) “**Accrual Factor**” means the day count fraction that is used by OTC Clear to convert the PAI Rate from an annual rate to a daily rate, on a basis of a year with a number of days equal to:
 - (a) 360 calendar days; or
 - (b) 365 calendar days,

as OTC Clear may, from time to time, determine to be appropriate in accordance with the then market convention for the conversion of the PAI Rate.

PAI will be apportioned to each Standard Northbound Rates Derivatives Contract by OTC Clear from the price alignment interest determined by the Special Clearing House Participant for the relevant Inter-CCP Rates Derivatives Contract with equal but opposite terms to (and which have been created to correspond to) such Standard Northbound Rates Derivatives Contract.

PAI will be notified to each Clearing Member and each Sponsored Settlement Member (where applicable), and will be paid or received by such Clearing Member or Sponsored Settlement Member, as the case may be, as part of the Clearing Member's Variation Margin requirement.

4.4.3 Ad Hoc Intra-day VM Call

In addition to the Routine Intra-day VM Call described in section 4.4.2, OTC Clear may make an ad hoc intra-day Variation Margin call (an “**Ad Hoc Intra-day VM Call**”) at any time on an OTC Clear Clearing Day or Northbound Clearing Day if OTC Clear determines that the market conditions at the relevant time requires an Ad Hoc Intra-day VM Call. OTC Clear will, to the extent reasonably practicable, consult with the Risk Management Committee prior to determining whether the market conditions at the relevant time warrant this. If OTC Clear is unable to consult with the Risk Management Committee sufficiently promptly in the circumstances, OTC Clear will consult with the chief executive of OTC Clear. In the event that the chief executive of OTC Clear is unavailable at the time for any reason, OTC Clear will consult with any Representative of OTC Clear designated by the OTC Clear Board from time to time for purposes of the applicable consultation.

Once OTC Clear determines that an Ad Hoc Intra-day VM Call shall be imposed, such imposition of Ad Hoc Intra-day VM Call shall apply to each Clearing Member with respect to each Contract then registered in its name (including its House Position Account and Client Position Account, if

any). In determining the amount of Collateral required with respect to each Contract as a result of the Ad Hoc Intra-day VM Call, no PAI adjustment will be made in the determination of an Ad Hoc Intra-day VM Call. Upon imposition of an Ad Hoc Intra-day VM Call in respect of a Position Account, each Clearing Member must deposit Collateral to ensure that it has a Margin Balance on the corresponding Collateral Account that is equal to or greater than the Margin requirement on that Position Account.

In addition to issuing the relevant Ad Hoc Intra-day VM Call on the Web Portal, OTC Clear will also use reasonable endeavours to notify each Clearing Member of the Ad Hoc Intra-day VM Call by telephone call or electronic mail.

Please refer to the Web Portal User Manual for more details on the timing of an Ad Hoc Intra-day VM Call.

4.5.2 Others

In addition to the Holiday Margin described in section 4.5.1 and Notional Exchange Failure Margin in section 4.5.3, OTC Clear may impose Additional Margin requirements on a Clearing Member at its sole discretion in the following situations:

- (i) if a Clearing Member fails to maintain Capital in an amount at least equal to the greater of its Expected Uncollateralized Loss and Minimum Capital Requirement;
- (ii) if a Clearing Member fails to maintain Capital in an amount required to ensure the value of its then CM Funded Contribution Amount (determined on an OTC Clear Clearing Day as if it was a Rates and FX Contribution Determination Date) is less than 20% of the then total amount of the Capital of such Clearing Member (please see section 2.3.1 of these Clearing Procedures);
- (iii) if a Clearing Member's Membership is being suspended by OTC Clear pursuant to Clearing Rule 601;
- (iv) in the circumstances described under Clearing Rule 1510;
- (v) if the Margin Balance of a Clearing Member decreases due to either market movement affecting the value of such Collateral or change in the applicable Collateral Haircut, or if OTC Clear determines there are wrong-way risk concerns on any of a Clearing Member's Position Account(s);
- (vi) if a Clearing Member has exceeded any Position Limit or Notional Exchange Risk Limit as described in Clearing Rule 1223(2);
- (vii) if a particular Standard Cross-currency Rates Derivatives Contract of a Clearing Member is registered by OTC Clear one day before any forthcoming Initial Exchange Date of that particular Standard Cross-currency Rates Derivatives Contract, where such day is (1) a Currency Day for each Contractual Currency of that particular Standard Cross-currency Rates Derivatives Contract and (2) an OTC Clear Clearing Day;
- (viii) if a particular Deliverable FX Forward Contract or Deliverable FX Swap Contract of a Clearing Member is registered by OTC Clear one day before any forthcoming Settlement

Date of that particular Deliverable FX Forward Contract or Deliverable FX Swap Contract, where such day is (1) a Currency Day for each Contractual Currency of that particular Deliverable FX Forward Contract or Deliverable FX Swap Contract and (2) an OTC Clear Clearing Day; or

(xi) if the days are OTC Clear Business Days but not Northbound Clearing Days.

In all other situations not specifically provided for under section 4.5.1, this section 4.5.2 or section 4.5.3, OTC Clear may impose Additional Margin requirements on a Clearing Member provided that it has first consulted with the Risk Management Committee.

4.5A Participating Margin

Participating Margin is calculated at regular intervals on each Northbound Clearing Day. With respect to a Clearing Member, Participating Margin is calculated in respect of the Inter-CCP Rates Derivatives Contracts with equal but opposite terms to (and which have been created to correspond to) the Standard Northbound Rates Derivatives Contracts recorded in all Position Accounts of that Clearing Member, as reduced by a multiplier which reflects the Inter-CCP SHCH Margin contributed by the Special Clearing House Participant and the reduction in the amount of Inter-CCP OTCC Margin from netting benefits.

4.6 Margin Process

Margin Process will be performed in respect of submission of Original Transactions and Original Northbound Transactions for registration, and a de-registration request (see section 3.6 of the Clearing Procedures).

Sections 4.6.1 to 4.6.4 relate to the Margin Process conducted in respect of submission of Original Transactions and Original Northbound Transactions, and section 4.6.5 relates to the Margin Process conducted in respect of a de-registration request.

4.6.1 Position Limits

Original Transactions and Original Northbound Transactions submitted for registration must satisfy, without limitation, the following conditions:

- (i) Position Limits check as set out in this section 4.6.1; and
- (ii) Margin and credit check as set out in sections 4.6.2 and 4.6.3.

