

VIA CFTC PORTAL

Mr Christopher Kirkpatrick
Commodity Futures Trading Commission
115 21st Street NW
Three Lafayette Centre
Washington DC 20581

18 June 2020

LCH Limited Self-Certification: RFR PAI and discounting transition

Dear Mr Kirkpatrick

Pursuant to CFTC regulation §40.6(a), LCH Limited (“LCH”), a derivatives clearing organization registered with the Commodity Futures Trading Commission (the “CFTC”), is submitting for self-certification changes to its rules relating to transitioning the discounting and Price Alignment Interest / Price Alignment Amount (“PAI/PAA”) on all SwapClear EUR and USD-discounted products. Additionally, LCH plans to apply cash compensation for all accounts containing open EUR-discounted or USD-discounted positions on the relevant conversion date. For USD-discounted positions, affected accounts will also be compensated for changes in risk profile.

Part I: Explanation and Analysis

Euro denominated products

The European Central Bank Private Sector Working Group (ECB PSWG) has recommended replacing the EUR Overnight Index Average (EONIA) with the EUR Short-Term Rate (€STR). The ECB began publishing the €STR on 2 October 2019 and LCH started to clear €STR linked products later that month. In line with the recommendation from the ECB PSWG, LCH proposes to change the discounting of EUR-denominated products from EONIA to €STR Flat. EONIA is currently defined as €STR + 8.5bp and as such the two indices contain the same market risk factor.

LCH proposes to compensate its members and clients in cash for the Net Present Value (NPV) change created by the change in discounting. This will be on a constant forwards basis, as per the ECB PSWG recommendation. Under this methodology all EUR future cash flows, known and projected (as calibrated under the Euro EONIA discount regime), are held constant and the compensation amount is calculated as solely the differential between the present value of these cashflows under the EUR EONIA discount regime versus the EUR €STR discount regime.

The discounting change and the compensation will be effective as of close of business Friday 24 July 2020.

USD denominated products

In June 2017 the US Federal Reserve Alternative Reference Rates Committee (“ARRC”) selected a Broad Treasuries repo financing rate, called the Secured Overnight Financing Rate (“SOFR”), as the preferred alternative rate for use in certain new USD derivatives and other financial contracts. The ARRC has developed a “Paced Transition Plan” to drive acceptance, adoption and use of derivatives referencing this new rate.

In support of this initiative, LCH started to clear USD SOFR-linked products in July 2018, and in November 2018, LCH launched a consultation with members in connection with the ARRC Paced Transition Plan for SOFR adoption.

Following the consultation process, in July 2019 LCH issued a letter to all its users setting out SwapClear’s proposal on the transition, and the information was made publicly available. This set out the following:

1. LCH plans to switch the PAI/PAA and discounting on all SwapClear USD-discounted products, including non-deliverable currencies and MXN, from Fed Funds to SOFR
2. LCH plans to apply Net Present Value (NPV) and Risk compensation to all accounts with a live USD-discounted position at the point of conversion
3. The NPV compensation will be settled in USD cash for the USD book and ND-IRS portfolios, and in MXN for the MXN portfolio
4. The Risk compensation will be achieved with “at-market” swaps converting the newly created SOFR risk back to Fed Funds at a number of key tenors
5. Clients will be able to opt out of the risk compensating swaps by making account-level elections
6. All swaps that are opted out of by clients will be subject to a market clearing process (auction) to determine the close out price to the client, where the process will ensure service wide market risk neutrality

The discounting change and the compensation (risk and value) will be effective as of close of business 16 October 2020.

Part II: Description of Rule Changes

Definitions have been added to the relevant section of the General Regulations. These are definitions for Impacted SwapClear Contract, Impacted SwapClear Contract Type, Rates Change Annex, Rates Change Effective Date and Rate Change Notice. They are needed to effect the changes noted above.

Regulation 60B (Changes to certain interest rates in the SwapClear Service) has been added to the General Regulations which outlines the framework and process for how LCH may change the rate used for calculating PAI / PAA in connection with SwapClear Contracts and/or the rate used to calculate the net present value of certain SwapClear Contracts.

Equivalent changes have been made to the FCM Regulations to the Definitions section and new Regulation 48A (Changes to certain interest rates in the SwapClear Service).

Section 1.12 of the Procedures Section 2C has been updated to include a new paragraph noting that if LCH was to choose an alternative interest rate for calculating PAI / PAA, it would notify all SwapClear Clearing Members in writing by delivering a Rate Change Notice.

A new Schedule 3 has been included in Procedures Section 2C which are the "Rate Change Annexes". These describe how the change in PAI / PAA would be actioned for the transition to SOFR and €STR respectively. They also specifically include a Cash Settlement Schedule which sets out certain provisions relating to the auction and cash settlement process in relation to both the SOFR Rate Change Annex for the SCM service and the SOFR Rate Change Annex for the FCM Service.

Equivalent changes have been made to the FCM Procedures in section 3.5.2 and schedule 7. The cash settlement schedule is only included in Schedule 3 of Procedures Section 2C noted above as it covers both the SCM and FCM Service. This is noted in the definitions section of Schedule 7 in the FCM Procedures.

There is a new section 1.9(g) of the Settlement Finality Regulations which notes that a payment transfer order can also mean an instruction in accordance with Regulation 60B of the General Regulations (noted above). This also translates to the specific provisions outlined in section 2.1(iv) and 2.2(m) related to when the payment transfer orders take effect and when they become irrevocable respectively.

These rule changes will go live on, or after, 2 July 2020.

The text of the changes is attached hereto as:

- i. **Appendix I**, General Regulations
- ii. **Appendix II**, FCM Regulations
- iii. **Appendix III**, Procedures Section 2C (SwapClear)
- iv. **Appendix IV**, FCM Procedures
- v. **Appendix V**, Settlement Finality Regulations

Part III: Core Principle Compliance

LCH has reviewed the changes against the requirements of the Core Principles and finds it will continue to comply with all the requirements and standards therein.

Part IV: Public Information

LCH has posted a notice of pending certification with the CFTC and a copy of the submission on LCH's website at: <http://www.lch.com/rules-regulations/proposed-rules-changes>.

Part V: Opposing Views

There were no opposing views expressed to LCH by governing board or committee members, members of LCH or market participants that were not incorporated into the rule. The approach has been designed around broad market participant consultation and bilateral feedback with ongoing regulatory engagement.

Certification

LCH hereby certifies to the Commodity Futures Trading Commission, pursuant to the procedures set forth in the Commission regulation § 40.6, that attached rule submission complies with the Commodity Exchange Act, as amended, and the regulations promulgated thereunder.

Should you have any questions please contact me at julian.oliver@lch.com.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Julian Oliver", is written over a light blue rectangular background.

Julian Oliver
Chief Compliance Officer
LCH Limited

Appendix I
General Regulations



**GENERAL REGULATIONS OF
LCH LIMITED**

"Identified Client Omnibus Segregated Account"	means (i) an Identified Client Omnibus Net Segregated Account or (ii) an Omnibus Gross Segregated Account opened on behalf of a group of Identified Omnibus Segregated Clearing Clients
"Identified Omnibus Net Segregated Clearing Clients"	means Identified Omnibus Segregated Clearing Clients in respect of whom the relevant Clearing Member clears Contracts with the Clearing House in an Identified Client Omnibus Net Segregated Account
"Identified Omnibus Segregated Clearing Clients"	means, in relation to a Relevant Client Clearing Business, (i) certain Omnibus Segregated Clearing Clients of the relevant Clearing Member or FCM whose identities have been recorded by the Onboarding department of the Clearing House and who are grouped together in a single Omnibus Segregated Account of the Clearing Member but who are not Affiliated Omnibus Segregated Clearing Clients; together with (ii) for the purposes of the Default Rules, any Determined Omnibus Net Segregated Clearing Clients who are grouped together in a single Omnibus Segregated Account
"Impacted ForexClear Option Clearing Member"	has the meaning assigned to it in Regulation 100(g)
<u>"Impacted SwapClear Contract"</u>	<u>means each SwapClear Contract that is of the same type and currency as an Impacted SwapClear Contract Type</u>
<u>"Impacted SwapClear Contract Type"</u>	<u>means, in relation to any change in the rate used for calculating PAI and Price Aligned Amount and for purposes of constructing the Clearing House's zero coupon yield curves under 1.7.2 of Section 2C of the Procedures to calculate the net present value of certain SwapClear Contracts, the types and currencies of SwapClear Contracts to which such change shall apply, as identified in the related Rate Change Notice.</u>
"Index"	has the meaning assigned to it in Chapter XIV(a)
"Indirect Account"	means an Indirect Gross Account or an Indirect Net Account
"Indirect Clearing Client"	means a client of an Indirect Gross Account Clearing Client or an Indirect Net Account Clearing Client in respect of whom the relevant Clearing Member clears Contracts with the Clearing House in an Indirect Account

"Rate X" and Rate "Y"

means, in relation to a SwapClear Transaction or a SwapClear Contract, the outstanding payment obligations of each party to the transaction, such that Rate X comprises the outstanding payment obligations of one party to the other and Rate Y comprises the outstanding payment obligations of the other party to the first party

"Rate Change Annex"

means, in relation to a change in the rate used for the calculation of PAI and Price Alignment Amount and for purposes of constructing the Clearing House's zero coupon yield curves under 1.7.2 of Section 2C of the Procedures to calculate the net present value of Impacted SwapClear Contracts, any annex to the Procedures identified by the Clearing House in the related Rate Change Notice as being the "Rate Change Annex" applicable to such change.

"Rate Change Effective Date"

means, in relation to a change in an interest rate identified in a Rate Change Notice, the date on which such change shall take effect, as identified in the related Rate Change Notice.

"Rate Change Notice"

means a member circular delivered by the Clearing House to all SwapClear Members pursuant to 1.12 of Section 2C of the Procedures, containing at least the following information:

(i) the Rate Change Effective Date;

(ii) the Impacted SwapClear Contract Types;

(iii) the interest rate to be used for purposes of calculating PAI and the Price Alignment Amount from, and including, the Rate Change Effective Date;

(iv) the rate to be used for purposes of constructing the Clearing House's zero coupon yield curves under 1.7.2 of Section 2C of the Procedures to calculate the net present value of the Impacted SwapClear Contracts from, and including, the Rate Change Effective Date; and

(iv) the Rate Change Annex (if any) that shall apply in relation to the change to the interest rate referred to above and any dates or information required to be communicated pursuant to such Rate Change Annex.

"Rates Exchange"

means any trading platform approved as such from time to time by the Clearing House in respect of the Listed Interest Rates Service

REGULATION 60B – CHANGES TO CERTAIN INTEREST RATES IN THE SWAPCLEAR SERVICE

- (a) From time to time, the Clearing House may, subject to the terms of the Procedures, change the rate used for calculating PAI and the Price Alignment Amount in connection with SwapClear Contracts and/or the rate used to calculate the net present value of certain SwapClear Contracts. In connection with any such change the Clearing House shall deliver a Rate Change Notice. If specified as applicable in such Rate Change Notice, a Rate Change Annex (and each document incorporated therein or supplemental thereto) shall apply to set forth the terms on which such amendment to such rate shall take effect, the manner in which the economic impact of such amendment on the Clearing House, SwapClear Clearing Members and SwapClear Clearing Clients may be addressed, and any related rights and obligations of the Clearing House, the SwapClear Clearing Members and SwapClear Clearing Clients in relation thereto, including but not limited to: (i) the creation and registration of new SwapClear Contracts to reflect the change in discounting risk, (ii) the creation and registration of new SwapClear Contracts and/or payment obligations in connection with the change in the net present value of one or more SwapClear Contracts, and/or (iii) any other procedures or mechanisms the Clearing House determines is required to give effect to such interest rate change referred to above. The Clearing House may, from time to time, amend, modify, supplement, replace, withdraw, or override the terms of a Rate Change Notice in relation to a given change in the rate used for calculating PAI and the Price Alignment Amount in connection with SwapClear Contracts and/or the rate used to calculate the net present value of certain SwapClear Contracts through a member circular or such other method as the Clearing House shall determine is appropriate..
- (b) Following the publication of a Rate Change Annex which specifies this Regulation 60(B)(b) to be applicable, each SwapClear Clearing Member (acting individually) hereby appoints the Clearing House, with the full and power and authority of that SwapClear Clearing Member, to:
- (i) act as its agent, to enter into, in the name of, and on behalf of, that SwapClear Clearing Member, one or more SwapClear Contracts on terms determined by that Rate Change Annex;
- (ii) in reliance on the deemed instructions that SwapClear Clearing Member provides on behalf of it and its SwapClear Clearing Clients pursuant to the terms of the Rate Change Annex, to register, any SwapClear Contracts so entered into under this Regulation and the Rate Change Annex in the Proprietary Account and/or the applicable Client Account held in that SwapClear Clearing Member's name (as applicable); and
- (iii) (A) execute in the SwapClear Clearing Member's name and on the SwapClear Clearing Member's behalf any document, contract, deed or other agreement, or (B) do, or cause to be done, any acts, in each case as the Clearing House determines (acting reasonably) to be lawfully necessary to give effect to the SwapClear Contracts entered into pursuant to the foregoing,

provided however that, in all cases the terms of each SwapClear Contract entered into and registered pursuant to the foregoing provisions and the accounts in which such SwapClear Contracts shall be registered shall be determined pursuant to the methodology set out in the relevant Rate Change Annex pursuant to which such powers are exercised.

- (c) Any SwapClear Contract entered into pursuant to paragraph (b) above shall be deemed to satisfy any registration requirements under these Regulations.
- (d) Upon the publication of the Rate Change Annex there shall arise a standing instruction to the Clearing House for itself and on behalf of the SwapClear Clearing Members authorising the Clearing House to take the steps set-out in that Rate Change Annex, including, if applicable under the terms of that Rate Change Annex, to enter into and register certain SwapClear Contracts on behalf of certain SwapClear Members and/or SwapClear Clearing Clients pursuant to paragraph (b) above and the Rate Change Annex.
- (e) A Rate Change Annex may give rise to one or more payment obligations being owed by the Clearing House to a SwapClear Clearing Member or by a SwapClear Clearing Member to the Clearing House (including, without limitation, under the terms of the SwapClear Contracts registered pursuant to (b) above) (each, a **Rate Change Payment**). The calculation of each Rate Change Payment and the due date for payment of the Rate Change Payment in each case shall be on the terms set out in the relevant Rate Change Annex.
- (f) Each SwapClear Clearing Member and each SwapClear Clearing Client shall be bound by the terms of the Rate Change Annex, including, without limitation, each SwapClear Contract registered or recorded to its Proprietary Account, Individual Segregated Account and "position account" within each Omnibus Segregated Account, as applicable, pursuant to each Rate Change Annex. Each SwapClear Clearing Member agrees and acknowledges that the terms of each Rate Change Annex shall be (i) binding as between it and each of its SwapClear Clearing Clients, (ii) replicated by way of back-to-back rights and obligations between the SwapClear Clearing Member and the relevant SwapClear Client on whose behalf the account or "position account" referred to above is held, and (iii) "Mandatory CCP Provisions" for the purposes of the Clearing Agreements between it and each of its SwapClear Clearing Clients.

Appendix II
FCM Regulations



FCM REGULATIONS OF THE CLEARING HOUSE

LCH LIMITED

is traded on or subject to the rules of an Exchange, (ii) an option on any such contract or (iii) any similar type of contract, and which, in the case of any of the foregoing, is required to be segregated (along with any related margin) pursuant to Section 4d(a) of the CEA if cleared by an FCM for a customer.

“Futures Product” means a Product which constitutes a Futures/Options Contract.

“Governmental Authority” means any:

- (a) governmental, inter-governmental, parliamentary or supranational body, entity, agency or department; or
- (b) regulatory, self-regulatory or other authority,

in each case, which has jurisdiction over the Clearing House and/or, in respect of a Clearing Member, the relevant Clearing Member.

“Hedged Account” has the meaning assigned to it in the FCM Procedures.

“Hedged ForexClear Service Clearing Member” has the meaning assigned to it in the ForexClear DMP Annex in the Default Rules.

“Hedged Rates Service Clearing Member” has the meaning assigned to it in the Rates Service DMP Annex in the Default Rules.

“Identified Off-Setting FCM Listed Interest Rates Contracts” has the meaning assigned to it in the FCM Procedures.

“Impacted FCM SwapClear Contract ” means each FCM SwapClear Contract that is of the same type and currency as an Impacted FCM SwapClear Contract Type.

“Impacted FCM SwapClear Contract Type” means, in relation to any change in the interest rate used for calculating the Price Alignment Amount and for purposes of constructing the Clearing House’s zero coupon yield curves under 2.1.7 of the FCM Procedures to calculate the net present value of certain FCM SwapClear Contracts, the types and currencies of FCM SwapClear Contracts to which such change shall apply, as identified in the related Rate Change Notice.

“Ineligible FCM ForexClear Contract” has the meaning assigned to it in FCM Regulation 49(h)(ii).

“Ineligible FCM ForexClear Transaction” has the meaning assigned to it in FCM Regulation 49(h)(i).

Interest Rates Contract.

“Proprietary Account”

means the house account with the Clearing House opened in the name of an FCM Clearing Member to which FCM Contracts made by the FCM Clearing Member for its own account are registered and to which monies in respect of such FCM Contracts are credited.

