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Glossary

Transaction for registration only if each Notional Amount of such Original Transaction is:

- (a) greater than or equal to one unit of the relevant currency; and
- (b) an integer or a number rounded up to two or less decimal places.

3.4.4.6 Currency

This is applicable to an Original Deliverable FX Swap Transaction only.

OTC Clear will accept an Original Deliverable FX Swap Transaction for registration only if:

- (i) the payer of a particular currency in the near leg of such Original Transaction is the receiver of such currency in the far leg of such Original Transaction;
- (ii) the receiver of a particular currency in the near leg of such Original Transaction is the payer of such currency in the far leg of such Original Transaction; and
- (iii) such Original Transaction is denominated in the same Currency Pair (swap and FX) in both near leg and far leg of that particular Original Transaction.

3.4.4.7 Trade Date

OTC Clear will accept an Original FX Forward Transaction or Original Deliverable FX Swap Transaction for registration only if the Trade Date of such Original Transaction falls on or prior to the date on which such Original Transaction is submitted for registration.

3.4A Suspension of Product

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 (a “**Product Suspension Event**”). In the event of the occurrence of a Product Suspension Event of a product, no Original Transactions in such product will be accepted for registration and instead they will be rejected. 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 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 and the SFC. OTC Clear shall give notice to Clearing Members by means of a Clearing Notice.

3.5 Error Contract

Pursuant to Clearing Rule 814, in the event OTC Clear terminates an Error Contract, the relevant Clearing Members who were parties to the Error Contract being terminated will be notified through the “OTC Clear Trade Report (Report Number TDRP01, TDRP02 or TDRP11)” in respect of an Error

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.

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 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 18:00 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 “**T₀**” 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 notified to each Clearing Member and will be paid or received by such Clearing Member, as the case may be, as part of its Variation Margin requirement.

4.4 Intra-day Variation Margin

4.4.1 Intra-day Variation Margin Call and Calculation

There are two types of intra-day Variation Margin calls:

- (i) Routine Intra-day VM Call as set out in section 4.4.2; and
- (ii) Ad Hoc Intra-day VM Call as set out in section 4.4.3.

Chapter 5

Curve Construction

5.1 Curve Construction for Rates Derivatives Contracts

5.1.1 Zero Coupon Yield Curves

OTC Clear uses zero coupon yield curves to generate discount factors for calculating the net present value of a Rates Derivatives Contract in order to determine marked-to-market (“**MTM**”) movements and Margin requirements in respect of such Rates Derivatives Contract.

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
0 x 3 forward rate agreement	Yield
Front Month Quarterly forward rate agreement	Future
2nd forward rate agreement	Future
3rd forward rate agreement	Future
4th forward rate agreement	Future
5th forward rate agreement	Future
6th forward rate agreement	Future
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
12 Year Swap	Yield
15 Year Swap	Yield

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, 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.

8.6.3.2 Unsuccessful Auction

In the event of an unsuccessful Auction, further round(s) of Auction may be held until all the Auction Portfolios have been disposed of or have been the subject of a Contract Termination Event. OTC Clear will consult the Default Management Group prior to determining whether an Auction is unsuccessful. Without prejudice to the generality of the immediately foregoing, an Auction shall be deemed to be unsuccessful if:

- (i) no Bids have been received prior to the close of an Auction due to operational or technological issues, including but not limited to corruption of auction file data;
- (ii) any other operational issue which OTC Clear, in consultation with the Default Management Group, deems appropriate; or
- (iii) no Bids or insufficient number of Bids have been received prior to the close of an Auction as determined by OTC Clear, in consultation with the Default Management Group.

8.6.3.3 Registration of Auction Portfolios

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 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.

8.6.4 Tranching Methodology

To incentivize competitive bidding during an Auction, and pursuant to Clearing Rules 1913 to 1916, OTC Clear will implement the Tranching Methodology which seeks to allocate the relevant proportion of the Rates and FX Contribution Balance of a Non-Defaulting Clearing Member in respect of its CM Funded Contribution Amount into one of three Tranches: the Senior Tranche, Middle Tranche and Junior Tranche. Pursuant to Clearing Rule 1919, upon the expiry of a Capped Liability Period, with respect to each Auction Portfolio constructed as a result of the occurrence of the DMP Events during such Capped Liability Period that was the subject of a successful Auction, OTC Clear will notify all relevant Bidders for each such Auction Portfolio the result of the application of the Tranching Methodology.

The following provides an example to illustrate the working mechanisms around the Tranching Methodology:

Using the hypothetical RAP figures mentioned in sections 8.6.2(i) to (iii) and assuming OTC Clear does not combine CNY IRS and CNY NDF Auction Portfolios, if:

Tranching for CM-A based on its Bids for the three Auction Portfolios:

- (i) CM-A is the Successful Bidder for the CNY IRS Auction Portfolio, 50% of CM-A's CM Funded Contribution Amount will be allocated to the Senior Tranche;
- (ii) CM-A is a Lower Bidder for the CNY NDF Auction Portfolio 40% of CM-A's CM Funded Contribution Amount will be allocated to the Middle Tranche; and
- (iii) CM-A is a Poor Bidder for the HK\$ IRS Auction Portfolio, 10% of CM-A's CM Funded Contribution Amount will be allocated to the Junior Tranche.