Pursuant to Clearing Rule 1222, OTC Clear may prescribe, amend or revoke Position Limits. In addition, unless with the prior written approval from OTC Clear, OTC Clear requires a Clearing Member to impose a House Account Limit or (if applicable) Client Account Limit in respect of its House Position Account and Client Position Account(s) in accordance with section 4.6.1.1. Each of the limits referred to in this section 4.6.1 is a Position Limit. OTC Clear will not register any Original Transaction if registering such Original Transaction will cause, among others, a Position Limit

described herein to be breached. All Position Limits imposed by OTC Clear are subject to changes from time to time and OTC Clear will notify the relevant Clearing Member(s) in respect of any such changes.

4.6.2 Margin and Credit Check – Real-Time Novation Process

During the Margin Process Hours on each OTC Clear Clearing Day and Northbound Clearing Day, but excluding any period specified by OTC Clear, OTC Clear will repeatedly perform “**Real-Time Novation**”, which is the process set out in this section 4.6.2.

When an Original Transaction or Original Northbound Transaction is submitted to OTC Clear for registration, OTC Clear will determine the incremental Margin required to cover such transaction together with the Margin requirements in respect of the Position Account(s) to which such transaction will be recorded (for such purpose, each Client Position Accounts shall be treated separately).

Once the Margin requirement in respect of such Original Transaction and Original Northbound Transaction and the relevant Position Account(s) is determined, OTC Clear will perform the Position Limits check and check if the Margin Balance in respect of the relevant Position Account(s) is sufficient to cover the incremental Margin requirement. If OTC Clear is satisfied that the Margin Balance in respect of the relevant Position Account(s) is sufficient to cover the incremental Margin requirement in respect of each Contract to be created upon registration of such Original Transaction or Original Northbound Transaction, and provided that the Position Limits of each relevant Position Account(s) would not be breached as a result of the registration of such Original Transaction or Original Northbound Transaction, OTC Clear will accept for registration such Original Transaction or Original Northbound Transaction and two Contracts will be created pursuant to Clearing Rules 806 and 8A07, respectively.

In respect of each Original Transaction, if OTC Clear determines that either the incremental Margin requirement in respect of each Contract to be created upon registration of such Original Transaction is not satisfied, or the Position Limits of the relevant Position Account(s) would be breached, in each case, as a result of the registration of such Original Transaction, such Original Transaction will be put on “pending” status in the Rates and FX Clearing System. “Pending” Original Transactions as at the end of the Margin Process Hours on an OTC Clear Clearing Day will be rejected by OTC Clear pursuant to section 3.3 of these Clearing Procedures.

In respect of each Original Northbound Transaction, if OTC Clear determines that in any one or more of the following conditions: (i) the incremental Margin requirement in respect of each Contract to be created upon registration of such Original Northbound Transaction is not satisfied, (ii) the Position Limits of the relevant Position Account(s) would be breached, in each case, as a result of the registration of such Original Northbound Transaction, or (iii) if such Original Northbound Transaction is not also accepted for clearing by the Special Clearing House Participant under the SHCH Clearing Rules and SHCH Clearing Guidelines, such Original Northbound Transaction will be rejected by OTC Clear pursuant to section 3.3 of these Clearing Procedures.

For the avoidance of doubt, Participating Margin requirements are assessed separately and do not form part of the Margin and credit check process described above. A Clearing Member's Excess Participating Margin does not form part of its Margin Balance and must be ported into the relevant House Collateral Account or Client Collateral Account in order for such excess Collateral to be

reflected as Margin Balance. OTC Clear will calculate Participation Margin requirements at regular intervals throughout a Northbound Clearing Day and if necessary make a demand for Participating Margin at the next scheduled Participating Margin call.

4.6.5 Margin Process in respect of a de-registration request, an Unwind Proposal and a porting of Client Contracts

- (i) In respect of a de-registration request for a Contract and an Unwind Proposal, OTC Clear will process such de-registration request and Unwind Proposal only if, in respect of the Position Account to which the relevant Contract is recorded, subsequent to the de-registration of such Contract and/or Unwind Proposal:
 - (a) there remains sufficient Margin Balance in the corresponding Collateral Account to satisfy the Margin requirement relating to Contracts remaining in such Position Account; and
 - (b) the Position Limits of such Position Account would not be breached
- (ii) In respect of (a) any porting of Client Contracts following a DMP Event or (b) the porting of Contracts relating to Clients pursuant to Clearing Rule 825, OTC Clear will process such porting request only if:
 - (a) (in the case where not all the Contracts recorded in the same Position Account are to be ported) there is sufficient Margin Balance and Participating Margin Balance in the corresponding Collateral Account to satisfy the Margin requirement relating to Contracts remaining in such Position Account;
 - (b) in respect of the Position Account to which the relevant Contract is recorded, subsequent to the porting of such Contract, there is or will be sufficient Margin Balance and Participating Margin Balance in the corresponding Collateral Account to satisfy the revised Margin requirement relating to such Position Account; and
 - (c) the Position Limits of the relevant Position Accounts of the Clearing Member, Transferor Clearing Member, the Transferee Clearing Member and/or the Replacement Clearing Member as applicable would not be breached.

4.7 End-of-Day Valuation and Settlement Process

The end-of-day pricing and market data cut-off time is at or around 16:00 hours Hong Kong time on each OTC Clear Clearing Day and Northbound Clearing Day (the “**End-of-Day Cut Off Time**”). OTC Clear will use the market price at such time to determine the risk exposure and the Margin requirements in respect of each Position Account (together, the “**End-of-Day Margin Requirements**”) in its end-of-day valuation and settlement process, which commences at 19:00 hours Hong Kong time on each OTC Clear Clearing Day and Northbound Clearing Day (the “**End-of-Day Settlement Process**”). The End-of-Day Settlement Process of an OTC Clear Clearing Day and Northbound Clearing Day will end when the end-of-day Margin reports are made available to Clearing Members on such OTC Clear Clearing Day and such Northbound Clearing Day pursuant to section 4.7.1.

The End-of-Day Settlement Process will capture the incremental risk exposure for a Clearing Member on any given OTC Clear Clearing Day and any given Northbound Clearing Day. OTC

Clear performs its regular Variation Margin calculation during the End-of-Day Settlement Process, and any Variation Margin gains determined in favour of a Clearing Member resulting from the market price movements of a Contract on such day will be redelivered to the relevant Clearing Member through the End-of-Day Settlement Process. If an OTC Clear Clearing Day or a Northbound Clearing Day is not a Currency Day for the Contractual Currency in which the Variation Margin is denominated, then OTC Clear will not make, or demand, a Variation Margin payment in respect of such Contract during the End-of-Day Settlement Process on such OTC Clear Clearing Day or Northbound Clearing Day. The relevant Variation Margin will be made, or demanded, by OTC Clear on the immediately following Currency Day for the relevant Contractual Currency. For the avoidance of doubt, whilst any Variation Margin gains as a result of market price movements will be redelivered to a Clearing Member through the End-of-Day Settlement Process, any Collateral constituting the Excess Margin will only be redelivered to a Clearing Member upon its request pursuant to Clearing Rule 1218.