“Protected Payments System” or “PPS”

has the meaning assigned to it in the FCM Procedures.

“Rate X and Rate Y”

means, in relation to an FCM SwapClear Transaction or an FCM SwapClear Contract, the outstanding payment obligations of each party to the transaction, such that Rate X comprises the outstanding payment obligations of one party to the other and Rate Y comprises the outstanding payment obligations of the other party to the first party.

“Rate Change Annex”

means, in relation to a change in the rate used for the calculation of Price Alignment Amount and for purposes of constructing the Clearing House’s zero coupon yield curves under 2.1.7 of the FCM Procedures to calculate the net present value of Impacted FCM SwapClear Contracts, any annex to the Procedures identified by the Clearing House in the related Rate Change Notice as being the “Rate Change Annex” applicable to such change.

“Rate Change Effective Date”

means, in relation to a change in an interest rate identified in a Rate Change Notice, the date on which such change shall take effect, as identified in the related Rate Change Notice.

“Rate Change Notice”

means a member circular delivered by the Clearing House to all SwapClear Members pursuant to 3.5.1 of the FCM Procedures, containing at least the following information:

(i) the Rate Change Effective Date;

(ii) the Impacted FCM SwapClear Contract Types;

(iii) the interest rate to be used for purposes of calculating the Price Alignment Amount from, and including, the Rate Change Effective Date;

(iv) the rate to be used for purposes of constructing the Clearing House’s zero coupon yield curves under 2.1.7 of the FCM Procedures to calculate the net present value of the Impacted FCM SwapClear Contracts from, and including, the Rate Change Effective Date; and

(iv) the Rate Change Annex (if any) that shall apply in relation to the change to the interest rate referred to above

and any dates or information required to be communicated pursuant to such Rate Change Annex.

"Rates Exchange" means any trading platform approved as such from time to time by the Clearing House in respect of the FCM Listed Interest Rates Clearing Service.

~~**"Rates Exchange Rules"** means the rules, regulations, administrative procedures, Memorandum and Articles of Association or by laws which regulate a Rates Exchange and the market administered by it as notified from time to time to the Clearing House.~~

"Rates Exchange Match" means, in respect of a Rates Exchange, a match on such Rates Exchange of Rates Exchange Particulars submitted by, or on behalf of, two FCM Listed Interest Rates Clearing Members, or an FCM Listed Interest Rates Clearing Member and a Listed Interest Rates Clearing Member, which is made either:

(i) other than through an order book of the Rates Exchange; or

(ii) through an order book of the Rates Exchange, and

in each case:

(a) which the Clearing House and the Rates Exchange have agreed will be cleared in accordance with, and subject to, the Rates Exchange Rules and the FCM Rulebook via the FCM Listed Interest Rates Open Offer clearing mechanism (and not via novation under FCM Regulation 54);

(b) regardless of whether such match is described or characterised as a trade, transaction or agreement in the relevant Rates Exchange Rules.

"Rates Exchange Particulars" means the order or trade particulars, in respect of an FCM Listed Interest Rates Eligible Product, submitted to a Rates Exchange in accordance with the relevant Rates Exchange Rules by, or on behalf of, an FCM Listed Interest Rates Clearing Member or a Listed Interest Rates Clearing Member.

"Rates Exchange Rules" means the rules, regulations, administrative procedures, Memorandum and Articles of Association or by-laws which regulate a Rates Exchange and the market administered by it as notified from time to time to the Clearing House.

REGULATION 48A - CHANGES TO CERTAIN INTEREST RATES IN THE SWAPCLEAR SERVICE

- (a) From time to time, the Clearing House may, subject to the terms of the Procedures, change the rate used for calculating the Price Alignment Amount in connection with FCM SwapClear Contracts and/or the rate used to calculate the net present value of certain FCM SwapClear Contracts. In connection with any such change the Clearing House shall deliver a Rate Change Notice. If specified as applicable in such Rate Change Notice, a Rate Change Annex (and each document incorporated therein or supplemental thereto) shall apply to set forth the terms on which such amendment to such rate shall take effect, the manner in which the economic impact of such amendment on the Clearing House, FCM Clearing Members and FCM Clients may be addressed, and any related rights and obligations of the Clearing House, the FCM Clearing Members and FCM Clients in relation thereto, including but not limited to: (i) the creation and registration of new FCM SwapClear Contracts to reflect the change in discounting risk, (ii) the creation and registration of new FCM SwapClear Contracts and/or payment obligations in connection with the change in the net present value of one or more FCM SwapClear Contracts, and/or (iii) any other procedures or mechanisms the Clearing House determines is required to give effect to such interest rate change referred to above. The Clearing House may, from time to time, amend, modify, supplement, replace, withdraw, or override the terms of a Rate Change Notice in relation to a given change in the rate used for calculating the Price Alignment Amount in connection with FCM SwapClear Contracts and/or the rate used to calculate the net present value of certain FCM SwapClear Contracts through a member circular or such other method as the Clearing House shall determine is appropriate.
- (b) Following the publication of a Rate Change Annex which specifies this Regulation 48(A)(b) to be applicable, each FCM Clearing Member (acting individually) hereby appoints the Clearing House, with the full and power and authority of that FCM Clearing Member, to:
- (i) act as its agent, to enter into, in the name of, and on behalf of, that FCM Clearing Member, one or more FCM SwapClear Contracts on terms determined by that Rate Change Annex;
- (ii) in reliance on the deemed instructions that FCM Clearing Member provides on behalf of it and its FCM Clients pursuant to the terms of the Rate Change Annex, to register, any FCM SwapClear Contracts so entered into under this Regulation and the Rate Change Annex in the Proprietary Account and/or the applicable FCM Client Sub-Account held in that FCM Clearing Member's name for the relevant FCM Client (as applicable); and
- (iii) (A) execute in the FCM Clearing Member's name and on the FCM Clearing Member's behalf any document, contract, deed or other agreement, or (B) do, or cause to be done, any acts, in each case as the Clearing House determines (acting reasonably) to be lawfully necessary to give effect to the FCM SwapClear Contracts entered into pursuant to the foregoing,

provided however that, in all cases the terms of each FCM SwapClear Contract entered into and registered pursuant to the foregoing provisions and the accounts in which such FCM SwapClear Contracts shall be registered shall be determined

- pursuant to the methodology set out in the relevant Rate Change Annex pursuant to which such powers are exercised.
- (c) Any FCM SwapClear Contract entered into pursuant to paragraph (b) above shall be deemed to satisfy any registration requirements under these Regulations.
- (d) Upon the publication of the Rate Change Annex there shall arise a standing instruction to the Clearing House for itself and on behalf of the FCM Clearing Members authorising the Clearing House to take the steps set-out in that Rate Change Annex, including, if applicable under the terms of that Rate Change Annex, to enter into and register certain FCM SwapClear Contracts on behalf of certain FCM Clearing Members and/or FCM Clients pursuant to paragraph (b) above and the Rate Change Annex.
- (e) A Rate Change Annex may give rise to one or more payment obligations being owed by the Clearing House to an FCM Clearing Member or by an FCM Clearing Member to the Clearing House (including, without limitation, under the terms of the SwapClear Contracts registered pursuant to (b) above) (each, a **Rate Change Payment**). The calculation of each Rate Change Payment and the due date for payment of the Rate Change Payment in each case shall be on the terms set out in the relevant Rate Change Annex.
- (f) Each SwapClear Clearing Member and each FCM Client shall be bound by the terms of the Rate Change Annex, including, without limitation, each SwapClear Contract registered or recorded to its Proprietary Account or FCM Client Sub-Account Client Account pursuant to each Rate Change Annex. Each SwapClear Clearing Member agrees and acknowledges that the terms of each Rate Change Annex shall be binding as between it and each of its FCM Clients.

Appendix III
Procedures Section 2C (SwapClear)



LCH LIMITED

PROCEDURES SECTION 2C

SWAPCLEAR CLEARING SERVICE

Member or Receiving Clearing Member may be required to pay additional initial margin to the Clearing House in the event that it does not pay Stress Loss Margin with respect to the transferring SwapClear Clearing Client(s).

1.10 **Tenor Basis Risk Margin Add-on**

An add-on margin requirement will be applied in respect of tenor basis risk.

1.11 **Intra-Day Margin Call: Collateral Management**

The methods for covering intra-day margin calls are set out in Section 1.11 of Procedure 4 (*Margin and Collateral*).

1.12 **Price Alignment Interest (PAI) [and Price Alignment Amount Rate](#)**

The calculation of PAI and Price Alignment Amount shall use the applicable interest rate specified and published on the Clearing House's website.

The Clearing House shall not change the interest rates used for the calculation of PAI and Price Alignment Amount in respect of USD, EUR, GBP, JPY and CHF without the consent of all SwapClear Clearing Members holding open contracts in such currencies.

Notwithstanding the foregoing, in the event the interest rate source used for the calculation of PAI or Price Alignment Amount for USD, EUR, GBP, JPY or CHF (i) is unavailable (including where such rate ceases, or will cease, to be provided by its administrators), (ii) is not sufficiently robust, (iii) is not fit for purpose or (iv) has materially changed, in each case as determined in the Clearing House's sole discretion, the Clearing House may use an alternative interest rate without the consent of such SwapClear Clearing Members.

[If the Clearing House chooses an alternative interest rate for purposes of calculating PAI and Price Alignment Amount pursuant to the immediately foregoing paragraph it shall notify all SwapClear Clearing Members in writing by delivering a Rate Change Notice.](#)

1.13 **Transfer of SwapClear Contracts between Client Accounts and Proprietary Accounts**

1.13.1 If at any time an early termination date (howsoever described) occurs in respect of one or more of the transactions between a SwapClear Clearing Member and a SwapClear Clearing Client in respect of which such SwapClear Clearing Member (i) is a party to Related SwapClear Contracts and (ii) at the time of such early termination date, is not a Defaulting SCM, that SwapClear Clearing Member may instruct the Clearing House to transfer the relevant Related SwapClear Contracts from its Client Account to its Proprietary Account.

For the purposes of this Section 1.13.1 below a "**Related SwapClear Contract**" means, in respect of a transaction between a SwapClear Clearing Member and a SwapClear Clearing Client which has been terminated on an early termination date, the open position represented by the SwapClear

SCHEDULE 3

RATE CHANGE ANNEXES

SWAPCLEAR SCM SERVICE - RATE CHANGE ANNEX – SECURED OVERNIGHT FINANCING RATE (SOFR)

1. SCOPE AND INTERPRETATION

- (a) This Annex constitutes a “Rate Change Annex” as defined in and pursuant to the Regulations and supplements and forms part of the Rulebook.
- (b) This Annex relates to the change in the rate from the Fed Funds Rate to the Secured Overnight Financing Rate provided by the Federal Reserve Bank of New York, as administrator (or a successor administrator) (SOFR) for the purposes of (i) calculating PAI, (ii) calculating the Price Alignment Amount, and (iii) constituting the relevant underlying benchmark for the instruments used to construct the Clearing House’s zero coupon yield curves under 1.7.2 of Section 2C of the Procedures to calculate the net present value, each in relation to the Impacted SwapClear Contracts.
- (c) The terms of this Annex shall apply to all Impacted SwapClear Contracts (as set-out in the Rate Change Notice relating to SOFR) that are registered with the Clearing House as set out below. For the avoidance of doubt, (i) no other SwapClear Contract shall be subject to, or affected by, the terms of this Annex and each SwapClear Contract shall remain in full force and effect, and (ii) the SwapClear Contract Terms shall not be amended by the terms of this Annex.
- (d) Capitalized terms used but not otherwise defined in this Annex have the meaning given to them in the Regulations. The term "business day" has the meaning given to it in the Regulations.
- (e) The terms of this Annex relating to operational or procedural matters may be supplemented, modified, amended, replaced or withdrawn from time to time by the Clearing House in its sole discretion through a member circular or such other method as the Clearing House shall determine is appropriate.

2. DEFINITIONS

For the purposes of this Annex:

Auction Adjustment per Unit means, in relation to a Maturity Bucket, an amount in USD equal to (i) the aggregate of all Auction Winner Amounts for that Maturity Bucket divided by (ii) the total notional amount of Discounting Risk Swaps in that Maturity Bucket which have been liquidated pursuant to the Cash Settlement Schedule.

Auction Date means, in relation to a Rate Change Notice relating to SOFR, the date specified as such by the Clearing House in such Rate Change Notice, being the date on which the auctions referred to herein and the Cash Settlement Supplement shall be held and certain amounts payable hereunder shall be calculated.

Auction Winner means, in relation to the Net Auction Contract Pair in respect of a Maturity Bucket, each Cash Settlement Participant (as defined in the Cash Settlement Schedule) that has submitted the

winning price for such Net Auction Contract Pair, as determined by the Clearing House in accordance with the Cash Settlement Supplement.

Auction Winner Amount means, in relation to the Net Auction Contract Pair for a Maturity Bucket and an Auction Winner, an amount in USD equal to the product of: (i) that Auction Winner's Winning Bid Quantity; (ii) the difference between that Auction Winner's Winning Bid Price and the Mid-Price; and (iii) the SOFR Basis Point Cash Value per Million, each for that Maturity Bucket. If the Auction Winner's Winning Bid Price is a price that by reference to the Mid-Price is (a) in favor of the Clearing House, the Auction Winner Amount shall be a negative amount or (b) in favor of the Auction Winner, the Auction Winner Amount shall be a positive amount.

Cash Compensation Contract means each contract determined by the Clearing House and registered in the relevant Proprietary Account, Individual Segregated Account or "position account" within an Omnibus Segregated Account pursuant to Section 8 below.

Cash Only Client means a SwapClear Clearing Client that has its positions recorded in a Cash Only Client Position Account.

Cash Only Client Position Account means:

(i) each Individual Segregated Account registered in the name of a SwapClear Clearing Client that is identified as a Cash Only Client Position Account in a Cash Only Election Notice; and

(ii) each "position account" within an Omnibus Segregated Account that is identified as a Cash Only Client Position Account in a Cash Only Election Notice, provided that, each "position account" in a net Omnibus Segregated Account shall be a Cash Only Client Position Account if the Clearing House has received a Cash Only Election Notice in relation to at least one "position account" in such net Omnibus Segregated Account. The phrase Omnibus Segregated Account includes both a "net" Omnibus Segregated Account and a "gross" Omnibus Segregated Account.

Cash Only Client Position Account Auction Adjustment means, in relation to a Cash Only Client Position Account and a Maturity Bucket, an amount in USD in favor of the Clearing House or a SwapClear Clearing Member (as applicable) equal to the product of (i) the notional amount of Discounting Risk Swaps for that Maturity Bucket that would, but for the delivery of the Cash Only Election Notice, have been registered in that Cash Only Client Position Account and which have been liquidated pursuant to the Cash Settlement Schedule, and (ii) the Auction Adjustment per Unit for that Maturity Bucket.

Cash Only Election Cut-Off Date is the date specified as such by the Clearing House in a Rate Change Notice relating to SOFR, being the date by which SwapClear Clearing Members must deliver any Cash Only Election Notices to the Clearing House.

Cash Only Election Notice means a written notice delivered by a SwapClear Clearing Member to the Clearing House in accordance with this Annex identifying each Individual Segregated Account and/or each "position account" within each Omnibus Segregated Account held by that SwapClear Clearing Member in respect of which there has been an election to be treated as a Cash Only Client Position Account(s) in accordance with Section 4 of this Annex.

Cash Settlement Schedule means the schedule hereto which sets out the terms on which the Clearing House shall conduct one or more auctions for purposes of determining certain amounts, curves and spreads and related concepts relevant to this Annex, as supplemented by any Cash Settlement Supplement published by the Clearing House from time to time. The Cash Settlement Schedule supplements, and forms part of, this Annex.

Cash Settlement Supplement means any document identified as such by the Clearing House which supplements and forms part of the Cash Settlement Schedule and sets out further terms in relation to the auction.

Cash Valuation Change Amount (MXN) means each amount denominated in MXN and determined in accordance with Section 7.5 of this Annex.

Cash Valuation Change Amount (USD) means each amount denominated in USD and determined in accordance with Section 7.1, Section 7.2 or Section 7.3 of this Annex.

De Minimis Participant Account means, in relation to a Maturity Bucket, any Proprietary Account, Individual Segregated Account, or "position account" within an Omnibus Segregated Account that, as of the Swap Portfolio Calculation Date, would have an allocation of Discounting Risk Swaps in a given Maturity Bucket with a notional amount that is closer to zero than to the integral number set out in the table in paragraph 5.1(c) in relation to that Maturity Bucket.

Discounting Risk Swaps means the SwapClear Contracts determined, identified and notified by the Clearing House in accordance with Section 5 this Annex and entered into and registered between the Clearing House and a SwapClear Clearing Member pursuant to Regulation 60B.

FedFunds Discounted Value means, in relation to an Impacted SwapClear Contract, the net present value, as of the end of the "business day" in New York on the Auction Date, of all future cash flows under that Impacted SwapClear Contract calculated using the Fed Funds Rate as the discounting rate for the purposes of constructing the zero coupon yield curves under 1.7.2 of Section 2C of the Procedures (with the future cash flows calculated in the same manner as for the determination of the SOFR Discounted Value). If the net present value represents an asset or positive value for the Clearing House, such FedFunds Discounted Value shall be a positive amount and if the net present value represents a liability or negative value for the Clearing House, such FedFunds Discounted Value shall be a negative amount.