Tranching for CM-B based on its Bids for the three Auction Portfolios:

- (i) CM-B is an Equal Bidder for the CNY IRS Auction Portfolio, 50% of CM-B's CM Funded Contribution Amount will be allocated to the Senior Tranche;
- (ii) CM-B is the Successful Bidder for the CNY NDF Auction Portfolio, 40% of CM-B's CM Funded Contribution Amount will be allocated to the Senior Tranche; and
- (iii) CM-B is the Successful Bidder for the HK\$ IRS Auction Portfolio, 10% of CM-B's CM Funded Contribution Amount will be allocated to the Senior Tranche.

Tranching for CM-C based on its Bids for the three Auction Portfolios:

- (i) CM-C is a Non-Bidder for the CNY IRS Auction Portfolio, 50% of CM-C's CM Funded Contribution Amount will be allocated to the Junior Tranche;
- (ii) CM-C is a No Position NDCM for the CNY NDF Auction Portfolio, 40% of CM-C's CM Funded Contribution Amount will be allocated to the Senior Tranche; and
- (iii) CM-C is a Better Bidder for the HK\$ IRS Auction Portfolio, 10% of CM-C's CM Funded Contribution Amount will be allocated to the Senior Tranche.

8.7 Portfolio Splitting and Re-composition

In case of an unsuccessful Auction, in order to enhance the likelihood of success of a subsequent Auction, OTC Clear has the flexibility to, in consultation with the Default Management Group, combine Auction Portfolios of different Transaction Categories or further sub-divide a previously constructed Auction Portfolio into multiple Auction Portfolios. The prime considerations for portfolio splitting and re-composition include, but are not limited to, the size of the Auction Portfolio(s).

8.8 Cost of Default and Loss Attribution

OTC Clear will assess its Rates and FX Loss incurred as a result of the occurrence of the DMP Event. Any Margin Balance of the Defaulting Clearing Member in excess of the full settlement of the default (but excluding any Client Entitlement which will be paid to the relevant Non-Porting Client of the Defaulting Clearing Member in accordance with Clearing Rule 1309) will be redelivered to the Defaulting Clearing Member as part of the net sum payable to the Defaulting Clearing Member pursuant to Clearing Rule 1307, or be returned in accordance with the relevant security document. Any Rates and FX Contribution Balance of the Defaulting Clearing Member in excess of the full settlement of the default will be redelivered to the Defaulting Clearing Member in accordance with Clearing Rule 1547.

In the event that the Rates and FX Loss exceeds the Defaulting Clearing Member's Rates and FX Contribution Balance, OTC Clear will satisfy the losses in accordance with Clearing Rule 1516.

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, 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.

8.10 Review

Upon the completion of the Default Management Process in respect of each occurrence of DMP Event, OTC Clear will review the process and may put forward recommendations to change the process.

OTC Clear will also, at a minimum of once every year, conduct review of the process set out in this Chapter 8 to ensure it is adequate, practical and effective. In doing so, OTC Clear will involve Clearing Members by inviting them to participate in fire drills as referred to in Clearing Rule 1611. OTC Clear will provide the results of any fire drills of the Default Management Process to the Risk Management Committee. OTC Clear will also publish the results of the fire drills on the HKEX website.

8.11 Porting of Affected Contracts and Collateral to a Replacement Clearing Member

OTC Clear will facilitate porting of Affected Contracts in a Client Position Account (and Collateral in its corresponding Client Collateral Account) of a Defaulting Clearing Member if all of the following conditions are satisfied:

Chapter 10

Determination of Close-out Value, Winding Down of the Rates and FX Clearing Service and OTC Clear Default

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 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 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 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 of these Clearing Procedures;
- (iii) 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; and
- (iv) with respect to a Contract being terminated as a result of a Contract Termination Event, the Final Settlement Cycle Determination Date determined in accordance with section 10.5 of these Clearing Procedures.

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

10.2 Rates and FX Clearing Termination Event

In the case of a winding down of the Rates and FX Clearing Service pursuant to Clearing Rules 1530 to 1540, OTC Clear will determine the Close-out Variation Margin for all Contracts on the Final Settlement Cycle Determination Date, where the “**Final Settlement Cycle Determination Date**” shall fall on:

- (i) if a Rates and FX Clearing 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 Rates and FX Clearing 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 Rates and FX Clearing Termination Event is declared.

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

10.3 Emergency Close-Out or OTC Clear Default

Upon the designation of an Early Termination Date pursuant to Clearing Rule 210, 1320(1), 1321(1) or 1323, OTC Clear will determine the Close-out Variation Margin for all applicable 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 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 by 09:00 hours Hong Kong time on the relevant Final Settlement Cycle Determination Date.

10.4 Product Suspension Event

In the case of a Product Suspension Event pursuant to section 3.4A of these Clearing Procedures, OTC Clear will determine the Close-out Variation Margin for all Contracts in respect of which a Product Suspension Event has occurred on the “**Final Settlement Cycle Determination Date**”, where the Final Settlement Cycle Determination Date shall fall on:

- (i) if a Product Suspension Event is effective 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 Product Suspension Event is effective 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 Product Suspension Event is effective.

OTC Clear will announce the decision to determine the Close-out Variation Margin with respect to all applicable Contracts in respect of which a Product Suspension Event has occurred by 09:00 hours Hong Kong time on the relevant Final Settlement Cycle Determination Date.

10.5 Contract Termination Event

In case of a Contract Termination Event pursuant to Clearing Rule 1918A, OTC Clear will determine the Close-out Variation Margin for all Identified 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 by 09:00 hours Hong Kong time on the relevant Final Settlement Cycle Determination Date.

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