4.7.1 Margin Reporting

Clearing Members can obtain certain information relating to end-of-day settlement curves, market price movements, Initial Margin, Additional Margin, Participating Margin, Variation Margin and net present value, in each case, relating to one or more of its Position Accounts on the Web Portal. Sponsored Settlement Members (where applicable) can also obtain certain information in respect of Variation Margin (other than Routine Intra-day Variation Margin) relating to the relevant Clearing Member's Position Account on the Web Portal.

The detailed Margin reports will show the End-of-Day Margin Requirements of each Clearing Member in respect of each of its Position Accounts. For information relating to Margin reporting, please refer to section 3.16 of these Clearing Procedures.

The End-of-Day Margin Requirements as shown in such Margin reports reflect the risk exposure of each relevant Contract on the Rates and FX Clearing System at a cut-off time of 19:00 hours Hong Kong time on an OTC Clear Clearing Day and a Northbound Clearing Day. The final Margin reports would be made available to each Clearing Member or Sponsored Settlement Member (where applicable) on each OTC Clear Clearing Day and Northbound Clearing Day.

4.7.2 Settlement of Margin Requirements

The table below summarises the timing and manner in which relevant Margin requirements shall be satisfied by Clearing Members*:

* Please see Chapter 7 of these Clearing Procedures for more information on the types of eligible cash and non-cash Collateral and any applicable Collateral Haircut.

Margin requirements	Demand made by OTC Clear	Latest time in which Margin requirements shall be satisfied	Form of Collateral
End-of-day Initial Margin	At 08:30 hours Hong Kong time on an OTC Clear Clearing Day via Margin call issued on the Web Portal	09:30 hours Hong Kong time on the OTC Clear Clearing Day on which the Margin call is made	Cash in any Eligible Currency and any non-cash assets specified pursuant to section 7.3 of these Clearing Procedures
Ad hoc intra-day Initial Margin	At any time between 08:30 hours Hong Kong time and 15:00 hours Hong Kong time determined by OTC Clear on an OTC Clear Clearing Day and a Northbound Clearing Day via Margin call on the Web Portal	Within an hour following demand made by OTC Clear	Cash in any Eligible Currency and any non-cash assets specified pursuant to section 7.3 of these Clearing Procedures
End-of-day Variation Margin	On an OTC Clear Clearing Day and Northbound Clearing Day by publication in the OTC Clear Settlement Report (Report Number STRP01) or "OTC Clear Settlement Report for Client ((Report Number STRP01_C)"	11:00 hours Hong Kong time on the OTC Clear Clearing Day or Northbound Clearing Day immediately following the publication of the end-of-day Margin report, provided that such day is a Currency Day for the currency in which the end-of-day Variation Margin is denominated	Cash only in the Contractual Currency of the relevant Contract
Routine Intra-day VM Call	At the Routine VM Call Time on an OTC Clear Business Day via Margin call on the Web Portal	Within an hour following the Routine Intra-day VM Call	Cash in any Eligible Currency and non-cash assets specified pursuant to section 7.3 of these Clearing Procedures

Margin requirements	Demand made by OTC Clear	Latest time in which Margin requirements shall be satisfied	Form of Collateral
Ad Hoc Intra-day VM Call	At any time determined by OTC Clear on an OTC Clear Clearing Day and Northbound Clearing Day via Margin call on the Web Portal	Within an hour following demand made by OTC Clear	Cash in any Eligible Currency and non-cash assets specified pursuant to section 7.3 of these Clearing Procedures
Holiday Margin	At 08:30 hours Hong Kong time on the OTC Clear Business Day immediately preceding the start of a holiday period via Margin call on the Web Portal	By 09:30 hours Hong Kong time on the OTC Clear Business Day immediately preceding the start of a holiday period	Cash in any Eligible Currency and non-cash assets specified pursuant to section 7.3 of these Clearing Procedures
Notional Exchange Failure Margin	At any time determined by OTC Clear on an OTC Clear Business Day via Margin call on the Web Portal or Email	Within 90 minutes following demand made by OTC Clear	Cash only in the specified Eligible Currency required by OTC Clear

Margin requirements	Demand made by OTC Clear	Latest time in which Margin requirements shall be satisfied	Form of Collateral
Other Additional Margin	Up to three times on each OTC Clear Clearing Day: At (1) 08:30 hours Hong Kong time; (2) 14:15 hours Hong Kong time and (3) at any other time between 08:30 hours Hong Kong time and 15:00 hours Hong Kong time determined by OTC Clear, in each case, on an OTC Clear Clearing Day via Margin call on the Web Portal	Within an hour following demand made by OTC Clear	Cash in any Eligible Currency (provided that if a specific Eligible Currency is requested by OTC Clear, the relevant Additional Margin requirement may only be satisfied in that Eligible Currency) and non-cash assets specified pursuant to section 7.3 of these Clearing Procedures
Participating Margin	Up to two times on each Northbound Clearing Day: At (1) 08:30 hours Hong Kong time and (2) 14:15 hours Hong Kong time via Participating Margin call on the Web Portal	Within an hour following demand made by OTC Clear	Cash in any Eligible Inter-CCP Currency

Chapter 5

Curve Construction

5.1 Curve Construction for Rates Derivatives Contracts

5.1.2 Market Instrument

The zero coupon yield curves are constructed using benchmark instruments that represent the most liquid part of the relevant yield curves, subject to their availability among different markets. Such benchmark instruments include, but are not limited to, deposits, interest rate futures, forward rate agreements, swaps, OIS and basis swaps. Benchmark instruments used in settlement curve construction may include, but are not limited to, the following:

Benchmark Instrument List	Type
O/N Interbank Money Market	Yield
T/N Interbank Money Market	Yield
1 week Interbank Money Market	Yield
2 week Interbank Money Market	Yield
1 month Interbank Money Market	Yield
2 month Interbank Money Market	Yield
3 month Interbank Money Market	Yield
6 month Interbank Money Market	Yield
0 x 3 forward rate agreement	Yield
0 x 6 forward rate agreement	Yield
2nd forward rate agreement	Yield
3rd forward rate agreement	Yield
4th forward rate agreement	Yield
5th forward rate agreement	Yield
6th forward rate agreement	Yield
1 month Swap	Yield
2 month Swap	Yield
3 month Swap	Yield
6 month Swap	Yield
9 month Swap	Yield