Maturity Bucket means, in relation to the Impacted SwapClear Contracts, Discounting Risk Swaps and Net Auction Contract Pairs, a group of such contracts which all have the same maturity, being either two years, five years, ten years, fifteen years, twenty years or thirty years from the date of registration.

Mid-Price has, in relation to the Net Auction Contract Pair for a Maturity Bucket, the meaning given to it in the Cash Settlement Schedule, and shall be expressed in basis points.

MXN Impacted SwapClear Contracts has the meaning given to it in Section 7 of this Annex.

Net Auction Contract Pair has the meaning given to it in the Cash Settlement Schedule.

SOFR Basis Point Cash Value per Million means, in relation to the Net Auction Contract Pair for a Maturity Bucket, an amount in USD equal to the change (expressed as a positive if a gain and a negative if a loss) in value of such Net Auction Contract Pair with a notional amount of USD one million as a result of adding a one basis point spread to the SOFR leg, as determined by the Clearing House in its sole discretion.

SOFR Discounted Value means, in relation to an Impacted SwapClear Contract, the net present value, as of the end of the "business day" in New York on the Auction Date, of all future cash flows under that Impacted SwapClear Contract using the SOFR Discounting Curve for the purposes of such calculation (with the future cash flows calculated in the same manner as for the determination of the FedFunds Discounted Value). If the net present value represents an asset or positive value for the

Clearing House, such SOFR Discounted Value shall be a positive amount and if the net present value represents a liability or negative value for the Clearing House, such SOFR Discounted Value shall be a negative amount.

SOFR Discounting Curve means the SOFR pricing curve constructed by the Clearing House in accordance with Section 4 of the Cash Settlement Schedule.

Swap Portfolio Calculation Date means, in relation to a Rate Change Notice relating to SOFR, the date specified as such by the Clearing House in such Rate Change Notice relating to SOFR, being the date on which the Clearing House shall determine the portfolios of Discounting Risk Swaps in relation to all Impacted SwapClear Contracts registered with the Clearing House on such date.

Winning Bid Price means, in relation to the Net Auction Contract Pair for a Maturity Bucket and an Auction Winner, the price payable to, or by, that Auction Winner to the Clearing House, expressed as a positive or negative spread in basis points on the SOFR leg of the Net Auction Contract Pair for that Maturity Bucket and determined through a modified Dutch auction as further set-out in the Cash Settlement Supplement(s). For the avoidance of doubt: (a) if the Clearing House is the receiver of SOFR under the Net Auction Contract Pair, and (1) the spread is a positive amount, the Winning Bid Price shall be a positive amount; or (2) the spread is a negative amount, the Winning Bid Price shall be a negative amount; and (b) if the Clearing House is the receiver of the Fed Funds Rate under the Net Auction Contract Pair, and (1) the spread is a positive amount, the Winning Bid Price shall be a negative amount; or (2) the spread is a negative amount, the Winning Bid Price shall be a positive amount.

Winning Bid Quantity means, in relation to an Auction Winner and a Net Auction Contract Pair for a Maturity Bucket, the notional amount (expressed in units of USD one million) of the Discounting Risk Swap related to such Net Auction Contract Pair (or the part thereof) which will be determined by the Clearing House pursuant to the Cash Settlement Supplement and registered in the Proprietary Account of the Auction Winner.

3. OBLIGATIONS TO MAKE CERTAIN CALCULATIONS AND ENTER INTO CERTAIN CONTRACTS

(a) In connection with the change from the Fed Funds Rate to SOFR described in Section 1(b) above, pursuant to and in accordance with the Clearing House's powers under Regulation 60B of the Regulations, this Annex sets out the method by which the Clearing House will:

Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN) and Cash Compensation Contracts

(i) for each Proprietary Account, each Individual Segregated Account and each "position account" within each Omnibus Segregated Account, calculate the following amounts, in each case, if any:

(A) Cash Valuation Change Amount (USD); and

(B) Cash Valuation Change Amount (MXN),

each of which are "Rate Change Payments" for the purpose of Regulation 60B.

(ii) determine and register, pursuant to Regulation 60B, certain Cash Compensation Contracts in each Proprietary Account, Individual Segregated Account and each "position account" within each Omnibus Segregated Account in accordance with Section 8 of this Annex in order to effect the payment of each Cash Valuation

Change Amount (USD), Cash Valuation Change Amount (MXN), Cash Only Client Position Auction Adjustment, and Auction Winner Amount, in each case, if any;

Discounting Risk Swaps and Auction Winner Amounts

- (iii) subject to (b) below, for (x) each Proprietary Account and (y) each Individual Segregated Account, and each "position account" within each Omnibus Segregated Account which is not a Cash Only Client Position Account, determine how certain Discounting Risk Swaps shall be identified in accordance with Section 5, registered and entered into between the Clearing House and each SwapClear Clearing Member pursuant to Regulation 60B and the terms of those Discounting Risk Swaps;
 - (iv) subject to (b) below, for each Cash Only Client Position Account, calculate the related Cash Only Client Position Account Auction Adjustments (which shall also each be a "Rate Change Payment" for the purpose of Regulation 60B); and
 - (v) for each Auction Winner, calculate the Auction Winner Amount (which shall also be a "Rate Change Payment" for the purpose of Regulation 60B).
- (b) Any account that is a De Minimis Participant Account in relation to a Maturity Bucket shall not have any Discounting Risk Swaps in that Maturity Bucket determined or registered in its name and shall not be obliged to pay, or entitled to receive, any Cash Only Client Position Account Auction Adjustments. Any Cash Only Election Notice received in relation to an Individual Segregated Account or "position account" within an Omnibus Segregated Account that is a De Minimis Participant Account as of the Auction Date shall be invalid and shall have no effect whatsoever (and, for the avoidance of doubt, the Discounting Risk Swaps that would otherwise be registered in any De Minimis Participant Account shall not count towards the Net Auction Contract Pair for any Maturity Bucket).

4. CLEARING MEMBER DEALINGS WITH CLIENTS AND CLIENT CASH ONLY ELECTIONS

Client Cash Only Elections

- (a) In relation to its SwapClear Client Clearing Business, a SwapClear Clearing Member shall provide each SwapClear Clearing Client with an election not to have Discounting Risk Swaps registered on that SwapClear Clearing Client's behalf in relation to Impacted SwapClear Contracts registered in the relevant Individual Segregated Account, or "position account" within the relevant Omnibus Segregated Account, and instead, subject to Section 4(d) below, to assume a right, or an obligation to pay or be paid an amount equal to the Cash Only Client Position Account Auction Adjustment in respect of the relevant Individual Segregated Account or "position account", as determined pursuant to this Annex (except in the circumstances provided for in the Cash Settlement Schedule, where the election not to have Discounting Risk Swaps registered may be overridden).
- (b) A SwapClear Clearing Member shall be entitled to deliver Cash Only Election Notices to the Clearing House at any time up to, and including, the Cash Only Election Cut-Off Date. All Cash Only Election Notices must be delivered to the Clearing House via the SwapClear Portal.
- (c) No SwapClear Clearing Member shall be entitled to deliver a Cash Only Election Notice in respect of its Proprietary Accounts and any such notice shall be invalid and shall have no effect whatsoever.

- (d) The Clearing House reserves the right to reject any Cash Only Election Notice received by the Clearing House after the end of the "business day" in New York on the Cash Only Election Cut-Off Date. A SwapClear Clearing Member shall only be entitled to deliver a Cash Only Election Notice in respect of all, but not some only, of the SwapClear Contracts registered in the name of a SwapClear Clearing Client in a single Individual Segregated Account or a single "position account" within an Omnibus Segregated Account. In relation to an Omnibus Segregated Account, the SwapClear Clearing Member shall be entitled to deliver a separate Cash Only Election Notice in relation to each "position account" within that Omnibus Segregated Account, provided however that, in relation to a net Omnibus Account, if the SwapClear Clearing Member has delivered a Cash Only Election Notice in respect of any "position account", all "position accounts" therein shall be Cash Only Client Position Accounts.
- (e) The delivery by a SwapClear Clearing Member of a Cash Only Election Notice shall be deemed, as of the end of the "business day" in New York on the Cash Only Election Cut-Off Date, to be an irrevocable instruction of that SwapClear Clearing Member (for itself and acting on behalf of the relevant SwapClear Clearing Client(s) for whom the Individual Segregated Account or any "position account" within an Omnibus Segregated Account which such Cash Only Election Notice affects is held) to the Clearing House to determine the Cash Valuation Change Amount (USD), the Cash Valuation Change Amount (MXN) and each Cash Only Client Position Account Auction Adjustment in accordance with Section 7.3, Section 7.4 and Section 7.5 of this Annex and to register the related Cash Compensation Contracts in the relevant Individual Segregated Account or "position account" within an Omnibus Segregated Account in accordance with this Annex.
- (f) If a SwapClear Clearing Member does not deliver a Cash Only Election Notice in respect of an Individual Segregated Account or "position account" within an Omnibus Segregated Account held for a SwapClear Clearing Client then that shall be deemed, as of the end of the "business day" in New York on the Cash Only Election Cut-Off Date, to be an irrevocable instruction of that SwapClear Clearing Member (for itself and acting on behalf of that SwapClear Clearing Client) to the Clearing House to (i) determine the Cash Valuation Change Amount (USD) and the Cash Valuation Change Amount (MXN) in accordance with Section 7.2 and Section 7.5 of this Annex and to register the related Cash Compensation Contract in the relevant Individual Segregated Account or "position account" within an Omnibus Segregated Account in accordance with this Annex, and (ii) determine the Discounting Risk Swaps to be allocated to such Individual Account or "position account" within an Omnibus Segregated Account in accordance with this Annex and to register such Discounting Risk Swaps in such account.
- (g) By not delivering a Cash Only Election Notice, in relation to an Individual Segregated Account or "position account" within an Omnibus Segregated Account, each SwapClear Clearing Member represents and warrants to the Clearing House on the Cash Only Election Cut-Off Date that (i) it has used reasonable endeavors to obtain instructions from each SwapClear Clearing Client in relation to the exercise of an election not to receive Discounting Risk Swaps in relation to such account or "position account" and (ii) it has not received instructions from any SwapClear Clearing Client to deliver a Cash Only Election Notice in respect of such account or "position account".

Clearing Member Obligations

- (h) Each SwapClear Clearing Member (and in the case of (h)(vi) below, each SwapClear Clearing Member and the Clearing House):

- (i) agrees to use reasonable endeavors to provide its SwapClear Clearing Clients with (i) information on the change in the rate from the Fed Funds Rate to SOFR pursuant to the terms of Regulation 60B and this Annex, (ii) information on the amounts payable pursuant to the terms of the Cash Compensation Contracts which may be registered in that SwapClear Clearing Client's Individual Segregated Account or "position account" within an Omnibus Segregated Account pursuant to the terms of this Annex, (iii) information on the Discounting Risk Swaps which may be allocated to that SwapClear Clearing Client's Individual Segregated Account or "position account" within an Omnibus Segregated Account pursuant to the terms of this Annex, and (iv) other information (indicative or otherwise) in relation to each SwapClear Clearing Client's "position account". Such information shall include the terms of this Annex and any information which it has received from, or is made available by, the Clearing House in connection with this Annex, including any risk disclosure statements relating to the matters herein;
- (ii) agrees that it, and each applicable SwapClear Clearing Client, shall be bound by the terms of any Cash Compensation Contracts and Discounting Risk Swaps registered pursuant to this Annex and all payment obligations thereunder (as determined by the Clearing House pursuant to this Annex);
- (iii) represents and warrants to the Clearing House as at the Cash Only Election Cut-off Date that each Cash Only Client in relation to which it has delivered a Cash Only Election Notice (A) has instructed the SwapClear Clearing Member to deliver the Cash Only Election Notice on its behalf, and (B) has expressly agreed (i) that by electing for its Individual Segregated Account or "position account" within an Omnibus Segregated Account to be a Cash Only Client Position Account under this Annex it shall not, other than if (X) the Cash Settlement Schedule provides that one or more auctions have failed, or (Y) some of the Discounting Risk Swaps are not successfully auctioned and liquidated in accordance with the Cash Settlement Schedule, be party to any Discounting Risk Swaps (ii) that it shall be obliged to pay or entitled to receive the Cash Valuation Change Amount (USD), the Cash Valuation Change Amount (MXN) and, provided the Cash Only Client Position Account is not a De Minimis Participant Account, each Cash Only Client Position Account Auction Adjustment determined in accordance with Section 7.3, Section 7.4 and Section 7.5 of this Annex, and (iii) that the Cash Only Client Position Account Auction Adjustment may not be economically equivalent to being party to any such Discounting Risk Swaps or liquidating, closing-out, selling or replacing the Discounting Risk Swaps in the relevant market;
- (iv) acknowledges that the Cash Valuation Change Amounts, the Auction Winner Amounts, each Cash Only Client Position Account Auction Adjustment, and the spread on the SOFR leg of the Discounting Risk Swaps shall be determined by reference to the auction, and agrees to be bound by the results of such auction and the terms of the Cash Settlement Schedule and the Cash Settlement Supplement;
- (v) agrees to perform all obligations and exercise all rights under this Annex, the Cash Settlement Schedule, the Cash Settlement Supplement, the Cash Compensation Contracts and the Discounting Risk Swaps in accordance with Applicable Law; and
- (vi) agrees that each Cash Compensation Contract and Discounting Risk Swap is being registered in the relevant account in connection with the matters specified in this Annex and the obligations thereunder are for the sole purpose

of addressing the value and discounting risk impact of the change from the Fed Funds Rate to SOFR and effecting the payment of amounts owed to, or payable by, the Auction Winner.

5. DETERMINING THE PORTFOLIO OF DISCOUNTING RISK SWAPS

5.1 On the Swap Portfolio Calculation Date, the Clearing House shall allocate Impacted SwapClear Contracts into different Maturity Buckets based on the tenor of the discounting risk associated with such Impacted SwapClear Contracts. Any Impacted SwapClear Contract that has discounting risk with a tenor that falls between two different Maturity Buckets shall be allocated to the nearest two Maturity Buckets in the Clearing House’s sole and absolute discretion. Separately in respect of the Impacted SwapClear Contracts allocated to each Maturity Bucket in each Proprietary Account, Individual Segregated Account and "position account" within each Omnibus Segregated Account, the Clearing House shall determine a portfolio of Discounting Risk Swaps which is designed to, in the Clearing House's sole and absolute discretion and to the extent practicable, replicate the Fed Funds Rate discounting risk profile in relation to such SwapClear Contracts as of the Swap Portfolio Calculation Date. For the avoidance of doubt, the determination by the Clearing House pursuant to this paragraph may be different from a SwapClear Clearing Member's or SwapClear Clearing Client’s models or methodologies. Each pair of Discounting Risk Swaps will:

- (a) have a maturity of two years, five years, ten years, fifteen years, twenty years or thirty years from the date of registration;
- (b) when registered, comprise a pair of SwapClear Contracts whereby:
 - (i) under the first SwapClear Contract, the Clearing House or the SwapClear Clearing Member (Party X) will receive SOFR plus or minus a spread which shall be equal to the relevant Mid-Price determined pursuant to the Cash Settlement Schedule and pay to the other party (Party Y) a fixed rate; and
 - (ii) under the second SwapClear Contract, Party X will receive the same fixed rate as referred to in (i) immediately above and pay to Party Y the Fed Funds Rate with no spread, and
- (c) have a notional amount that is determined by the Clearing House, in its sole and absolute discretion, where such notional amount shall be rounded to the nearest integral number set out in the following table:

<u>Maturity Bucket</u>	<u>2Y</u>	<u>5Y</u>	<u>10Y</u>	<u>15Y</u>	<u>20Y</u>	<u>30Y</u>
<u>Amount in USD to which the notional amount will be rounded to</u>	<u>5,000,000</u>	<u>2,500,000</u>	<u>1,250,000</u>	<u>500,000</u>	<u>500,000</u>	<u>500,000</u>

5.2 The Clearing House shall separately determine the portfolio of Discounting Risk Swaps in respect of each of the following (excluding, in relation to a Maturity Bucket, any De Minimis

Participant Accounts in relation to that Maturity Bucket) as of the Swap Portfolio Calculation Date:

- (a) the Impacted SwapClear Contracts then registered in each SwapClear Clearing Member's Proprietary Account;
- (b) the Impacted SwapClear Contracts then registered in each Individual Segregated Account held for any SwapClear Clearing Client; and
- (c) the Impacted SwapClear Contracts then registered in a "position account" in the name of each SwapClear Clearing Client within each Omnibus Segregated Account

5.3 The Clearing House shall promptly notify each SwapClear Clearing Member of each portfolio of Discounting Risk Swaps it has determined pursuant to this Section 5 in respect of each account or "position account" held by each SwapClear Clearing Member as set out above.

5.4 Without prejudice to the above, at any time prior to the Swap Portfolio Calculation Date, the Clearing House may publish indicative portfolios of the Discounting Risk Swaps in relation to the Impacted SwapClear Contracts then registered in the name of a SwapClear Clearing Member for information only.