1 Year Swap	Yield
2 Year Swap	Yield
3 Year Swap	Yield
4 Year Swap	Yield
5 Year Swap	Yield
6 Year Swap	Yield
7 Year Swap	Yield
8 Year Swap	Yield
9 Year Swap	Yield
10 Year Swap	Yield
11 Year Swap	Yield
12 Year Swap	Yield
15 Year Swap	Yield
20 Year Swap	Yield
25 Year Swap	Yield
30 Year Swap	Yield

5.1.3 Market Sources

OTC Clear obtains quotes for the relevant benchmark instrument used in zero coupon yield curves construction from direct data feeds of appropriate market sources selected by OTC Clear ("**Relevant Market Sources**"), provided that, in respect Standard Northbound Derivatives Contracts, direct data feeds from the Special Clearing House Participant will be used exclusively unless market price(s) of the relevant benchmark instrument(s) is not provided by the Special Clearing House Participant at the relevant time, in which case, OTC Clear will refer to other Relevant Market Sources selected by it in its sole and absolute discretion.

Please contact OTC Clear for details of the Relevant Market Sources.

5.1.4 Construction of Zero Coupon Yield Curves

OTC Clear will construct zero coupon yield curves using bootstrapping methodology and apply interpolation techniques as OTC Clear may consider appropriate in its sole discretion. Please contact OTC Clear for details of the construction method and interpolation techniques used.

OTC Clear will update the relevant zero coupon yield curves using market prices of the relevant benchmark instruments obtained from the Relevant Market Sources at regular intervals during Margin Process Hours on each OTC Clear Clearing Day and Northbound Clearing Day for purposes of determining the Margin requirements in respect of each Rates Derivatives Contract. In order to ensure accuracy of a zero coupon yield curve, OTC Clear will compare the updated zero coupon

yield curve against the corresponding zero coupon yield curve determined during the End-of-Day Settlement Process on the immediately preceding OTC Clear Clearing Day and, on the immediately preceding Northbound Clearing Day. Subject to availability and liquidity of the relevant benchmark instruments, curves constructed for discounting and rate forecasting could be different to allow for OIS discounting.

As part of the End-of-Day Settlement Process, OTC Clear will construct the relevant zero coupon yield curves for each Rates Derivatives Contract using the market price of the relevant benchmark instruments obtained at the End-of-Day Cut Off Time on each OTC Clear Clearing Day and Northbound Clearing Day, as applicable.

5.1.5 Market Data and Frequencies

OTC Clear obtains the prices for each of interest rate curves from the source(s) (each, a “**Source**”) and at the frequency (“**Frequency**”) set out below:

- (i) Interest rate curve:
 - (a) Source – OTC Clear
 - (b) Frequency – at regular intervals during the Margin Process Hours on each OTC Clear Clearing Day and Northbound Clearing Day
- (ii) PAI rates:
 - (a) Source – OTC Clear for all Contracts except Standard Northbound Rates Derivatives Contracts
 - (b) Frequency – once daily during the End-of-Day Settlement Process on each OTC Clear Clearing Day
- (iii) PAI amount for Standard Northbound Rates Derivatives Contracts
 - (a) Source – in respect of each Standard Northbound Rates Derivatives Contract, the PAI amount paid by the Special Clearing House Participant in respect of the Inter-CCP Rates Derivatives Contract with equal but opposite terms to (and which have been created to correspond to) such Standard Northbound Rates Derivatives Contract
 - (b) Frequency – once daily during the End-of-Day Settlement Process on each Northbound Clearing Day

5.2.2 Market Data and Frequencies

OTC Clear obtains the prices for each of FX spot rates, FX swap points and interest rate curves from the source(s) (each, a “**Source**”) and at the frequency (“**Frequency**”) set out below:

- (i) FX spot rates:
 - (a) Source – received by OTC Clear through a live link from the Relevant Market Source(s)

- (b) Frequency – at regular intervals during the Margin Process Hours on each OTC Clear Clearing Day

(ii) FX swap point:

- (a) Source – received by OTC Clear through a live link from the Relevant Market Source(s) for each Tenor set out below
- (b) Tenor (“**Tenor**”) – may include, but are not limited to, the tenors shown in the list below:

Tenor
S/N
1 week
2 weeks
1 month
2 months
3 months
6 months
9 months
1 year
2 years
3 years
4 years
5 years

- (c) Frequency – at regular intervals during the Margin Process Hours on each OTC Clear Clearing Day

(iii) Interest rate curve:

- (a) Source – OTC Clear
- (b) Frequency – at regular intervals during the Margin Process Hours on each OTC Clear Clearing Day

(iv) PAI rates:

- (a) Source – OTC Clear
- (b) Frequency – once daily during the End-of-Day Settlement Process on each OTC Clear Clearing Day

Chapter 6

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\$ 50 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 Addition ^(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

* 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.

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, 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.

6.2 Excess Margin and CM Funded Contribution Amount

Pursuant to section 6.1.1(4), with respect to each Clearing Member, its 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) will be used to determine its Position

* 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.

Account EUL and its relative pro rata percentage share and such Excess Margin (if any) will be taken into account by OTC Clear to reduce the CM Funded Contribution Amount applicable to that Clearing Member.

Assuming that, applying the calculations referred to in parameter (2a) above, the House Position Account of Clearing Member A gives the highest Position Account STV, and assuming further that Clearing Member A has opted to utilize its Excess Margin to reduce the Expected Uncollateralized Loss in respect of any of its Position Accounts and now has Excess Margin of 150 provided to reduce the Expected Uncollateralized Loss on top of its Initial Margin recorded to the Collateral Account relating to the House Position Account, using the figures in the above illustrative example, the Margin Balance of Clearing Member A will be increased from 630 to 780.

Based on the same calculation methodology described in section 6.1, Clearing Member A's relative pro-rata percentage share and Daily GF Value on OTC Clear Clearing Day "X" will be reduced as shown in the table below:

Clearing Member / Special Clearing House Participant	Position Account STV	Position Account Stress Add-on	Margin Balance**	Expected Uncollateralized Loss	Relative pro-rata percentage share	Daily GF Value	Daily GF Value with Reserve
Clearing Member A	1,000	80	630 → 780	300	18.18%	90.91	100.00
Clearing Member B	300	20	120	200	12.12%	60.61	66.67
Clearing Member C	500	50	300	250	15.15%	75.76	83.33
Clearing Member D	800	100	400	500	30.30%	151.52	166.67
Clearing Member E	600	60	460	200	12.12%	60.61	66.67
Clearing Member F	400	20	220	200	12.12%	60.61	66.67
Total				1,650	100%	500	550

In the illustrative example, Margin Balance excludes (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.

The relative pro-rata percentage share calculated on OTC Clear Clearing Day "X" will be averaged with the relative pro-rata percentage share calculated on the OTC Clear Clearing Days in the relevant Calculation Period relating to the relevant Rates and FX Contribution Determination Date in determining the CM Funded Contribution Amount of Clearing Member A on such Rates and FX Contribution Determination Date.

6.2A Where the Special Clearing House Participant is the highest Expected Uncollateralized Loss

Although the Special Clearing House Participant is exempted from Rates and FX Contribution, its Position Account STV, Position Account Stress Add-on and Expected Uncollateralized Loss is calculated and ranked for the purpose determining the highest Max EUL and consequently each Clearing Members' Daily GF Value with Reserve.

Illustrated in the table below is how each Clearing Members' Daily GF Value with Reserve will be affected where the Special Clearing House Participant has the highest Expected Uncollateralized Loss:

Clearing Member / Special Clearing House Participant	Position Account STV	Position Account Stress Add-on	Margin Balance	Expected Uncollateralized Loss	Relative pro-rata percentage share	Daily GF Value	Daily GF Value with Reserve
Clearing Member A	1,000	80	630	450	25.00%	150	165
Clearing Member B	300	20	120	200	11.11%	66.66	73.33
Clearing Member C	500	50	300	250	13.89%	83.34	91.67
Clearing Member D	800	100	400	500	27.78%	166.68	183.35
Clearing Member E	600	60	460	200	11.11%	66.66	73.33
Clearing Member F	400	20	220	200	11.11%	66.66	73.33
Special Clearing House Participant	900	100	400	600	Not Applicable	Not Applicable	Not Applicable
Total (Excluding Special Clearing House Participant)				1,800	100%	600	660

Chapter 7

Collateral

7.1 Acceptable Collateral

OTC Clear may, at its sole discretion, determine from time to time the types of assets which are acceptable as Collateral for purposes of Margin requirements and Rates and FX Contribution, and determine when any asset will cease to be acceptable as Collateral for such purposes. OTC Clear publishes the list of eligible Collateral on the HKEX website and updates it from time to time. OTC Clear reserves the right to change the list of eligible Collateral at its sole and absolute discretion. Assets previously posted to OTC Clear as Collateral but which no longer qualify as eligible Collateral will not be taken into account for the purposes of determining a Clearing Member's Margin Balance, Participating Margin Balance and CM Funded Contribution Amount and must be substituted with other eligible Collateral in order to meet a Clearing Member's Margin requirement and/or Rates and FX Liability. Assets previously posted to OTC Clear as Collateral but which no longer qualify as eligible Collateral will remain in each Clearing Member's relevant Collateral Account until they are withdrawn.

7.3 Non-cash Collateral

OTC Clear currently accepts non-cash Collateral from Clearing Members only for the purposes of satisfying Margin (except Participating Margin) requirements. OTC Clear currently does not accept non-cash Collateral for the purpose of satisfying a Clearing Member's Rates and FX Liability. Pursuant to Clearing Rule 1213, non-cash Collateral delivered by a Clearing Member to satisfy its Margin requirements will be transferred by way of security interest.

A Clearing Member who intends to post non-cash Collateral for the purposes of satisfying its Margin (except Participating Margin) requirements must:

- (i) execute a valid Deed of Charge in OTC Clear's standard form^{*}; and
- (ii) complete all perfection requirements in all relevant jurisdictions to the satisfaction of OTC Clear.

OTC Clear only accepts non-cash Collateral delivered to it at its account at the relevant Custodian specified for the relevant type of eligible non-cash Collateral.

OTC Clear will not accept a Clearing Member's non-cash Collateral if the documents required by OTC Clear have not been duly executed and all necessary perfection requirements in all relevant jurisdictions have not been completed within the necessary timeframe. Non-cash Collateral credited to a Clearing Member's Collateral Account will not be allowed to be used except as provided for under the Clearing Rules or these Clearing Procedures, or transferred or withdrawn by the Clearing Member unless with the express permission of OTC Clear.

^{*} The standard form Deed of Charge is available from OTC Clear upon request.

7.4A Collateral Concentration Limit for Participating Margin

OTC Clear may impose a limit to restrict the maximum amount of cash in each Eligible Inter-CCP Currency that may be delivered by a Clearing Member for the purposes of satisfying its Participating Margin requirement.

7.5 Collateral Valuation

7.5.1 Collateral Haircuts

When determining whether each Clearing Member's Margin Balance and Participating Margin Balance and Rates and FX Contribution are sufficient to cover its Margin requirement and its Rates and FX Liability, respectively, OTC Clear will value the assets in such Clearing Member's Collateral Accounts and GF Account at their market value less any applicable valuation discount or haircut stipulated by OTC Clear ("**Collateral Haircut**"). OTC Clear publishes the relevant Collateral Haircut for each asset type on the HKEX website and updates it from time to time.

The Collateral Haircut applicable to each type of asset will be determined by OTC Clear based on the calibration result and wrong-way risk back testing referred to in section 7.5.2, and subject to change from time to time pursuant to Clearing Rule 1214. For the avoidance of doubt, Collateral Haircut may apply on both cash and non-cash Collateral, but does not apply for the purpose of determining the value of any Collateral to be redelivered to Clearing Members pursuant to these Clearing Rules. In respect of any Collateral, OTC Clear will review the applicable Collateral Haircut on a monthly basis and will notify Clearing Members of any change of in Collateral Haircut.

7.5.3 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 Haircut referred to in section 7.5.1. At any given time:

- (i) any cash Collateral denominated in an Eligible Currency or Eligible Inter-CCP Currency other than the Base Currency will be valued at the Base Currency equivalent at such rate prevailing at the time of the conversion as OTC Clear shall reasonably select;
- (ii) any non-cash Collateral will be valued by OTC Clear by reference to the latest market prices available for such non-cash Collateral obtained from external market sources. Once OTC Clear is in receipt of the latest market prices for the non-cash Collateral, it will generate the mid or mean price for the purpose of valuing such non-cash Collateral. On any given day, if the latest market prices for any non-cash Collateral is not available from the external market sources, OTC Clear will determine the valuation of any such non-cash Collateral based on, among others, the following methodologies:
 - (a) the last available traded price of the relevant asset; and/or
 - (b) the price performance of proxy instruments issued by the same issuer or its affiliates for the relevant asset; and
- (iii) in respect of any non-cash Collateral provided by a Clearing Member to OTC Clear as its Initial Margin or Additional Margin, subsequent to liquidation of any such non-cash Collateral during a Default Management Process, such non-cash Collateral will be given a value equal

to the value obtained by OTC Clear during the liquidation process and attached to the Total Available Resources relating to such Default Management Process.