6. THE AUCTION

6.1 On the Auction Date the Clearing House shall conduct one or more auctions and each auction conducted shall apply to both LCH's SCM service and LCH's FCM service. The initial terms of the auctions shall be as set out in the Cash Settlement Schedule and the Clearing House shall supplement such terms to provide further detail on the operation of the auctions through publication of one or more Cash Settlement Supplements, provided however that, the Clearing House shall not be entitled to materially alter the nature of the obligations of any SwapClear Clearing Member under this Rate Change Annex via any Cash Settlement Supplement. Each Cash Settlement Supplement shall be deemed to supplement, and form part of, the Cash Settlement Schedule and the Clearing House shall be entitled to supplement, modify, amend, replace or withdraw the Cash Settlement Schedule or Cash Settlement Supplements (in whole or in part) from time to time in its sole discretion through such method as the Clearing House shall determine is appropriate.

6.2 Each SwapClear Clearing Member that is an Expected Cash Settlement Participant (as defined in the Cash Settlement Schedule) agrees that it shall use all reasonable efforts to submit pricing in accordance with this Cash Settlement Schedule for the Net Auction Contract Pair in each Maturity Bucket.

7. THE CASH VALUATION CHANGE AMOUNTS AND THE CASH ONLY CLIENT POSITION ACCOUNT AUCTION ADJUSTMENTS

All Impacted SwapClear Contracts other than TIIE Interest Rate Swaps denominated in MXN

The following provisions are applicable in relation to all Impacted SwapClear Contracts other than Impacted SwapClear Contracts that are TIIE interest rate swaps denominated in MXN. With respect to the calculations to be performed under Section 7.1 to 7.3 (inclusive) below, for the purposes of determining the Cash Valuation Change Amount (USD) in relation to non-deliverable interest rate swaps the Clearing House shall first convert into USD the value of the discounted future cash flows which are not denominated in USD by applying

the relevant rate of exchange as determined by the Clearing House in accordance with its usual procedures. Each of the calculations performed under Sections 7.1 to 7.3 (inclusive) below shall include any non-deliverable interest rate swaps registered in the relevant account or "position account" as of the end of the "business day" in New York on the Auction Date.

Proprietary Accounts

7.1 Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date, the Clearing House shall calculate the Cash Valuation Change Amount (USD) in respect of each Proprietary Account as follows:

- (a) the Clearing House shall calculate the aggregate FedFunds Discounted Value and the aggregate SOFR Discounted Value in relation to each Impacted SwapClear Contract registered in each Proprietary Account as of the end of the "business day" in New York on the Auction Date;
- (b) if the aggregate SOFR Discounted Value in relation to all Impacted SwapClear Contracts registered in a Proprietary Account exceeds the aggregate FedFunds Discounted Value in relation to all such Impacted SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the Clearing House in relation to such Proprietary Account; and
- (c) if the aggregate SOFR Discounted Value in relation to all Impacted SwapClear Contracts registered in a Proprietary Account is less than the aggregate FedFunds Discounted Value in relation to all such Impacted SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the SwapClear Clearing Member in relation to such Proprietary Account.

Client Accounts (excluding Cash Only Client Position Accounts)

7.2 The following only applies in relation to each Individual Segregated Account or "position account" within each Omnibus Segregated Account that is not a Cash Only Client Position Account. Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date the Clearing House shall determine the Cash Valuation Change Amount (USD) in respect of the Impacted SwapClear Contracts registered in each Individual Segregated Account or "position account" within each Omnibus Segregated Account that is not a Cash Only Client Position Account as follows:

- (a) the Clearing House shall calculate the aggregate FedFunds Discounted Value and the aggregate SOFR Discounted Value in relation to all Impacted SwapClear Contracts registered in such account as of the end of the "business day" in New York on the Auction Date;
- (b) if the aggregate SOFR Discounted Value in relation to all Impacted SwapClear Contracts registered in such account exceeds the aggregate FedFunds Discounted Value in relation to all such Impacted SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the excess and shall be an amount in favor of the Clearing House in relation to such account; and

- (c) if the aggregate SOFR Discounted Value in relation to all Impacted SwapClear Contracts registered in such account is less than the aggregate FedFunds Discounted Value in relation to all such Impacted SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the SwapClear Clearing Member in relation to such account.

Cash Only Client Position Accounts

7.3 The following applies only in relation to Cash Only Client Position Accounts. Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date the Clearing House shall determine the Cash Valuation Change Amount (USD) in respect of the Impacted SwapClear Contracts registered in a Cash Only Client Position Account as follows:

- (a) the Clearing House shall calculate the aggregate FedFunds Discounted Value and the aggregate SOFR Discounted Value in relation to all Impacted SwapClear Contracts registered in such account as of the end of the "business day" in New York on the Auction Date;
- (b) if the aggregate SOFR Discounted Value in relation to all Impacted SwapClear Contracts registered in such account exceeds the aggregate FedFunds Discounted Value in relation to all such Impacted SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the Clearing House in relation to such account;
- (c) if the aggregate SOFR Discounted Value in relation to all Impacted SwapClear Contracts registered in such account is less than the aggregate FedFunds Discounted Value in relation to all such Impacted SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the SwapClear Clearing Member in whose name such Cash Only Client Position Account is held; and

7.4 Immediately following the conclusion of the auction on the Auction Date, provided that the auction for the relevant Maturity Buckets occurs in accordance with the Cash Settlement Schedule, the Clearing House shall calculate, in respect of each Cash Only Client Position Account the aggregate Cash Only Client Position Account Auction Adjustment in relation to each Maturity Bucket.

Impacted SwapClear Contracts which are TIE Interest Rate Swaps denominated in MXN

7.5 Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date the Clearing House shall determine the Cash Valuation Change Amount (MXN) separately in respect of each Impacted SwapClear Contracts that is a TIE interest rate swap denominated in MXN (MXN Impacted SwapClear Contracts) registered in each Proprietary Account, Individual Segregated Account and "position account" within an Omnibus Segregated Account, as follows:

- (a) first, for the purposes of determining the Cash Valuation Change Amount (MXN) in relation to the MXN Impacted SwapClear Contracts, the value of the discounted future cash flows thereunder shall be multiplied by the relevant

USD/MXN rates of exchange determined by the Clearing House in accordance with the Clearing House's usual procedures;

- (b) second, the Clearing House shall calculate the aggregate FedFunds Discounted Value and the aggregate SOFR Discounted Value in relation to all MXN Impacted SwapClear Contracts registered in such account as of the end of the "business day" in New York on the Auction Date;
- (c) if the aggregate SOFR Discounted Value in relation to all such MXN Impacted SwapClear Contracts registered in such account exceeds the aggregate FedFunds Discounted Value in relation to all such MXN Impacted SwapClear Contracts then the Cash Valuation Change Amount (MXN) shall be an amount in MXN equal to the absolute value of the difference and shall be an amount in favor of the Clearing House in relation to such account; and
- (d) if the aggregate SOFR Discounted Value in relation to all MXN Impacted SwapClear Contracts registered in such account is less than the aggregate FedFunds Discounted Value in relation to all such MXN Impacted SwapClear Contracts then the Cash Valuation Change Amount (MXN) shall be an amount in MXN equal to the absolute value of the difference and shall be an amount in favor of the SwapClear Clearing Member in whose name such Cash Only Client Position Account is held.

8. REGISTRATION OF CASH COMPENSATION CONTRACTS

8.1 On the basis of the calculations set forth in Section 7 above, the Clearing House shall determine, as applicable, the Cash Valuation Change Amount (USD), the Cash Valuation Change Amount (MXN), the Cash Only Client Position Account Auction Adjustments and the Auction Winner Amount in respect of each Proprietary Account, each Individual Segregated Account and each "position account" within an Omnibus Segregated Account and each SwapClear Clearing Member and the Clearing House (as applicable) irrevocably agrees that it shall be bound to pay such amounts to the other pursuant to the terms of the related Cash Compensation Contracts.

8.2 The Clearing House shall, pursuant to Regulation 60B, register a separate Cash Compensation Contract in each Proprietary Account, each Individual Segregated Account and each "position account" within an Omnibus Segregated Account in relation to each of the following amounts (to the extent such amounts are applicable to such account or "position account"):

- (a) Cash Valuation Change Amounts (USD);
- (b) Cash Valuation Change Amounts (MXN);
- (c) Cash Only Client Position Account Auction Adjustments; and
- (d) Auction Winner Amounts.

8.3 Each Cash Compensation Contract shall be registered for the sole purpose of effecting the payment of the Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN), Cash Only Client Position Account Auction Adjustments or Auction Winner Amount (as applicable) to which it relates. It shall operationally be recorded as having a "Notional Amount" (as defined in the SwapClear Contract Terms) of USD1 (or, in the case of the Cash Compensation Swap relating to the Cash Valuation Change Amount (MXN), MXN1), a "Termination Date" (as defined in the SwapClear Contract Terms) falling two

"business days" after the Auction Date, and an obligation on the Clearing House or the SwapClear Clearing Member (as applicable) to pay to the other an amount equal to the Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN), Cash Only Client Position Account Auction Adjustments or Auction Winner Amount (as applicable) in relation to the relevant account or "position account", with such amounts determined in accordance with Section 7 of this Annex. However, neither the Clearing House nor a SwapClear Clearing Member shall be required to pay any amounts under a Cash Compensation Contract other than the Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN), Cash Only Client Position Account Auction Adjustment or Auction Winner Amount (as applicable) to which such Cash Compensation Contract relates.

8.4 Each SwapClear Clearing Member agrees to be bound by each Cash Compensation Contract registered pursuant to this Section 8, which shall, when registered, constitute a SwapClear Contract between the Clearing House and the relevant SwapClear Clearing Member that has arisen by reason of the application of the Regulations to the Impacted SwapClear Contracts.

9. REGISTRATION OF DISCOUNTING RISK SWAPS

9.1 Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date the Clearing House shall notify all SwapClear Clearing Members of the Discounting Risk Swaps that will be registered in the accounts in accordance with this Annex. If the Clearing House exercises its powers pursuant to Section 4(b) of the Cash Settlement Schedule, then, as soon as practicable following such exercise, it shall notify all SwapClear Clearing Members of the Discounting Risk Swaps that will be registered in their Proprietary Accounts, Individual Segregated Accounts and "position accounts" within each Omnibus Segregated Account and it shall register such Discounting Risk Swaps in such accounts without regard to any Cash Only Election Notice.

9.2 Except as provided in Section 9.3 below, on the first "business day" immediately following the Auction Date the Clearing House shall:

- (a) in relation to each Auction Winner, register the related Discounting Risk Swaps (or portion thereof) in the Proprietary Account of the Auction Winner and each Auction Winner and the Clearing House shall become party to such Discounting Risk Swaps;
- (b) in relation to each Proprietary Account other than De Minimis Participant Accounts, register the Discounting Risk Swaps determined pursuant to Section 5.2(a) in each SwapClear Clearing Member's Proprietary Account; and
- (c) in relation to each Individual Segregated Account and "position account" within each Omnibus Segregated Account other than Cash Only Client Position Accounts and De Minimis Participant Accounts, register the Discounting Risk Swaps determined pursuant to Section 5.2(b), and (c) in relation to such SwapClear Clearing Client in the relevant account.

9.3 Each SwapClear Clearing Member agrees to be bound by each Discounting Risk Swap registered pursuant to this Section 9, which shall, when registered, constitute SwapClear Contracts between the Clearing House and the relevant SwapClear Clearing Member that have arisen by reason of the application of the Regulations to the Impacted SwapClear Contracts.

10. DETERMINATIONS BINDING

Subject to Section 13, all determinations and calculations made by the Clearing House pursuant to this Annex and the Cash Settlement Schedule shall be binding and may in no circumstances (other than in the case of manifest error) be called into question by any person.

11. RECORDS

The Clearing House shall update its books and records to reflect the Discounting Risk Swaps, Cash Compensation Contracts, Cash Valuation Change Amounts (USD), Cash Valuation Change Amounts (MXN), Auction Winner Amounts and Cash Only Client Position Account Auction Adjustments resulting from the operation of this Annex and the Cash Settlement Schedule. The obligation to pay, or the right to receive, any amounts determined under this Annex may be reflected in the books and records of the Clearing House in such manner as the Clearing House determines is necessary to meet its operational requirements.

12. MISCELLANEOUS

- (a) The obligations of the Clearing House to each SwapClear Clearing Member shall be to perform its obligations as principal to such SwapClear Clearing Member in accordance with the Rulebook, but subject to the restrictions on the Clearing House's obligations and liabilities contained in the Rulebook and Section 13.
- (b) The terms of this Annex are without prejudice to the Clearing House's rights under the Procedures to change the rate used for the purposes of (i) calculating PAI, (ii) calculating the Price Alignment Amount, and (iii) constructing the Clearing House's zero coupon yield curves under 1.7.2 of Section 2C of the Procedures from time to time and such terms shall not be relevant or binding on the Clearing House in respect of any such changes.
- (c) The performance by the Clearing House of its obligations hereunder shall always be subject to the provisions of the Rulebook. The benefit of the performance by the Clearing House of its obligations under this Annex is conferred upon SwapClear Clearing Members only, as principal, and a person who is not a party to the Rulebook has no right under Contracts (Rights of Third Parties) Act 1999 (as amended from time to time) to enforce any term of this Annex.

13. LIMITATION OF LIABILITY

13.1 Without prejudice to the generality of Regulation 52, each SwapClear Clearing Member agrees:

- (a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any SwapClear Clearing Member or any other person (including, without limitation, any SwapClear Clearing Client) whether in contract, tort (including, without limitation, negligence), trust, as a fiduciary or under any other cause of action, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and
- (b) to waive any claim against the Clearing House or any member of the LCH Group arising or that may arise in connection with:

- (i) any determination, calculation, notification, registration, publication, exercise of discretion, or decision, taken or not taken by the Clearing House or any other member of the LCH Group in connection with this Annex; or
- (ii) the determination or publication of any price, curve, data, quote or other information arising from, or in connection with, this Annex;

except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

13.2 Without prejudice to the generality of Regulation 52 and clause 14.1 above, each SwapClear Clearing Member further agrees:

- (a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any SwapClear Clearing Member or any other person (including, without limitation, any SwapClear Clearing Client) in tort (including, without limitation, negligence), trust, as a fiduciary or under any other non-contractual cause of action, or under any implied contractual term, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and
- (b) to waive any non-contractual claim or claim under any implied contractual term against the Clearing House or any member of the LCH Group;

arising or that may arise in connection with the Clearing House's performance of its contractual duties or obligations under this Annex, except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

13.3 Each SwapClear Clearing Member agrees that neither the Clearing House nor any other member of the LCH Group (i) owes any duty of care to any person in connection with the performance of the Clearing House's duties or obligations or exercise of its rights under this Annex, save for the express contractual duties set forth in this Annex; (ii) is under any obligation to research, investigate, supplement, or verify the veracity of, any price, data, quote or other information received from a SwapClear Clearing Member in connection with this Annex; (iii) is acting as a fiduciary for, or as an advisor to, any SwapClear Clearing Member or SwapClear Clearing Client in connection with this Annex or any SwapClear Contract registered as a result of the matters specified in this Annex; (iv) shall be under any requirement to consult with, or individually notify (other than as expressly set out in this Annex), a SwapClear Clearing Member or SwapClear Clearing Client in connection with making its determinations, exercising its discretions or performing its duties or obligations or exercising its rights, each under this Annex; or (v) has made any representation, express or implied, in relation to this Annex, and each SwapClear Clearing Member acknowledges that it has not relied on any representations made by the Clearing House or any other member of the LCH Group in relation to this Annex.

13.4 For the avoidance of doubt, notwithstanding anything herein or in the Cash Settlement Supplement or Cash Settlement Schedule, neither the Clearing House nor any other member of the LCH Group shall be liable for any obligations of, or to any person who is not, a SwapClear Clearing Member.

CASH SETTLEMENT SCHEDULE

This Cash Settlement Schedule sets forth certain provisions relating to the auction and cash settlement process in relation to both the SOFR Rate Change Annex for the SCM service and the SOFR Rate Change Annex for the FCM Service and may be supplemented from time to time by one or more Cash Settlement Supplements.

1. AUCTIONED CONTRACTS

The Clearing House shall determine a single Net Auction Contract Pair (as defined below) separately for each Maturity Bucket as follows:

- (a) first, the Clearing House shall determine the portfolio of Discounting Risk Swaps for each Maturity Bucket that would, but for the Cash Only Election Notices, have been registered in each of the Cash Only Client Position Accounts in accordance with the SOFR Rate Change Annex for the SCM service and the SOFR Rate Change Annex for the FCM service; and
- (b) second, the Clearing House shall aggregate and net all of the risks and cash flows for the above Discounting Risk Swaps for each Maturity Bucket to determine a single pair of Discounting Risk Swaps for each Maturity Bucket, and each such pair of Discounting Risk Swaps shall be the **Net Auction Contract Pair** for that Maturity Bucket.