Pursuant to section 4.5.2 of these Clearing Procedures, a Clearing Member may be required to transfer additional Collateral to OTC Clear if the Margin Balance or Participating Margin Balance or the Rates and FX Contribution Balance, as applicable, decreases due to either market movement affecting the value of such Collateral or change in the applicable Collateral Haircut. OTC Clear may also require Clearing Members to post additional Collateral types due to wrong-way risk concerns.

7.6 Treatment of Collateral

7.6.1 Cash Collateral

7.6.1.1 Margin

OTC Clear may invest with a conservative policy in respect of any Initial Margin, Routine Intra-day Variation Margin, Ad Hoc Intra-day Variation Margin, Additional Margin, or Participating Margin delivered in the form of cash by Clearing Members. OTC Clear may utilise some or all the cash Collateral transferred outright to it as Participating Margin to satisfy its obligations to post Inter-CCP OTCC Margin Amount to the Special Clearing House Participant.

OTC Clear will, on a monthly basis, pay a return calculated on a daily basis to Clearing Members in respect of any Initial Margin, Routine Intra-day Variation Margin, Ad Hoc Intra-day Variation Margin or Additional Margin delivered in the form of cash and comprising the Margin Balance as at the end of each OTC Clear Clearing Day at a prevailing bank savings rate*.

OTC Clear will, on a quarterly basis, pay a return calculated on a daily basis to Clearing Members in respect of Participating Margin delivered in the form of cash and comprising the Participating Margin Balance as at each Northbound Clearing Day at a rate determined by OTC Clear from time to time. OTC Clear reserves the right to deduct any administrative costs from any interest to be paid.

For the avoidance of doubt, in the event that the average of such rates in respect of a particular Eligible Currency or Eligible Inter-CCP Currency is a negative rate, Clearing Members shall be required to pay to OTC Clear an amount equal to the absolute value of such rate multiplied by the portion of their Margin Balance or Participating Margin Balance that comprises cash Collateral in such Eligible Currency or Eligible Inter-CCP Currency. Any loss arising from the investment activities is for OTC Clear. The obligation of OTC Clear to redeliver Margin in cash will not be affected by the investment performance.

* For the purposes of 7.6.1.1, prevailing bank savings rate is the average prevailing savings rate of the three note issuing banks. The prevailing savings rate of each note issuing bank will be determined by OTC Clear with reference to the savings rates published or the savings rates notified to depositors via other means by such note issuing bank as well as any costs or charges imposed by such note issuing bank with respect to the relevant Eligible Currency.

7.6.2 Non-Cash Collateral[†]

Non-cash Collateral delivered to OTC Clear by a Clearing Member for purposes of satisfying its Margin requirements except Participating Margin will be transferred to OTC Clear by way of security interest with no right of rehypothecation pursuant to Clearing Rule 1213.

Each Clearing Member will bear the risk for any loss and gain on the value of the non-cash Collateral, and pursuant to Clearing Rule 1006, OTC Clear will distribute an amount representing any income it has received in respect of any non-cash Collateral, taking into account the deduction required to reflect any accommodation charges, administration costs or commitment fees for credit lines incurred by OTC Clear in respect of such non-cash Collateral. Each of such fees will be set out in Appendix I to the Clearing Procedures.

[†] OTC Clear currently accepts non-cash Collateral from Clearing Members only for the purposes of satisfying Margin requirements except Participating Margin requirements. OTC Clear currently does not accept non-cash Collateral for the purpose of satisfying a Clearing Member's Participating Margin requirements and Rates and FX Liability.

Chapter 8

Default Management

8.2 Member Obligations

Each Clearing Member has provided an undertaking to discharge its obligations in participating in the Default Management Process pursuant to Clearing Rule 1609.

Non-Defaulting Clearing Members shall provide market access for OTC Clear to execute Hedging pursuant to Clearing Rule 1801 and section 8.5. Each Non-Defaulting Clearing Member shall support the Hedging or risk neutralization process by promptly providing the Default Management Group with competitive pricing for hedging trades upon request. OTC Clear will consult with the Default Management Group in determining the range of competitive pricing for a Hedging transaction. If Non-Defaulting Clearing Members who have executed Hedging transactions with OTC Clear subsequently enter into other swap transactions to further hedge or offload their risk exposure created by such Hedging transactions, such Non-Defaulting Clearing Members shall disclose the terms of such swap transactions to OTC Clear.

If a DMG Delegate is no longer an employee or a director of the Clearing Member that nominates the DMG Delegate or the Clearing Member becomes aware that its DMG Delegate's employment or directorship will be terminated, such Clearing Member shall notify OTC Clear in writing as soon as practicable and such DMG Delegate will be removed from the Default Management Group. Such Clearing Member shall then nominate another employee or director to be a DMG Delegate.

8.6 Auction

8.6.1 Auction Protocol

The entire Auction process may take a number of days, but is expected to be completed as soon as reasonably practicable. Auction Portfolios may be auctioned at different times. Each Auction Portfolio shall be subject to its own Auction.

In respect of each Auction, DMP Information relating to such Auction will be provided to each Non-Defaulting Clearing Member participating in such Auction and the Special Clearing House Participant for dissemination to its clearing participants who have voluntarily agreed to participate in such Auction. The information provided will allow the Non-Defaulting Clearing Members and clearing participants of the Special Clearing House Participant to assess the risk in the Auction Portfolio and value the same.

8.6.3 Bidding Process

8.6.3.1 Bids

In respect of each Auction, once the timeframe for submitting Bids as notified by OTC Clear to Bidders has drawn to a close, no further Bids will be accepted. OTC Clear will examine all Bids submitted as follows:

- (i) the highest Bid received by OTC Clear is expected to be the Successful Bid of the Auction, provided that OTC Clear will not accept a Bid if accepting such Bid can potentially, without limitation, (a) cause OTC Clear to breach any legal or regulatory requirement applicable to

- it, (b) lead to legal action or proceedings to be taken against OTC Clear or (c) be disadvantageous or have a material adverse effect on OTC Clear; and
- (ii) in the event that the two (or more) highest Bids received by OTC Clear are of exactly the same value, the relevant Bidders will be invited to submit revised Bids. If no revised Bids have been received by OTC Clear within 10 minutes following the invitation of Bid re-submission, the relevant Bidder who submitted its original Bid first is expected to be the Successful Bidder.