Each Net Auction Contract Pair shall comprise (i) a Discounting Risk Swap pursuant to which, the Clearing House or SwapClear Clearing Member (**Party X**) will receive SOFR plus or minus a spread which shall be equal to the relevant Mid-Price determined pursuant to this Cash Settlement Schedule and pay to the other (**Party Y**) a fixed rate and (ii) a Discounting Risk Swap pursuant to which Party X will receive the same fixed rate as referred to in (i) immediately above and pay to Party Y the Fed Funds Rate with no spread.

For the avoidance of doubt, the above determinations are made solely for the purposes of determining the Net Discounting Risk Swaps that shall be subject to the auction and, prior to the registration of the Discounting Risk Swaps resulting from the from the auction, no SwapClear Contracts shall be registered in any SwapClear Clearing Member's accounts.

For these purposes:

Cash Settlement Participants means those SwapClear Clearing Members and FCM Clearing Members (if any) who have notified the Clearing House via the SwapClear Portal by the cut-off time specified by the Clearing House in the Rate Change Notice related to SOFR that they shall participate in the auction. For the avoidance of doubt, only one SwapClear Clearing Member per group of affiliated SwapClear Clearing Members shall be entitled to submit a bid and such SwapClear Clearing Member shall be bound by the terms of such bid and the terms of this Cash Settlement Schedule, the Cash Settlement Supplement and the Annex.

Expected Cash Settlement Participant means each SwapClear Clearing Member and FCM Clearing Member (if any) that belongs to a group which, during January, February and March 2020, had more than USD1 trillion in gross notional amount of new SwapClear Contracts and/or FCM SwapClear Contracts that are Impacted SwapClear Contracts or Impacted FCM SwapClear Contracts registered in the Proprietary Accounts of all SwapClear Clearing Members or FCM Clearing Members in that group.

2. PRICE SUBMISSIONS

- (a) The manner in which each Cash Settlement Participant must submit pricing shall be further set out by the Clearing House in a Cash Settlement Supplement.
- (b) Each time a Cash Settlement Participant submits pricing it shall be deemed to represent and warrant that it has all necessary internal approvals and risk permissions in place to submit such pricing, pay any amounts and be bound to any SwapClear Contracts and/or SwapClear FCM Contracts registered in its Proprietary Account in connection with the auction.
- (c) Each price submitted by a Cash Settlement Participant constitutes an offer to the Clearing House to enter into the Net Auction Contract Pair and shall be treated for all purposes as an irrevocable firm, executable price.
- (d) Subject to paragraph (e) below, the Clearing House may only reject a bid or offer if it considers, in its sole and absolute discretion, that such bid or offer has been submitted as a result of a manifest error. If the Clearing House makes such a determination it shall first contact the Cash Settlement Participant who submitted such pricing and provide such Cash Settlement Participant with the opportunity to withdraw and/or correct such manifest error before the auction is concluded. If such pricing is not corrected or withdrawn the Clearing House shall disregard such pricing for all purposes.
- (e) For the purposes of all determinations other than the determination of the Mid-Price, the Clearing House shall not take into account any bid or offer that is submitted for a Maturity Bucket if the number of basis points between such bid or offer, on the one hand, and the Mid-Price, on the other hand, is greater than the Bid/Offer Limit for that Maturity Bucket. The **Bid/Offer Limit** shall be expressed as a number of basis points and shall be as set out in the Cash Settlement Supplement.

3. DETERMINING THE MID-PRICE AND CONSTRUCTING THE SOFR PRICING CURVE

- (a) Solely for the purposes of determining the Mid-Price in relation to each Maturity Bucket the Clearing House shall take the following steps separately in relation to all bids and offers submitted for each Maturity Bucket:
 - (i) first, it shall order the bid prices in descending order (i.e. starting with the highest bid) and order the offer prices in ascending order (i.e. starting with the lowest offer);
 - (ii) second, it shall remove any crossing bids and offers (i.e. if any ranked, ordered, individual bid price exceeds any ranked, ordered, individual offer price both such bid and offer prices shall be removed);
 - (iii) third, it shall determine the top quartile of the bid prices and the top quartile of the offer prices (rounding up to determine a quarter) and remove the remaining bid and offer prices;

- (iv) fourth, it shall calculate the average of the remaining bid prices and the average of the remaining offer prices; and
- (v) fifth, it shall sum the averages determined under step (iv) and divide the result by two, and the result shall be the "Mid-Price" for that Maturity Bucket.

For the avoidance of doubt, the above steps shall not apply to determine the identity of the Auction Winner and shall only be applicable to determine the Mid-Price in relation to each Maturity Bucket.

- (b) Once the above steps have been completed, the Clearing House shall construct a SOFR curve by (i) in relation to tenors for which there is a corresponding Maturity Bucket, adding each Mid-Price calculated with respect to a Maturity Bucket in accordance with the foregoing methodology to the corresponding tenor on the Clearing House's zero coupon yield curve for the Fed Funds Rate as of the Auction Date, and (ii) in relation to tenors for which there is not a corresponding Maturity Bucket, using observable market data points and applying linear interpolation where the Clearing House considers appropriate.

4. FURTHER POWERS AND INFORMATION

- (a) In the event that no prices are received in relation to a Maturity Bucket by the end of the relevant bidding window identified above, or the Clearing House otherwise determines, in its sole and absolute discretion, that it would be appropriate to do so, the Clearing House may:
 - (i) hold one or more further auctions on the Auction Date or subsequent days;
 - (ii) split the portfolio of Net Auction Contract Pairs into different groups or notional amounts; and/or
 - (iii) take any other steps that it considers appropriate in order to obtain bids or offers in relation to the Net Auction Contract Pairs in such Maturity Bucket,

and it shall make any consequential adjustments to the terms of the Rate Change Notice(s) relating to SOFR as it considers appropriate.

- (b) If, having taken the steps above, where applicable, no prices are received in relation to one or more of the Maturity Buckets then the Clearing House will determine that no further auctions shall take place and all Cash Only Clients shall have Discounting Risk Swaps registered in the relevant Individual Segregated Account, "position account" within an Omnibus Segregated Account or FCM Client Sub-Accounts (as applicable) notwithstanding any Cash Only Election Notices previously delivered in respect of such SwapClear Clearing Clients or FCM Clients, and the spread on the SOFR leg of each Discounting Risk Swap which references SOFR shall be determined by the Clearing House using observable market data, including the Clearing House's zero coupon yield curve for SOFR (constructed in accordance with the Procedures).
- (c) If, in relation to a Maturity Bucket, the Clearing House is unable to auction and liquidate the full notional amount of the Discounting Risk Swaps that are the subject of the auction for that Maturity Bucket (including, without limitation, because the aggregate notional amount for which bids are received in relation to that Maturity Bucket is less than the entire notional amount of such Discounting Risk Swaps) (the **Non-Auctioned Swaps**), the Clearing House shall, notwithstanding any Cash Only Election Notices previously delivered, allocate the Non-Auctioned Swaps to each Cash Only Client Position Account, with each Cash Only

Client Position Account being allocated a share of the Non-Auctioned Swaps pro rata to that Cash Only Client Position Account's share of the total notional amount of Discounting Risk Swaps for that Maturity Bucket that would, but for the delivery of the Cash Only Election Notices, have been registered in each of the Cash Only Client Position Accounts.

5. LIMITATION OF LIABILITY

5.1 Without prejudice to the generality of Regulation 52, each SwapClear Clearing Member agrees:

(a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any SwapClear Clearing Member or any other person (including, without limitation, any SwapClear Clearing Client) whether in contract, tort (including, without limitation, negligence), trust, as a fiduciary or under any other cause of action, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and

(b) to waive any claim against the Clearing House or any member of the LCH Group;

arising or that may arise in connection with:

(i) any determination, calculation, exercise of discretion, or decision, taken or not taken by the Clearing House or any other member of the LCH Group in connection with the Cash Settlement Schedule; or

(ii) the determination or publication of any price, curve, data, quote or other information arising from, or in connection with, the Cash Settlement Schedule;

except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

5.2 Without prejudice to the generality of Regulation 52 and clause 5.1 above, each SwapClear Clearing Member further agrees:

(a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any SwapClear Clearing Member or any other person (including, without limitation, any SwapClear Clearing Client) in tort (including, without limitation, negligence), trust, as a fiduciary or under any other non-contractual cause of action, or under any implied contractual term, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and

(b) to waive any non-contractual claim or claim under any implied contractual term against the Clearing House or any member of the LCH Group;

arising or that may arise in connection with the Clearing House's performance of its contractual duties or obligations under the Cash Settlement Schedule, except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

- 5.3 Each SwapClear Clearing Member agrees that neither the Clearing House nor any other member of the LCH Group (i) owes any duty of care to any person in connection with the performance of the Clearing House's duties or obligations or exercise of its rights under the Cash Settlement Schedule, save for the express contractual duties set forth in the Cash Settlement Schedule; (ii) is under any obligation to research, investigate, supplement, or verify the veracity of, any price, data, quote or other information received from a SwapClear Clearing Member in connection with the Cash Settlement Schedule; (iii) is acting as a fiduciary for, or as an advisor to, any SwapClear Clearing Member or SwapClear Clearing Client in connection with the Cash Settlement Schedule or any SwapClear Contract registered as a result of the matters specified in the Cash Settlement Schedule; (iv) shall be under any requirement to consult with, or individually notify, a SwapClear Clearing Member or SwapClear Clearing Client in connection with making its determinations, exercising its discretions or performing its duties or obligations or exercising its rights, each under the Cash Settlement Schedule; or (v) has made any representation, express or implied, in relation to the Cash Settlement Schedule, and each SwapClear Clearing Member acknowledges that it has not relied on any representations made by the Clearing House or any other member of the LCH Group in relation to the Cash Settlement Schedule.
- 5.4 For the avoidance of doubt, notwithstanding anything herein or in the Annex or Cash Settlement Supplement, neither the Clearing House nor any other member of the LCH Group shall be liable for any obligations of, or to any person who is not, a SwapClear Clearing Member.

SWAPCLEAR SCM SERVICE - RATE CHANGE ANNEX – EURO SHORT TERM RATE (€STR)

1. SCOPE AND INTERPRETATION

- (a) This Annex constitutes a “Rate Change Annex” as defined in the Regulations and supplements and forms part of the Rulebook.
- (b) This Annex relates to the change in the rate from the Euro OverNight Index Average (EONIA) to the Euro Short Term Rate (€STR) for the purposes of (i) calculating PAI, (ii) calculating the Price Alignment Amount, and (iii) constituting the relevant underlying benchmark for the instruments used to construct the Clearing House’s zero coupon yield curves under 1.7.2 of Section 2C of the Procedures to calculate the net present value, each in relation to Impacted SwapClear Contracts.
- (c) The terms of this Annex shall apply to all Impacted SwapClear Contracts of the type set-out in the Rate Change Notice relating to €STR as set out below. For the avoidance of doubt, (i) no other SwapClear Contract shall be subject to, or affected by, the terms of this Annex and each SwapClear Contract shall remain in full force and effect, and (ii) the SwapClear Contract Terms shall not be amended by the terms of this Annex.
- (d) Capitalized terms used but not otherwise defined in this Annex have the meaning given to them in the Regulations. The term "business day" has the meaning given to it in the Regulations.
- (e) The terms of this Annex relating to operational or procedural matters may be supplemented, modified, amended, replaced or withdrawn from time to time by the Clearing House in its sole discretion through a member circular or such other method as the Clearing House shall determine is appropriate.

2. DEFINITIONS

For the purposes of this Annex:

Cash Compensation Amount means, in relation to the Impacted SwapClear Contracts in a Proprietary Account, an Individual Segregated Account, or a "position account" within an Omnibus Segregated Account, the amount determined in accordance with Section 4 below.

Cash Compensation Contract means each contract determined by the Clearing House and registered in the relevant Proprietary Account, Individual Segregated Account or "position account" within an Omnibus Segregated Account pursuant to Section 4 below.

EONIA Discounted Value means, in relation to an Impacted SwapClear Contract, the net present value, as of the end of the "business day" in New York on the €STR Calculation Date, of all future cash flows under that Impacted SwapClear Contract calculated using EONIA as the discounting rate for the purpose of constructing the zero coupon yield curves under 1.7.2 of Section 2C of the Procedures (with the future cash flows calculated in the same manner as for the determination of the €STR Discounted Value). If the net present value represents an asset or positive value for the Clearing House, such EONIA Discounted Value shall be a positive amount and if the net present value represents a liability or negative value for the Clearing House, such EONIA Discounted Value shall be a negative amount.

€STR Calculation Date means in relation to a Rate Change Notice relating to €STR the date specified as such by the Clearing House and specified in the Rate Change Notice relating to €STR, being the date on which the Clearing House shall calculate the amounts and values specified in Section 4 below.

€STR Discounted Value means, in relation to an Impacted SwapClear Contract, the net present value as of the end of the "business day" in New York on the €STR Calculation Date of all future cash flows under that Impacted SwapClear Contract using €STR as the discounting rate for the purpose of constructing the zero coupon yield curves under 1.7.2 of Section 2C of the Procedures (with the future cash flows calculated in the same manner as for the determination of the EONIA Discounted Value). If the net present value represents an asset or positive value for the Clearing House, such €STR Discounted Value shall be a positive amount and if the net present value represents a liability or negative value for the Clearing House, such €STR Discounted Value shall be a negative amount.

3. OBLIGATIONS TO MAKE CERTAIN CALCULATIONS AND ENTER INTO CERTAIN CONTRACTS

Pursuant to Regulation 60B of the Regulations, this Annex sets out the method for (i) calculating the Cash Compensation Amounts (which are "Rate Change Payments" for purposes of Regulation 60B), and (ii) determining the terms of the Cash Compensation Contracts which shall be registered in order to effect the payment of the Cash Compensation Amounts. .

4. DETERMINATION OF THE CASH COMPENSATION AMOUNT AND THE CASH COMPENSATION CONTRACTS FOLLOWING THE CHANGE TO €STR

(a) Immediately following the €STR Calculation Date the Clearing House shall calculate:

(i) the aggregate EONIA Discounted Value and the aggregate €STR Discounted Value in relation to all Impacted SwapClear Contracts registered in each Proprietary Account as of the end of the "business day" in New York on the €STR Calculation Date;

(ii) the aggregate EONIA Discounted Value and the aggregate €STR Discounted Value in relation to all Impacted SwapClear Contracts registered in each Individual Segregated Account as of the end of the "business day" in New York on the €STR Calculation Date; and

(iii) the aggregate EONIA Discounted Value and the aggregate €STR Discounted Value in relation to all Impacted SwapClear Contracts registered in each "position account" within each Omnibus Segregated Account as of the end of the "business day" in New York on the €STR Calculation Date.

(b) The Clearing House shall determine a single Cash Compensation Amount separately in respect of all of the Impacted SwapClear Contracts in each Proprietary Account, each Individual Segregated Account, and each "position account" within each Omnibus Segregated Account as follows. If:

(i) the aggregate €STR Discounted Value in relation to all such Impacted SwapClear Contracts exceeds the aggregate EONIA Discounted Value in relation to all such Impacted SwapClear Contracts then the Cash Compensation Amount in relation to such Impacted SwapClear Contracts shall be equal to the absolute value of the

- difference, and shall be an amount in favor of the Clearing House in relation to such Proprietary Account, Individual Segregated Account, or "position account" within such Omnibus Segregated Account (as applicable); and
- (ii) the aggregate €STR Discounted Value in relation to all such Impacted SwapClear Contracts is less than the aggregate EONIA Discounted Value in relation to all such Impacted SwapClear Contracts then the Cash Compensation Amount in relation to such Impacted SwapClear Contracts shall be equal to the absolute value of the difference, and shall be an amount in favor of the SwapClear Clearing Member in relation to such Proprietary Account, Individual Segregated Account, or "position account" within such Omnibus Segregated Account (as applicable).
- (c) The Clearing House shall, pursuant to Regulation 60B, register a separate Cash Compensation Contract in each Proprietary Account, each Individual Segregated Account and each "position account" within an Omnibus Segregated Account in relation to the Cash Compensation Amount (to the extent such amounts are applicable to such account or "position account"). Each SwapClear Clearing Member and the Clearing House (as applicable) irrevocably agrees that it shall be bound to pay the Cash Compensation Amount to the other pursuant to the terms of the related Cash Compensation Contract. Each Cash Compensation Contract shall be registered for the sole purpose of effecting the payment of the Cash Compensation Amount to which it relates. It shall operationally be recorded as having a "Notional Amount" (as defined in the SwapClear Contract Terms) of EUR1, a "Termination Date" (as defined in the SwapClear Contract Terms) falling two "business days" after the €STR Calculation Date, and an obligation on the Clearing House or the SwapClear Clearing Member (as applicable) to pay to the other an amount equal to the Cash Compensation Amount related to the relevant Proprietary Account, Individual Segregated Account, or "position account" within the relevant Omnibus Segregated Account, in each case as determined pursuant to Section 4(b) above, with a positive Cash Compensation Amount representing an amount payable by the Clearing House to the SwapClear Clearing Member and a negative Cash Compensation Amount representing an amount payable to the Clearing House by the SwapClear Clearing Member. However, Neither the Clearing House nor a SwapClear Clearing Member shall be required to pay any amounts under a Cash Compensation Contract other than the Cash Compensation Amount to which such Cash Compensation Contract relates.
- (d) Each SwapClear Clearing Member agrees to be bound by each Cash Compensation Contract registered pursuant to this Section 4, which shall, when registered, constitute a SwapClear Contract between the Clearing House and the relevant SwapClear Clearing Member that has arisen by reason of the application of the Regulations to the Impacted SwapClear Contracts.
- (e) Each SwapClear Clearing Member agrees (and in the case of (f)(iv) below, each SwapClear Clearing Member and the Clearing House agrees):
- (i) to use reasonable endeavors to provide each of its SwapClear Clearing Clients with (i) information on the change in the rate from EONIA to €STR pursuant to the terms of Regulation 60B and this Annex, (ii) information on the amounts payable pursuant to the terms of the Cash Compensation Contracts which may be allocated to that SwapClear Clearing Client's Individual Segregated Account, or "position account" within such Omnibus Segregated Account pursuant to the terms of this Annex, and (iii) other information (indicative or otherwise) in relation to each SwapClear Clearing Client's "position account. Such information shall include the terms of this Annex and any information which it has received from, or is made available by, the Clearing House in connection with this Annex;

- (ii) that it, and each of SwapClear Clearing Client, shall be bound by the terms of any Cash Compensation Contracts registered pursuant to this Annex and all payment obligations thereunder (as determined by the Clearing House pursuant to this Annex);
- (iii) to perform all obligations and exercise all rights under this Annex in accordance with Applicable Law; and
- (iv) that each Cash Compensation Contract is being registered in the relevant account in connection with the matters specified in this Annex and the obligations thereunder are for the sole purpose of addressing the value impact of the change from EONIA to €STR.