Once the Successful Bid has been confirmed, OTC Clear will verbally notify the Successful Bidder or the Special Clearing House Participant (in case where the Successful Bidder is a PRC Bidder), followed by a written confirmation of the same.

In respect of each Auction, details of the Bids will be kept confidential so that a Bidder will not have knowledge of the Bid prices submitted by other Bidders.

For the avoidance of doubt, OTC Clear shall not be liable for any damages against it if a Bid fails to reach OTC Clear due to operational, technological or any other reasons.

8.6.3.3 Registration of Auction Portfolios (non-PRC Bidders)

Upon completion of a successful Auction, OTC Clear will register the relevant Auction Contracts to the Successful Bidder in accordance with Clearing Rule 1921. OTC Clear will liaise with both the relevant Approved Trade Registration System and the relevant Clearing Member to ensure the records relating to all Auction Contract(s) are updated on the Approved Trade Registration System. This update will automatically enable the recalculation of the Successful Bidder's Margin requirements and / or its CM Funded Contribution Amount, reflecting the impact of the acquisition of the Auction Contract(s) by the Successful Bidder.

OTC Clear will liaise with a Successful Bidder for booking relevant Auction Contract(s) into its systems so that the systems and records kept by such Successful Bidder will be aligned with those of OTC Clear.

The timing of transfer of any Auction Payment or Auction Receivable is set out in Clearing Rules 1922 and 1923, respectively.

8.6.3.4 Registration of Auction Portfolios (PRC Bidders)

If the Successful Bidder is a PRC Bidder, the provisions set out in Rule 21M04 will apply.

The timing of transfer of any Auction Payment or Auction Receivable is set out in Clearing Rule 21M07.

8.9 Post Auction Communication

Upon disposal of all Auction Portfolios by way of Auction or by the declaration of a Contract Termination Event following the occurrence of a DMP Event with respect to the Defaulting Clearing Member or the Defaulting Special Clearing House Participant, OTC Clear will announce the completion of the Default Management Process by notifying the Clearing Members and will provide a summary of the steps taken during the Default Management Process, such summary will be published on the HKEX website, a copy of which will also be provided to the SFC.

Chapter 9

Special Events / Business Continuity

9.5 Special Arrangement of Voluntary Deposit of Cash Collateral, Porting of Excess Margin and Withdrawal of Excess Margin, Excess Participating Margin and Rates and FX Contribution Excess under Adverse Weather Conditions

This section 9.5 includes the arrangement surrounding depositing, porting or withdrawing cash Collateral on a voluntary basis as adopted by OTC Clear when a Black Rainstorm Warning or a Typhoon Signal Number 8 or above is issued by The Hong Kong Observatory or Extreme Conditions are announced.

Chapter 10

Determination of Close-out Value

10.1 Close-out Value

The close-out value for each Contract will be determined in the Base Currency, and shall be the difference between the aggregate net Variation Margin (but excluding Routine Intra-day Variation Margin) settled by the relevant Clearing Member up to and including the last End-of-Day Settlement Process immediately preceding the Final Settlement Cycle Determination Date in respect of such Contract and the Close-out Variation Margin relating to such Contract, where:

“Close-out Variation Margin” means, with respect to a Contract, the net present value relating to such Contract as determined by OTC Clear using calculation methodology similar to that used to determine Variation Margin in the End-of-Day Settlement Process, except that, (a) for Contracts other than Standard Northbound Rates Derivatives Contracts, the relevant calculations will be determined on the basis of the curve(s) built and pricing input(s) and instrument quote(s) obtained as at 11:00 hours Hong Kong time, and (b) for Standard Northbound Rates Derivatives Contracts, the relevant calculations will be determined in accordance with calculation methodology published by Special Clearing House Participant, referencing curve(s) built and pricing input(s) and instrument quote(s) obtained as at 16:00 hours Hong Kong time, in each case, on:

- (i) with respect to a Contract being terminated as a result of the occurrence of Rates and FX Clearing Termination Event, the Final Settlement Cycle Determination Date determined in accordance with section 10.2 of these Clearing Procedures;
- (ii) with respect to a Contract (except a Standard Northbound Rates Derivatives Contract) which is the subject of Emergency Close-Out, or which is being terminated during the OTC Clear Failure to Pay Grace Period or as a result of the occurrence of an OTC Clear Failure to Pay Event or OTC Clear Insolvency Event, the Final Settlement Cycle Determination Date determined in accordance with section 10.3.1 of these Clearing Procedures;
- (iii) with respect to a Standard Northbound Rates Derivatives Contract which is the subject of Emergency Close-Out, or which is being terminated during the OTC Clear Failure to Pay Grace Period or as a result of the occurrence of an OTC Clear Failure to Pay Event or as a result of the occurrence of an OTC Clear Failure to Pay SHCH Event or OTC Clear Insolvency Event, the Final Settlement Cycle Determination Date determined in accordance with section 10.3.2 of these Clearing Procedures;
- (iv) with respect to a Contract being terminated as a result of the occurrence of a Product Suspension Event, the Final Settlement Cycle Determination Date for such Product Suspension Event pursuant to section 10.4 of these Clearing Procedures;
- (v) with respect to a Contract (except a Standard Northbound Rates Derivatives Contract) being terminated as a result of a Contract Termination Event, the Final Settlement Cycle Determination Date determined in accordance with section 10.5.1 of these Clearing Procedures; and

- (vi) with respect to a Standard Northbound Rates Derivatives Contract being terminated as a result of a Contract Termination Event, the Final Settlement Cycle Determination Date determined in accordance with section 10.5.2 of these Clearing Procedures.

The Close-out Variation Margin amount determined in any of the situations described in sub-paragraph (i), (ii), (iv) or (v) above will not be adjusted by PAI and in sub-paragraph (iii) or (vi) above will be adjusted by PAI.

10.3 Emergency Close-Out or OTC Clear Default

10.3.1 Upon the designation of an Early Termination Date pursuant to Clearing Rule 210, 1320(1), 1321(1) or 1322, OTC Clear will determine the Close-out Variation Margin for all applicable Contracts except Standard Northbound Rates Derivatives Contracts on the Final Settlement Cycle Determination Date, where the **“Final Settlement Cycle Determination Date”** shall fall on:

- (i) if an Early Termination Date is declared by OTC Clear at or prior to 09:00 hours Hong Kong time on an OTC Clear Business Day, such OTC Clear Business Day; or
- (ii) if an Early Termination Date is declared after 09:00 hours Hong Kong time on an OTC Clear Business Day, the OTC Clear Business Day immediately following the day on which such Early Termination Date is declared.

OTC Clear will announce the decision to determine the Close-out Variation Margin with respect to all applicable Contracts except Standard Northbound Rates Derivatives Contracts by 09:00 hours Hong Kong time on the relevant Final Settlement Cycle Determination Date.

10.3.2 Upon the designation of an Early Termination Date pursuant to Clearing Rule 210, 21J14, 1320(1), 1321(1) or 1322, OTC Clear will determine the Close-out Variation Margin for all applicable Standard Northbound Rates Derivatives Contracts on the Final Settlement Cycle Determination Date, where the **“Final Settlement Cycle Determination Date”** shall fall on the Participantship Termination Date pursuant to Clearing Rule 21E05 or the Early Termination Date pursuant to Clearing Rule 21J14.

OTC Clear will announce the decision to determine the Close-out Variation Margin with respect to all applicable Standard Northbound Rates Derivatives Contracts on the relevant Final Settlement Cycle Determination Date.

10.5 Contract Termination Event and Special Clearing House Participant Default

10.5.1 In case of a Contract Termination Event pursuant to Clearing Rule 21J04, 1918A or 1918AA, OTC Clear will determine the Close-out Variation Margin for all Identified Contracts except Standard Northbound Rates Derivatives Contracts on the Final Settlement Cycle Determination Date, and for such purpose the **“Final Settlement Cycle Determination Date”** shall fall on:

- (i) if a Contract Termination Event is declared by OTC Clear at or prior to 09:00 hours Hong Kong time on an OTC Clear Business Day, such OTC Clear Business Day; or
- (ii) if a Contract Termination Event is declared after 09:00 hours Hong Kong time on an OTC Clear Business Day, the OTC Clear Business Day immediately following the day on which such Contract Termination Event is declared.

OTC Clear will announce the decision to determine the Close-out Variation Margin with respect to all Identified Contracts except Standard Northbound Rates Derivatives Contracts by 09:00 hours Hong Kong time on the relevant Final Settlement Cycle Determination Date.

- 10.5.2** In case of a Contract Termination Event pursuant to Clearing Rule 21J04, 1918A or 1918AA, OTC Clear will determine the Close-out Variation Margin for all Identified Contracts which are Standard Northbound Rates Derivatives Contracts on the Final Settlement Cycle Determination Date, where the “Final Settlement Cycle Determination Date” shall fall on the Early Termination Date pursuant to Clearing Rule 21J03 or the Final Settlement Cycle Determination Date shall be determined as agreed between OTC Clear and the Special Clearing House Participant pursuant to Clearing Rule 21M05.

OTC Clear will announce the decision to determine the Close-out Variation Margin with respect to all Identified Contracts which are Standard Northbound Rates Derivatives Contracts on the relevant Final Settlement Cycle Determination Date.

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 OTC Clear Clearing Days 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 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 OTC Clear Clearing 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 Add-on ^(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 / Special Clearing House Participant	Position Account STV ^(a)	Position Account Stress Add-on ^(b)	Margin Balance ^(c)	Expected Uncollateralized Loss ^(d)	Relative pro-rata percentage share ^(e)	GF Component
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, 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**”.

(b) 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 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, 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, 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 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 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 OTC Clear Clearing 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, 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, the Expected Uncollateralized Loss of the Special Clearing House Participant

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.

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, 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.

Appendix I Fees Schedule

(i) Annual Fee, Registration Fee and Maintenance Fee (for Clearing Members engaged in House Business)

(e) Standard Northbound Rates Derivatives Contract

Tenor	Fee Rate	
	Registration Fee	Maintenance Fee
0 – 1 year	0.0001% of the notional amount of the Contract*.	0.000025% of the notional amount of the Contract, on a monthly basis in respect of each Contract until its maturity. Registration Fees and Maintenance Fees will be billed in aggregate (in HK\$) monthly in arrears.
>1 – 3 years	0.0003% of the notional amount of the Contract*.	
>3 – 5 years	0.0004% of the notional amount of the Contract*.	
>5 – 6 years	0.0006% of the notional amount of the Contract*.	
>6 – 7 years	0.0006% of the notional amount of the Contract*.	
>7 – 9 years	0.0008% of the notional amount of the Contract*.	
>9 – 10 years	0.0008% of the notional amount of the Contract*.	

(ii) Registration Fee and Maintenance Fee (for Clearing Members providing Client Clearing Services to their Clients)

(e) Standard Northbound Rates Derivatives Contract

Tenor	Fee Rate	
	Registration Fee	Maintenance Fee
0 – 1 year	0.0001% of the notional amount of the Contract*.	0.000025% of the notional amount of the Contract, on a monthly basis in respect of each Contract until its maturity. Registration Fees and Maintenance Fees will be billed in aggregate (in HK\$) monthly in arrears.
>1 – 3 years	0.0003% of the notional amount of the Contract*.	
>3 – 5 years	0.0004% of the notional amount of the Contract*.	
>5 – 6 years	0.0006% of the notional amount of the Contract*.	
>6 – 7 years	0.0006% of the notional amount of the Contract*.	
>7 – 9 years	0.0008% of the notional amount of the Contract*.	
>9 – 10 years	0.0008% of the notional amount of the Contract*.	

(x) Fee for each request for deposit, porting or withdrawal of non-cash Collateral

(a) Deposit: Charge at cost

(b) Porting: Charge at cost

(c) Withdrawal: Charge at cost

For the avoidance of doubt, no fees will be charged for the porting of non-cash Collateral held by a Defaulting Clearing Member to a Replacement Clearing Member upon the occurrence of a DMP Event.

Note:

Backloading applies when (a) the Trade Date of a Contract registered in the name of a Clearing Member precedes the commencement of the Membership of that particular Clearing Member; or (b) the Trade Date of an Original Transaction or Original Northbound Transaction submitted for registration as Contracts precedes the effective date of the amendment in the specific product eligibility requirements (as set out in section 3.4 of the Clearing Procedures) and such Original Transaction, but for such amendment, would have not been accepted for registration.

* If (a) the Trade Date of an Original Transaction or Original Northbound Transaction precedes the date on which such Original Transaction or Original Northbound Transaction is submitted to OTC Clear for registration by more than 1 OTC Clear Clearing Day and backloading does not apply; or (b) the aggregate notional amount of Contracts cleared by a Clearing Member exceeds an amount notified in a Clearing Notice to Clearing Members by OTC Clear, the relevant registration fee or such lesser amount as OTC Clear may from time to time agree with the Clearing Member will apply.