5. DETERMINATIONS BINDING

Subject to Section 8, all determinations and calculations made by the Clearing House pursuant to this Annex shall be binding and may in no circumstances (other than in the case of manifest error) be called into question by any person.

6. RECORDS

The Clearing House shall update its books and records to reflect the Cash Compensation Contracts and the amounts payable thereunder and the obligation to pay, or the right to receive, any such amounts may be reflected in the books and records of the Clearing House in such manner as the Clearing House determines is necessary to meet its operational requirements.

7. MISCELLANEOUS

- (a) The obligations of the Clearing House to each SwapClear Clearing Member shall be to perform its obligations as principal to such SwapClear Clearing Member in accordance with the Rulebook, but subject to the restrictions on the Clearing House's obligations and liabilities contained in the Rulebook and Section 8.
- (b) The terms of this Annex are without prejudice to the Clearing House's rights under the Procedures to change the rate used for the purposes of (i) calculating PAI, (ii) calculating the Price Alignment Amount, and (iii) constructing the Clearing House's zero coupon yield curves under 1.7.2 of Section 2C of the Procedures from time to time and such terms shall not be relevant or binding on the Clearing House in respect of any such changes.
- (c) The performance by the Clearing House of its obligations hereunder shall always be subject to the provisions of the Rulebook. The benefit of the performance by the Clearing House of its obligations under this Annex is conferred upon SwapClear Members only, as principal, and a person who is not a party to the Rulebook has no right under Contracts (Rights of Third Parties) Act 1999 (as amended from time to time) to enforce any term of this Annex.

8. LIMITATION OF LIABILITY

8.1 Without prejudice to the generality of Regulation 52, each SwapClear Clearing Member agrees:

- (a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any SwapClear Clearing Member or any other person

(including, without limitation, any SwapClear Clearing Client) whether in contract, tort (including, without limitation, negligence), trust, as a fiduciary or under any other cause of action, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and

(b) to waive any claim against the Clearing House or any member of the LCH Group;

arising or that may arise in connection with:

(i) any determination, calculation, notification, registration, publication, exercise of discretion, or decision, taken or not taken by the Clearing House or any other member of the LCH Group in connection with this Annex; or

(ii) the determination or publication of any price, curve, data, quote or other information arising from, or in connection with, this Annex;

except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

8.2 Without prejudice to the generality of Regulation 52 and clause 8.1 above, each SwapClear Clearing Member further agrees:

(a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any SwapClear Clearing Member or any other person (including, without limitation, any SwapClear Clearing Client) in tort (including, without limitation, negligence), trust, as a fiduciary or under any other non-contractual cause of action, or under any implied contractual term, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and

(b) to waive any non-contractual claim or claim under any implied contractual term against the Clearing House or any member of the LCH Group;

arising or that may arise in connection with the Clearing House's performance of its contractual duties or obligations under this Annex, except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

8.3 Each SwapClear Clearing Member agrees that neither the Clearing House nor any other member of the LCH Group (i) owes any duty of care to any person in connection with the performance of the Clearing House's duties or obligations or exercise of its rights under this Annex, save for the express contractual duties set forth in this Annex; (ii) is under any obligation to research, investigate, supplement, or verify the veracity of, any price, data, quote or other information received from a SwapClear Clearing Member in connection with this Annex; (iii) is acting as a fiduciary for, or as an advisor to, any SwapClear Clearing Member or SwapClear Clearing Client in connection with this Annex or any SwapClear Contract registered as a result of the matters specified in this Annex; (iv) shall be under any requirement to consult with, or individually notify (other than as expressly set out in this Annex), a SwapClear Clearing Member or SwapClear Clearing Client in connection with making its determinations, exercising its discretions or performing its duties or obligations or exercising its rights, each under this Annex; or (v) has made any representation, express or implied, in relation to this Annex, and each SwapClear Clearing Member acknowledges that it has not relied on any representations made by the Clearing House or any other member of the LCH Group in relation to this Annex.

8.4 For the avoidance of doubt, notwithstanding anything to the contrary herein, neither the Clearing House nor any other member of the LCH Group shall be liable for any obligations of, or to any person who is not, a SwapClear Clearing Member.

Appendix IV
FCM Procedures



FCM PROCEDURES OF THE CLEARING HOUSE

LCH LIMITED

Currency	PAA Rate
	“SIOR” or any successor page(s) thereto.
ZAR	The rate used shall be the SFX ZAR OND rate, the rate published by SAFEX JIBAR – as such rate appears on Reuters page “SFXROD” or any successor page(s) thereto.
CZK	The rate used shall be the “CZEONIA” rate, the rate published by the Czech National Bank – as such rate appears on Reuters page “CZEONIA” or any successor page(s) thereto.
HUF	The rate used shall be the “HUFONIA” rate, the rate published by the National Bank of Hungary – as such rate appears on Reuters page “HUFONIA” or any successor page(s) thereto.
SGD	The rate used shall be the “SONAR” rate, the rate published by the Association of Banks in Singapore – as such rate appears on Reuters page “ABSIRFIX01” or any successor page(s) thereto.
NOK	The rate used shall be the NOK sight deposit rate, the rate published by Norges Bank – as such rate appears on Reuters page “NOINTR=ECI” or any successor page(s) thereto

For currency NOK, PAA is calculated using an appropriate overnight deposit rate for the currency.

Notwithstanding the foregoing, in the event the interest rate source used for the calculation of PAA (i) is unavailable (including where such rate ceases, or will cease, to be provided by its administrator), (ii) is not sufficiently robust, (iii) is not fit for purpose or (iv) has materially changed, in each case as determined in the Clearing House’s sole discretion, the Clearing House may use an alternative interest rate without the consent of such SwapClear Clearing Members and/or FCM Clearing Members.

[If the Clearing House chooses an alternative interest rate for purposes of calculating Price Alignment Amount pursuant to the immediately foregoing paragraph it shall notify all SwapClear Clearing Members and FCM Clearing Members in writing by delivering a Rate Change Notice.](#)

3.5.3 *Interest Structure*

Application of Collateral	Type of Collateral			
	Securities	Cash	Foreign Cash	Forward Cash
Initial margin after offset	Accommodation Charge Payable	Pay relevant rate	pay relevant rate of Collateral currency	No charge or payment

SCHEDULE 7

RATE CHANGE ANNEXES

SWAPCLEAR FCM SERVICE - RATE CHANGE ANNEX – SECURED OVERNIGHT FINANCING RATE (SOFR)

1. SCOPE AND INTERPRETATION

- (a) This Annex constitutes a “Rate Change Annex” as defined in and pursuant to the FCM Regulations and supplements and forms part of the FCM Rulebook.
- (b) This Annex relates to the change in the rate from the Fed Funds Rate to the Secured Overnight Financing Rate provided by the Federal Reserve Bank of New York, as administrator (or a successor administrator) (SOFR) for the purposes of (i) calculating the Price Alignment Amount, and (ii) constituting the relevant underlying benchmark for the instruments used to construct the Clearing House’s zero coupon yield curves under 2.1.7 of the FCM Procedures to calculate the net present value, each in relation to the Impacted FCM SwapClear Contracts.
- (c) The terms of this Annex shall apply to all Impacted FCM SwapClear Contracts (as set-out in the Rate Change Notice relating to SOFR) that are registered with the Clearing House as set out below. For the avoidance of doubt, (i) no other FCM SwapClear Contract shall be subject to, or affected by, the terms of this Annex and each FCM SwapClear Contract shall remain in full force and effect, and (ii) the FCM SwapClear Contract Terms shall not be amended by the terms of this Annex.
- (d) Capitalized terms used but not otherwise defined in this Annex have the meaning given to them in the FCM Regulations.
- (e) The terms of this Annex relating to operational or procedural matters may be supplemented, modified, amended, replaced or withdrawn from time to time by the Clearing House in its sole discretion through a member circular or such other method as the Clearing House shall determine is appropriate.

2. DEFINITIONS

For the purposes of this Annex:

Auction Adjustment per Unit means, in relation to a Maturity Bucket, an amount in USD equal to (i) the aggregate of all Auction Winner Amounts for that Maturity Bucket divided by (ii) the total notional amount of Discounting Risk Swaps in that Maturity Bucket which have been liquidated pursuant to the Cash Settlement Schedule.

Auction Date means, in relation to a Rate Change Notice relating to SOFR, the date specified as such by the Clearing House in such Rate Change Notice, being the date on which the auctions referred to herein and the Cash Settlement Supplement shall be held and certain amounts payable hereunder shall be calculated.

Auction Winner means, in relation to the Net Auction Contract Pair in respect of a Maturity Bucket, each Cash Settlement Participant (as defined in the Cash Settlement Schedule) that has submitted the winning price for such Net Auction Contract Pair, as determined by the Clearing House in accordance with the Cash Settlement Supplement.

Auction Winner Amount means, in relation to the Net Auction Contract Pair for Maturity Bucket and an Auction Winner, an amount in USD equal to the product of: (i) that Auction Winner's Winning Bid Quantity; (ii) the difference between that Auction Winner's Winning Bid Price and the Mid-Price; and (iii) the SOFR Basis Point Cash Value per Million, each for that Maturity Bucket. If the Auction Winner's Winning Bid Price is a price that by reference to the Mid-Price is (a) in favor of the Clearing House, the Auction Winner Amount shall be a negative amount or (b) in favor of the Auction Winner, the Auction Winner Amount shall be a positive amount.

Cash Compensation Contract means each contract determined by the Clearing House and registered in the relevant Proprietary Account, or an FCM Client Sub-Account pursuant to Section 8 below.

Cash Only Client means an FCM Client that has its positions recorded in a Cash Only Client Position Account.

Cash Only Client Position Account means each FCM Client Sub-Account registered in the name of an FCM Client that is identified as a Cash Only Client Position Account in a Cash Only Election Notice.

Cash Only Client Position Account Auction Adjustment means, in relation to a Cash Only Client Position Account and a Maturity Bucket, an amount in USD in favor of the Clearing House or an FCM Clearing Member (as applicable) equal to the product of (i) the notional amount of Discounting Risk Swaps for that Maturity Bucket that would, but for the delivery of the Cash Only Election Notice, have been registered in that Cash Only Client Position Account and which have been liquidated pursuant to the Cash Settlement Schedule, and (ii) the Auction Adjustment per Unit for that Maturity Bucket.

Cash Only Election Cut-Off Date is the date specified as such by the Clearing House in a Rate Change Notice relating to SOFR, being the date by which FCM Clearing Members must deliver any Cash Only Election Notices to the Clearing House.

Cash Only Election Notice means a written notice delivered by an FCM Clearing Member to the Clearing House in accordance with this Annex identifying those FCM Clients and the related FCM Client Sub-Accounts which have elected to be Cash Only Client Position Account(s) in accordance with Section 4 of this Annex.

Cash Settlement Schedule means the schedule to the SCM SOFR Rate Change Annex which sets-out the terms on which the Clearing House shall conduct one or more auctions for purposes of determining certain amounts, curves and spreads and related concepts relevant to this Annex, as supplemented by any Cash Settlement Supplement published by the Clearing House from time to time. The Cash Settlement Schedule supplements, and forms part of, this Annex.

Cash Settlement Supplement means any document identified as such by the Clearing House which supplements and forms part of the Cash Settlement Schedule and sets out further terms in relation to the auction.

Cash Valuation Change Amount (MXN) means each amount denominated in MXN and determined in accordance with Section 7.5 of this Annex.

Cash Valuation Change Amount (USD) means each amount denominated in USD and determined in accordance with Section 7.1, Section 7.2 or Section 7.3 of this Annex.

De Minimis Participant Account means, in relation to a Maturity Bucket, any Proprietary Account, or any FCM Client Sub-Account that, as of the Swap Portfolio Calculation Date, would have an allocation of Discounting Risk Swaps in a given Maturity Bucket with a notional amount that is closer to zero than to the integral number set out in the table in paragraph 5.1(c) in relation to that Maturity Bucket.

Discounting Risk Swaps means the FCM SwapClear Contracts determined, identified and notified by the Clearing House in accordance with Section 5 of this Annex and entered into and registered between the Clearing House and an FCM Clearing Member pursuant to Regulation 48A.

FedFunds Discounted Value means, in relation to an Impacted FCM SwapClear Contract, the net present value, as of the end of the Business Day in New York on the Auction Date, of all future cash flows under that Impacted FCM SwapClear Contract calculated using the Fed Funds Rate as the discounting rate for the purposes of constructing the zero coupon yield curves under 2.1.7 of the FCM Procedures (with the future cash flows calculated in the same manner as for the determination of the SOFR Discounted Value). If the net present value represents an asset or positive value for the Clearing House, such FedFunds Discounted Value shall be a positive amount and if the net present value represents a liability or negative value for the Clearing House, such FedFunds Discounted Value shall be a negative amount.

Maturity Bucket means, in relation to the Impacted FCM SwapClear Contracts, Discounting Risk Swaps and Net Auction Contract Pairs, a group of such contracts which all have the same maturity, being either two years, five years, ten years, fifteen years, twenty years or thirty years from the date of registration.

Mid-Price has, in relation to the Net Auction Contract Pair for a Maturity Bucket, the meaning given to it in the Cash Settlement Schedule, and shall be expressed in basis points.

MXN Impacted SwapClear Contracts has the meaning given to it in Section 7 of this Annex.

Net Auction Contract Pair has the meaning given to it in the Cash Settlement Schedule.

SCM SOFR Rate Change Annex means the rate change annex published by the Clearing House in relation to SOFR under Regulation 60B of the UK General Regulations.

SOFR Basis Point Cash Value per Million means, in relation to the Net Auction Contract Pair for a Maturity Bucket, an amount in USD equal to the change (expressed as a positive if a gain and a negative if a loss) in value of such Net Auction Contract Pair with a notional amount of USD one million as a result of adding a one basis point spread to the SOFR leg, as determined by the Clearing House in its sole discretion.

SOFR Discounted Value means, in relation to an Impacted FCM SwapClear Contract, the net present value, as of the end of the Business Day in New York on the Auction Date, of all future cash flows under that Impacted FCM SwapClear Contract using the SOFR Discounting Curve for the purposes of such calculation (with the future cash flows calculated in the same manner as for the determination of the FedFunds Discounted Value). If the net present value represents an asset or positive value for the Clearing House, such SOFR Discounted Value shall be a positive amount and if the net present value represents a liability or negative value for the Clearing House, such SOFR Discounted Value shall be a negative amount.

SOFR Discounting Curve means the SOFR pricing curve constructed by the Clearing House in accordance with Section 4 of the Cash Settlement Schedule.

Swap Portfolio Calculation Date means, in relation to a Rate Change Notice relating to SOFR the date specified as such by the Clearing House in such Rate Change Notice relating to SOFR, being the date on which the Clearing House shall determine the portfolios of Discounting Risk Swaps in relation to all Impacted FCM SwapClear Contracts registered with the Clearing House on such date.

Winning Bid Price means, in relation to the Net Auction Contract Pair for a Maturity Bucket and an Auction Winner, the price payable to, or by, that Auction Winner to the Clearing House, expressed as a positive or negative spread in basis points on the SOFR leg of the Net Auction Contract Pair for that Maturity Bucket and determined through a modified Dutch auction as further set-out in the Cash Settlement Supplement(s). For the avoidance of doubt: (a) if the Clearing House is the receiver of SOFR under the Net Auction Contract Pair, and (1) the spread is a positive amount, the Winning Bid Price shall be a positive amount; or (2) the spread is a negative amount, the Winning Bid Price shall be a negative amount; and (b) if the Clearing House is the receiver of the Fed Funds Rate under the Net Auction Contract Pair, and (1) the spread is a positive amount, the Winning Bid Price shall be a negative amount; or (2) the spread is a negative amount, the Winning Bid Price shall be a positive amount.

Winning Bid Quantity means, in relation to an Auction Winner and a Net Auction Contract Pair for a Maturity Bucket, the notional amount (expressed in units of USD one million) of the Discounting Risk Swap related to such Net Auction Contract Pair (or the part thereof) which will be determined by the Clearing House pursuant to the Cash Settlement Supplement and registered in the Proprietary Account of the Auction Winner.

3. OBLIGATIONS TO MAKE CERTAIN CALCULATIONS AND ENTER INTO CERTAIN CONTRACTS

(a) In connection with the change from the Fed Funds Rate to SOFR described in Section 1(b) above, pursuant to and in accordance with the Clearing House's powers under Regulation 48A of the FCM Regulations, this Annex sets out the method by which the Clearing House will:

Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN) and Cash Compensation Contracts

(i) for each Proprietary Account and each FCM Client Sub-Account, calculate the following amounts, in each case, if any:

(A) Cash Valuation Change Amount (USD); and

(B) Cash Valuation Change Amount (MXN),

each of which are "Rate Change Payments" for the purpose of Regulation 48A.

(ii) determine and register, pursuant to Regulation 48A, certain Cash Compensation Contracts in each Proprietary Account and FCM Client Sub-Account in accordance with Section 8 of this Annex in order to effect the payment of each Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN), Cash Only Client Position Account Auction Adjustment, and Auction Winner Amount, in each case, if any;

Discounting Risk Swaps and Auction Winner Amounts

- (iii) subject to (b) below, for (x) each Proprietary Account and (y) each FCM Client Sub-Account which is not a Cash Only Client Position Account, determine how certain Discounting Risk Swaps shall be identified in accordance with Section 5, registered and entered into between the Clearing House and each FCM Clearing Member pursuant to Regulation 48A and the terms of those Discounting Risk Swaps;
 - (iv) subject to (b) below, for each Cash Only Client Position Account, calculate the related Cash Only Client Position Account Auction Adjustments (which shall also each be a "Rate Change Payment" for the purpose of Regulation 48A); and
 - (v) for each Auction Winner, calculate the Auction Winner Amount (which shall also be a "Rate Change Payment" for the purpose of Regulation 48A).
- (b) Any account that is a De Minimis Participant Account in relation to a Maturity Bucket shall not have any Discounting Risk Swaps in that Maturity Bucket determined or registered in its name and shall not be obliged to pay, or entitled to receive, any Cash Only Client Position Account Auction Adjustments. Any Cash Only Election Notice received in relation to an FCM Client Sub-Account that is a De Minimis Participant Account as of the Auction Date shall be invalid and shall have no effect whatsoever (and, for the avoidance of doubt, the Discounting Risk Swaps that would otherwise be registered in any De Minimis Participant Account shall not count towards the Net Auction Contract Pair for any Maturity Bucket).

4. CLEARING MEMBER DEALINGS WITH FCM CLIENTS AND CLIENT CASH ONLY ELECTIONS

Client Cash Only Elections

- (a) In relation to its SwapClear Client Clearing Business, an FCM Clearing Member shall provide each FCM Client with an election not to have Discounting Risk Swaps registered on that FCM Client's behalf in relation to Impacted FCM SwapClear Contracts registered in the relevant FCM Client Sub-Account and instead, subject to Section 4(d) below, to assume a right, or an obligation to pay or be paid an amount equal to the Cash Only Client Position Account Auction Adjustment in respect of each FCM Client Sub-Account, as determined pursuant to this Annex (except in the circumstances provided for in the Cash Settlement Schedule, where the election not to have Discounting Risk Swaps registered may be overridden).
- (b) An FCM Clearing Member shall be entitled to deliver Cash Only Election Notices to the Clearing House at any time up to, and including, the Cash Only Election Cut-Off Date. All Cash Only Election Notices must be delivered to the Clearing House via the SwapClear Portal.
- (c) No FCM Clearing Member shall be entitled to deliver a Cash Only Election Notice in respect of its Proprietary Accounts and any such notice shall be invalid and shall have no effect whatsoever.
- (d) The Clearing House reserves the right to reject any Cash Only Election Notice received by the Clearing House after the end of the Business Day in New York on the Cash Only Election Cut-Off Date. An FCM Clearing Member shall only be entitled to deliver a Cash Only Election Notice in respect of all, but not some only, of the FCM SwapClear Contracts registered in the name of an FCM Client in a single FCM Client Sub-Account.

- (e) The delivery by an FCM Clearing Member of a Cash Only Election Notice shall be deemed, as of the end of the Business Day in New York on the Cash Only Election Cut-Off Date, to be an irrevocable instruction of that FCM Clearing Member (for itself and acting on behalf of the relevant FCM Client(s) for whom the FCM Client Sub-Account which such Cash Only Election Notice affects is held) to the Clearing House to determine the Cash Valuation Change Amount (USD), the Cash Valuation Change Amount (MXN) and each Cash Only Client Position Account Auction Adjustment payable to or by that FCM Clearing Member in accordance with Section 7.3, Section 7.4 and Section 7.5 of this Annex and to register the related Cash Compensation Contracts in the relevant FCM Client Sub-Account in accordance with this Annex.
- (f) If an FCM Clearing Member does not deliver a Cash Only Election Notice in respect of an FCM Client Sub-Account held for an FCM Client then that shall be deemed, as of the end of the Business Day in New York on the Cash Only Election Cut-Off Date, to be an irrevocable instruction of that FCM Clearing Member (for itself and acting on behalf of that FCM Client) to the Clearing House to (i) determine the Cash Valuation Change Amount (USD) and the Cash Valuation Change Amount (MXN) in accordance with Section 7.2 and Section 7.5 of this Annex and to register the related Cash Compensation Contract in the relevant FCM Client Sub-Account in accordance with this Annex, and (ii) determine the Discounting Risk Swaps to be allocated to such FCM Client's FCM Client Sub-Account in accordance with this Annex and to register such Discounting Risk Swaps in such account.
- (g) By not delivering a Cash Only Election Notice, in relation to an FCM Client Sub-Account, each FCM Clearing Member represents and warrants to the Clearing House on the Cash Only Election Cut-Off Date that (i) it has used reasonable endeavors to obtain instructions from the FCM Client in relation to the exercise of an election not to receive Discounting Risk Swaps in relation to such account and (ii) it has not received instructions from any FCM Client to deliver a Cash Only Election Notice in respect of such account.

Clearing Member Obligations

- (h) Each FCM Clearing Member (and in the case of (h)(vi) below, each FCM Clearing Member and the Clearing House):
- (i) agrees to use reasonable endeavors to provide its FCM Clients with information on (i) the change in the rate from the Fed Funds Rate to SOFR pursuant to the terms of Regulation 48A and this Annex, (ii) the amounts payable pursuant to the terms the Cash Compensation Contracts which may be registered in that FCM Client's FCM Client Sub-Account pursuant to the terms of this Annex, and (iii) the Discounting Risk Swaps which may be allocated to that FCM Client's FCM Client Sub-Account pursuant to the terms of this Annex. Such information shall include the terms of this Annex and any information which it has received from, or is made available by, the Clearing House in connection with this Annex, including any risk disclosure statements relating to the matters herein;
- (ii) agrees that it, and each applicable FCM Client, shall be bound by the terms of any Cash Compensation Contracts and Discounting Risk Swaps registered pursuant to this Annex and all payment obligations thereunder (as determined by the Clearing House pursuant to this Annex);
- (iii) represents and warrants to the Clearing House as at the Cash Only Election Cut-off Date that each Cash Only Client in relation to which it has delivered a Cash Only Election Notice (A) has instructed the FCM Clearing Member to deliver the Cash

Only Election Notice on its behalf, and (B) has expressly agreed (i) that by electing for its FCM Client Sub-Account to be a Cash Only Client Position Account under this Annex it shall not, other than if (X) the Cash Settlement Schedule provides that one or more auctions have failed, or (Y) some of the Discounting Risk Swaps are not successfully auctioned and liquidated in accordance with the Cash Settlement Schedule, be party to any Discounting Risk Swaps (ii) that it shall be obliged to pay or entitled to receive the Cash Valuation Change Amount (USD), the Cash Valuation Change Amount (MXN) and, provided the Cash Only Client Position Account is not a De Minimis Participant Account, each Cash Only Client Position Account Auction Adjustment determined in accordance with Section 7.3, Section 7.4 and Section 7.5 of this Annex, and (iii) that the Cash Only Client Position Account Auction Adjustment may not be economically equivalent to being party to any such Discounting Risk Swaps or liquidating, closing-out, selling or replacing the Discounting Risk Swaps in the relevant market;

- (iv) acknowledges that the Cash Valuation Change Amounts, the Auction Winner Amounts, each Cash Only Client Position Account Auction Adjustment, and the spread on the SOFR leg of the Discounting Risk Swaps shall be determined by reference to the auction, and agrees to be bound by the results of such auction and the terms of the Cash Settlement Schedule and the Cash Settlement Supplement;
- (v) agrees to perform all obligations and exercise all rights under this Annex, the Cash Settlement Schedule, the Cash Settlement Supplement, the Cash Compensation Contracts and the Discounting Risk Swaps in accordance with Applicable Law; and
- (vi) agrees that each Cash Compensation Contract and Discounting Risk Swap is being registered in the relevant account in connection with the matters specified in this Annex and the obligations thereunder are for the sole purpose of addressing the value and discounting risk impact of the change from the Fed Funds Rate to SOFR and effecting the payment of amounts owed to, or payable by, the Auction Winner.

5. DETERMINING THE PORTFOLIO OF DISCOUNTING RISK SWAPS

5.1 On the Swap Portfolio Calculation Date, the Clearing House shall allocate Impacted FCM SwapClear Contracts into different Maturity Buckets based on the tenor of the discounting risk associated with such Impacted FCM SwapClear Contracts. Any Impacted FCM SwapClear Contract that has discounting risk with a tenor that falls between two different Maturity Buckets shall be allocated to the nearest two Maturity Buckets in the Clearing House's sole and absolute discretion. Separately in respect of the Impacted FCM SwapClear Contracts allocated to each Maturity Bucket in each Proprietary Account and FCM Client Sub-Account, determine a portfolio of Discounting Risk Swaps which is designed to, in the Clearing House's sole and absolute discretion and to the extent practicable, replicate the Fed Funds Rate discounting risk profile in relation to such FCM SwapClear Contracts as of the Swap Portfolio Calculation Date. For the avoidance of doubt, the determination by the Clearing House pursuant to this paragraph may be different from an FCM Clearing Member's or FCM Client's models or methodologies. Each pair of Discounting Risk Swaps will:

- (a) have a maturity of two years, five years, ten years, fifteen years, twenty years or thirty years from the date of registration;
- (b) when registered, comprise a pair of FCM SwapClear Contracts whereby:

- (i) under the first FCM SwapClear Contract, the Clearing House or the FCM Clearing Member (Party X) will receive SOFR plus or minus a spread which shall be equal to the relevant Mid-Price determined pursuant to the Cash Settlement Schedule and pay to the other party (Party Y) a fixed rate; and
- (ii) under the second FCM SwapClear Contract, Party X will receive the same fixed rate as referred to in (i) immediately above and pay to Party Y the Fed Funds Rate with no spread, and
- (c) have a notional amount that is determined by the Clearing House, in its sole and absolute discretion, where such notional amount shall be rounded to the nearest integral number set out in the following table:

<u>Maturity Bucket</u>	<u>2Y</u>	<u>5Y</u>	<u>10Y</u>	<u>15Y</u>	<u>20Y</u>	<u>30Y</u>
<u>Amount in USD to which the notional amount will be rounded to</u>	<u>5,000,000</u>	<u>2,500,000</u>	<u>1,250,000</u>	<u>500,000</u>	<u>500,000</u>	<u>500,000</u>

5.2 The Clearing House shall separately determine the portfolio of Discounting Risk Swaps in respect of each of the following (excluding, in relation to a Maturity Bucket, any De Minimis Participant Accounts in relation to that Maturity Bucket) as of the Swap Portfolio Calculation Date:

- (a) the Impacted FCM SwapClear Contracts then registered in each FCM Clearing Member's Proprietary Account; and
- (b) the Impacted FCM SwapClear Contracts then registered in each FCM Client's FCM Client Sub-Account.

5.3 The Clearing House shall promptly notify each FCM Clearing Member of each portfolio of Discounting Risk Swaps it has determined pursuant to this Section 5 in respect of each account held by each FCM Clearing Member as set out above.

5.4 Without prejudice to the above, at any time prior to the Swap Portfolio Calculation Date, the Clearing House may publish indicative portfolios of the Discounting Risk Swaps in relation to the Impacted FCM SwapClear Contracts then registered in the name of an FCM Clearing Member for information only.

6. THE AUCTION

6.1 On the Auction Date the Clearing House shall conduct one or more auctions and each auction conducted shall apply to both LCH's SCM service and LCH's FCM service. The initial terms of the auctions shall be as set out in the Cash Settlement Schedule and the Clearing House shall supplement such terms to provide further detail on the operation of the auctions through publication of one or more Cash Settlement Supplements, provided however that, the

Clearing House shall not be entitled to materially alter the nature of the obligations of any FCM Clearing Member under this Rate Change Annex via any Cash Settlement Supplement. Each Cash Settlement Supplement shall be deemed to supplement, and form part of, the Cash Settlement Schedule and the Clearing House shall be entitled to supplement, modify, amend, replace or withdraw the Cash Settlement Schedule or Cash Settlement Supplements (in whole or in part) from time to time in its sole discretion through such method as the Clearing House shall determine is appropriate.

6.2 Each FCM Clearing Member that is an Expected Cash Settlement Participant (as defined in the Cash Settlement Schedule) agrees that it shall use all reasonable efforts to submit pricing in accordance with this Cash Settlement Schedule for the Net Auction Contract Pair in each Maturity Bucket.

6.3 If, having taken the steps in Section 4(a) of the of the Cash Settlement Schedule, where applicable, no prices are received in relation to one or more of the Maturity Buckets then the Clearing House will determine that no further auctions shall take place and all Cash Only Clients shall have Discounting Risk Swaps registered in the FCM Client Sub-Accounts notwithstanding any Cash Only Election Notices previously delivered in respect of such FCM Clients, and the spread on the SOFR leg of each Discounting Risk Swap which references SOFR shall be determined by the Clearing House using observable market data, including the Clearing House's zero coupon yield curve for SOFR (constructed in accordance with the FCM Procedures).

6.4 If, in relation to a Maturity Bucket, the Clearing House is unable to auction and liquidate the full notional amount of the Discounting Risk Swaps that are the subject of the auction for that Maturity Bucket (including, without limitation, because the aggregate notional amount for which bids are received in relation to that Maturity Bucket is less than the entire notional amount of such Discounting Risk Swaps) (the **Non-Auctioned Swaps**), then the Clearing House shall, notwithstanding any Cash Only Election Notices previously delivered, allocate the Non-Auctioned Swaps to each Cash Only Client Position Account, with each Cash Only Position Client Account being allocated a share of the Non-Auctioned Swaps pro rata to that Cash Only Client Position Account's share of the total notional amount of Discounting Risk Swaps for that Maturity Bucket that would, but for the delivery of the Cash Only Election Notices, have been registered in each of the Cash Only Client Position Accounts.

7. THE CASH VALUATION CHANGE AMOUNTS AND THE CASH ONLY CLIENT POSITION ACCOUNT AUCTION ADJUSTMENTS

All Impacted FCM SwapClear Contracts other than TIE Interest Rate Swaps denominated in MXN

The following provisions are applicable in relation to all Impacted FCM SwapClear Contracts other than Impacted FCM SwapClear Contracts that are TIE interest rate swaps denominated in MXN. With respect to the calculations to be performed under Section 7.1 to 7.3 (inclusive) below, for the purposes of determining the Cash Valuation Change Amount (USD) in relation to non-deliverable interest rate swaps the Clearing House shall first convert into USD the value of the discounted future cash flows which are not denominated in USD by applying the relevant rate of exchange as determined by the Clearing House in accordance with its usual procedures. Each of the calculations performed under Sections 7.1 to 7.3 (inclusive) below shall include any non-deliverable interest rate swaps registered in the relevant account as of the end of the Business Day in New York on the Auction Date.

Proprietary Accounts

7.1 Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date, the Clearing House shall calculate the Cash Valuation Change Amount (USD) in respect of each Proprietary Account as follows:

- (a) the Clearing House shall calculate the aggregate FedFunds Discounted Value and the aggregate SOFR Discounted Value in relation to each Impacted FCM SwapClear Contract registered in each Proprietary Account as of the end of the Business Day in New York on the Auction Date;
- (b) if the aggregate SOFR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in a Proprietary Account exceeds the aggregate FedFunds Discounted Value in relation to all such Impacted FCM SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the Clearing House in relation to such Proprietary Account; and
- (c) if the aggregate SOFR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in a Proprietary Account is less than the aggregate FedFunds Discounted Value in relation to all such Impacted FCM SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the FCM Clearing Member in relation to such Proprietary Account.

FCM Client Sub-Accounts (excluding Cash Only Position Client Accounts)

7.2 The following only applies in relation to each FCM Client Sub-Account that is not a Cash Only Client Position Account. Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date the Clearing House shall determine the Cash Valuation Change Amount (USD) in respect of the Impacted FCM SwapClear Contracts registered in each FCM Client Sub-Account that is not a Cash Only Client Position Account as follows:

- (a) the Clearing House shall calculate the aggregate FedFunds Discounted Value and the aggregate SOFR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in such account as of the end of the Business Day in New York on the Auction Date;
- (b) if the aggregate SOFR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in such account exceeds the aggregate FedFunds Discounted Value in relation to all such Impacted FCM SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the excess and shall be an amount in favor of the Clearing House in relation to such account; and
- (c) if the aggregate SOFR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in such account is less than the aggregate FedFunds Discounted Value in relation to all such Impacted FCM SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the FCM Clearing Member in relation to such account.

Cash Only Client Position Accounts

7.3 The following applies only in relation to Cash Only Client Position Accounts. Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date the Clearing House shall determine the Cash Valuation Change Amount (USD) in respect of the Impacted FCM SwapClear Contracts registered in a Cash Only Client Position Account as follows:

- (a) the Clearing House shall calculate the aggregate FedFunds Discounted Value and the aggregate SOFR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in such account as of the end of the Business Day in New York on the Auction Date;
- (b) if the aggregate SOFR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in such account exceeds the aggregate FedFunds Discounted Value in relation to all such Impacted FCM SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the Clearing House in relation to such account;
- (c) if the aggregate SOFR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in such account is less than the aggregate FedFunds Discounted Value in relation to all such Impacted FCM SwapClear Contracts then the Cash Valuation Change Amount (USD) shall be an amount equal to the absolute value of the difference and shall be an amount in favor of the FCM Clearing Member in whose name such Cash Only Client Position Account is held; and

7.4 Immediately following the conclusion of the auction on the Auction Date, provided that the auction for the relevant Maturity Buckets occurs in accordance with the Cash Settlement Schedule, the Clearing House shall calculate, in respect of each Cash Only Client Position Account the aggregate Cash Only Client Position Account Auction Adjustment in relation to each Maturity Bucket.

Impacted FCM SwapClear Contracts which are TIE Interest Rate Swaps denominated in MXN

7.5 Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date the Clearing House shall determine the Cash Valuation Change Amount (MXN) separately in respect of each Impacted FCM SwapClear Contracts that is a TIE interest rate swap denominated in MXN (**MXN Impacted SwapClear Contracts**) registered in each Proprietary Account or FCM Client Sub-Account, as follows:

- (a) first, for the purposes of determining the Cash Valuation Change Amount (MXN) in relation to the MXN Impacted FCM SwapClear Contracts, the value of the discounted future cash flows thereunder shall be multiplied by the relevant USD/MXN rates of exchange determined by the Clearing House in accordance with the Clearing House's usual procedures;
- (b) second, the Clearing House shall calculate the aggregate FedFunds Discounted Value and the aggregate SOFR Discounted Value in relation to all MXN Impacted FCM SwapClear Contracts registered in such account as of the end of the Business Day in New York on the Auction Date;

- (c) if the aggregate SOFR Discounted Value in relation to all such MXN Impacted FCM SwapClear Contracts registered in such account exceeds the aggregate FedFunds Discounted Value in relation to all such MXN Impacted SwapClear Contracts then the Cash Valuation Change Amount (MXN) shall be an amount in MXN equal to the absolute value of the difference and shall be an amount in favor of the Clearing House in relation to such account; and
- (d) if the aggregate SOFR Discounted Value in relation to all MXN Impacted FCM SwapClear Contracts registered in such account is less than the aggregate FedFunds Discounted Value in relation to all such MXN Impacted FCM SwapClear Contracts then the Cash Valuation Change Amount (MXN) shall be an amount in MXN equal to the absolute value of the difference and shall be an amount in favor of the FCM Clearing Member in whose name such Cash Only Client Position Account is held.

8. REGISTRATION OF CASH COMPENSATION CONTRACTS

8.1 On the basis of the calculations set forth in Section 7 above, the Clearing House shall determine, as applicable, the Cash Valuation Change Amount (USD), the Cash Valuation Change Amount (MXN), the Cash Only Client Position Account Auction Adjustments and the Auction Winner Amount in respect of each Proprietary Account and each FCM Client Sub-Account and each FCM Clearing Member and the Clearing House (as applicable) irrevocably agrees that it shall be bound to pay such amounts to the other pursuant to the terms of the related Cash Compensation Contracts.

8.2 The Clearing House shall, pursuant to Regulation 48A, register a separate Cash Compensation Contract in each Proprietary Account and each FCM Client Sub-Account in relation to each of the following amounts (to the extent such amounts are applicable to such account)

- (a) Cash Valuation Change Amounts (USD);
- (b) Cash Valuation Change Amounts (MXN);
- (c) Cash Only Client Position Account Auction Adjustments; and
- (d) Auction Winner Amounts.

8.3 Each Cash Compensation Contract shall be registered for the sole purpose of effecting the payment of the Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN), Cash Only Client Position Account Auction Adjustments or Auction Winner Amount (as applicable) to which it relates. It shall operationally be recorded as having a "Notional Amount" (as defined in the FCM SwapClear Contract Terms) of USD1 (or, in the case of the Cash Compensation Contract relating to the Cash Valuation Change Amount (MXN), MXN1), a "Termination Date" (as defined in the FCM SwapClear Contract Terms) falling two Business Days after the Auction Date, and an obligation on the Clearing House or the FCM Clearing Member (as applicable) to pay to the other an amount equal to the Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN), Cash Only Client Position Account Auction Adjustments or Auction Winner Amount (as applicable) in relation to the relevant account, with such amounts determined in accordance with Section 7 of this Annex. However, neither the Clearing House nor an FCM Clearing Member shall be required to pay any amounts under a Cash Compensation Contract other than the Cash Valuation Change Amount (USD), Cash Valuation Change Amount (MXN), Cash Only

Client Position Account Auction Adjustment or Auction Winner Amount (as applicable) to which such Cash Compensation Contract relates.

8.4 Each FCM Clearing Member agrees to be bound by each Cash Compensation Contract registered pursuant to this Section 8, which shall, when registered, constitute an FCM SwapClear Contract between the Clearing House and the relevant FCM Clearing Member that has arisen by reason of the application of the Regulations to the Impacted FCM SwapClear Contracts.

9. REGISTRATION OF DISCOUNTING RISK SWAPS

9.1 Immediately following the conclusion of the auction (or determination by the Clearing House that the auction shall not occur) on the Auction Date the Clearing House shall notify all FCM Clearing Members of the Discounting Risk Swaps that will be registered in the accounts in accordance with this Annex. If the Clearing House exercises its powers pursuant to Section 4(b) of the Cash Settlement Schedule, then, as soon as practicable following such exercise, it shall notify all FCM Clearing Members of the Discounting Risk Swaps that will be registered in their Proprietary Accounts and FCM Client Sub-Accounts and it shall register such Discounting Risk Swaps in such accounts without regard to any Cash Only Election Notice.

9.2 Except as provided in Section 9.3 below, on the first Business Day immediately following the Auction Date the Clearing House shall:

- (a) in relation to each Auction Winner, register the related Discounting Risk Swaps (or portion thereof) in the Proprietary Account of the Auction Winner and each Auction Winner and the Clearing House shall become party to such Discounting Risk Swaps;
- (b) in relation to each Proprietary Account other than De Minimis Participant Accounts, register the Discounting Risk Swaps determined pursuant to Section 5.2(a) in each FCM Clearing Member's Proprietary Account; and
- (c) in relation to each FCM Client Sub-Account other than Cash Only Client Position Accounts and De Minimis Participant Accounts, register the Discounting Risk Swaps determined pursuant to Section 5.2(b) in relation to such FCM Client in the relevant account.

9.3 Each FCM Clearing Member agrees to be bound by each Discounting Risk Swap registered pursuant to this Section 9, which shall, when registered, constitute FCM SwapClear Contracts between the Clearing House and the relevant FCM Clearing Member that have arisen by reason of the application of the Regulations to the Impacted FCM SwapClear Contracts.

10. DETERMINATIONS BINDING

Subject to Section 13, all determinations and calculations made by the Clearing House pursuant to this Annex and the Cash Settlement Schedule shall be binding and may in no circumstances (other than in the case of manifest error) be called into question by any person.

11. RECORDS

The Clearing House shall update its books and records to reflect the Discounting Risk Swaps, Cash Compensation Contracts, Cash Valuation Change Amounts (USD), Cash Valuation Change Amounts (MXN), Auction Winner Amounts and Cash Only Client Position Account Auction Adjustments resulting from the operation of this Annex and the Cash Settlement

Schedule. The obligation to pay, or the right to receive, any amounts determined under this Annex may be reflected in the books and records of the Clearing House in such manner as the Clearing House determines is necessary to meet its operational requirements.

12. MISCELLANEOUS

- (a) The obligations of the Clearing House to each FCM Clearing Member shall be to perform its obligations as principal to such FCM Clearing Member in accordance with the Rulebook, but subject to the restrictions on the Clearing House's obligations and liabilities contained in the Rulebook and Section 13.
- (b) The terms of this Annex are without prejudice to the Clearing House's rights under the FCM Procedures to change the rate used for the purposes of (i) calculating the Price Alignment Amount, and (ii) constructing the Clearing House's zero coupon yield curves under 2.1.7 of the FCM Procedures from time to time and such terms shall not be relevant or binding on the Clearing House in respect of any such changes.
- (c) The performance by the Clearing House of its obligations hereunder shall always be subject to the provisions of the Rulebook.

13. LIMITATION OF LIABILITY

13.1 Without prejudice to the generality of Regulation 44, each FCM Clearing Member agrees:

- (a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any FCM Clearing Member or any other person (including, without limitation, any FCM Client) whether in contract, tort (including, without limitation, negligence), trust, as a fiduciary or under any other cause of action, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and
- (b) to waive any claim against the Clearing House or any member of the LCH Group; arising or that may arise in connection with:
 - (i) any determination, calculation, notification, registration, publication, exercise of discretion, or decision, taken or not taken by the Clearing House or any other member of the LCH Group in connection with this Annex; or
 - (ii) the determination or publication of any price, curve, data, quote or other information arising from, or in connection with, this Annex;

except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

13.2 Without prejudice to the generality of Regulation 44 and clause 14.1 above, each FCM Clearing Member further agrees:

- (a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any FCM Clearing Member or any other person (including, without limitation, any FCM Client) in tort (including, without limitation, negligence), trust, as a fiduciary or under any other non-contractual cause of action, or under any implied contractual term, and whether in respect of any damages, loss or

gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and

(b) to waive any non-contractual claim or claim under any implied contractual term against the Clearing House or any member of the LCH Group;

arising or that may arise in connection with the Clearing House's performance of its contractual duties or obligations under this Annex, except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

13.3 Each FCM Clearing Member agrees that neither the Clearing House nor any other member of the LCH Group (i) owes any duty of care to any person in connection with the performance of the Clearing House's duties or obligations or exercise of its rights under this Annex, save for the express contractual duties set forth in this Annex; (ii) is under any obligation to research, investigate, supplement, or verify the veracity of, any price, data, quote or other information received from an FCM Clearing Member in connection with this Annex; (iii) is acting as a fiduciary for, or as an advisor to, any FCM Clearing Member or FCM Client in connection with this Annex or any FCM SwapClear Contract registered as a result of the matters specified in this Annex; (iv) shall be under any requirement to consult with, or individually notify (other than as expressly set out in this Annex), an FCM Clearing Member or FCM Client in connection with making its determinations, exercising its discretions or performing its duties or obligations or exercising its rights, each under this Annex; or (v) has made any representation, express or implied, in relation to this Annex, and each FCM Clearing Member acknowledges that it has not relied on any representations made by the Clearing House or any other member of the LCH Group in relation to this Annex.

13.4 For the avoidance of doubt, neither the Clearing House nor any other member of the LCH Group shall be liable for any obligations of, or to any person who is not, an FCM Clearing Member.

SWAPCLEAR SCM SERVICE - RATE CHANGE ANNEX – EURO SHORT TERM RATE (€STR)

1. SCOPE AND INTERPRETATION

- (a) This Annex constitutes a “Rate Change Annex” as defined in the FCM Regulations and supplements and forms part of the FCM Rulebook.
- (b) This Annex relates to the change in the rate from the Euro OverNight Index Average (EONIA) to the Euro Short Term Rate (€STR) for the purposes of (i) calculating the Price Alignment Amount, and (ii) constituting the relevant underlying benchmark for the instruments used to construct the Clearing House’s zero coupon yield curves under 2.1.7 of the FCM Procedures to calculate the net present value, each in relation to Impacted FCM SwapClear Contracts.
- (c) The terms of this Annex shall apply to all Impacted FCM SwapClear Contracts of the type set-out in the Rate Change Notice relating to €STR as set out below. For the avoidance of doubt, (i) no other FCM Contract shall be subject to, or affected by, the terms of this Annex and each FCM Contract shall remain in full force and effect, and (ii) the FCM SwapClear Contract Terms shall not be amended by the terms of this Annex.
- (d) Capitalized terms used but not otherwise defined in this Annex have the meaning given to them in the FCM Regulations.
- (e) The terms of this Annex relating to operational or procedural matters may be supplemented, modified, amended, replaced or withdrawn from time to time by the Clearing House in its sole discretion through a member circular or such other method as the Clearing House shall determine is appropriate.

2. DEFINITIONS

For the purposes of this Annex:

Cash Compensation Amount means, in relation to the Impacted FCM SwapClear Contracts in a Proprietary Account or an FCM Client Sub-Account, the amount determined in accordance with Section 4 below.

Cash Compensation Contract means each contract determined by the Clearing House and registered in the relevant Proprietary Account or an FCM Client Sub-Account pursuant to Section 4 below.

EONIA Discounted Value means, in relation to an Impacted FCM SwapClear Contract, the net present value, as of the end of the Business Day in New York on the €STR Calculation Date, of all future cash flows under that Impacted FCM SwapClear Contract calculated using EONIA as the discounting rate for the purpose of constructing the zero coupon yield curves under 2.1.7 of the FCM Procedures (with the future cash flows calculated in the same manner as for the determination of the €STR Discounted Value). If the net present value represents an asset or positive value for the Clearing House, such EONIA Discounted Value shall be a positive amount and if the net present value represents a liability or negative value for the Clearing House, such EONIA Discounted Value shall be a negative amount

€STR Calculation Date means in relation to a Rate Change Notice relating to €STR the date specified as such by the Clearing House and specified in the Rate Change Notice relating to €STR,

being the date on which the Clearing House shall calculate the amounts and values specified in Section 4 below.

€STR Discounted Value means, in relation to an Impacted FCM SwapClear Contract, the net present value as of the end of the Business Day in New York on the €STR Calculation Date of all future cash flows under that Impacted FCM SwapClear Contract using €STR as the discounting rate for the purpose of constructing the zero coupon yield curves under 2.1.7 of the FCM Procedures (with the future cash flows calculated in the same manner as for the determination of the EONIA Discounted Value). If the net present value represents an asset or positive value for the Clearing House, such €STR Discounted Value shall be a positive amount and if the net present value represents a liability or negative value for the Clearing House, such €STR Discounted Value shall be a negative amount.

3. OBLIGATIONS TO MAKE CERTAIN CALCULATIONS AND ENTER INTO CERTAIN CONTRACTS

Pursuant to Regulation 48A of the Regulations, this Annex sets out the method for (i) calculating the Cash Compensation Amounts (which are Rate Change Payments” for purposes of Regulation 48A), and (ii) determining the terms of the Cash Compensation Contracts which shall be registered in order to effect the payment of the Cash Compensation Amounts

4. DETERMINATION OF THE CASH COMPENSATION AMOUNT AND THE CASH COMPENSATION CONTRACTS FOLLOWING THE CHANGE TO €STR

(a) Immediately following the €STR Calculation Date the Clearing House shall calculate:

(i) the aggregate EONIA Discounted Value and the aggregate €STR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in each Proprietary Account as of the end of the Business Day in New York on the €STR Calculation Date; and

(ii) the aggregate EONIA Discounted Value and the aggregate €STR Discounted Value in relation to all Impacted FCM SwapClear Contracts registered in each FCM Client Sub-Account as of the end of the Business Day in New York on the €STR Calculation Date.

(b) The Clearing House shall determine a single Cash Compensation Amount separately in respect of all of the Impacted FCM SwapClear Contracts in each Proprietary Account and each FCM Client Sub-Account as follows. If:

(i) the aggregate €STR Discounted Value in relation to all such Impacted FCM SwapClear Contracts exceeds the aggregate EONIA Discounted Value in relation to all such Impacted FCM SwapClear Contracts the Cash Compensation Amount in relation to such Impacted FCM SwapClear Contracts shall be equal to the absolute value of the difference, and shall be an amount in favor of the Clearing House in relation to such Proprietary Account or FCM Client Sub-Account (as applicable); and

(ii) the aggregate €STR Discounted Value in relation to all such Impacted FCM SwapClear Contracts is less than the aggregate EONIA Discounted Value in relation to all such Impacted FCM SwapClear Contracts then the Cash Compensation Amount in relation to such Impacted FCM SwapClear Contracts shall be equal to the absolute value of the difference, and shall be an amount in favor of the FCM

Clearing Member in relation to such Proprietary Account or FCM Client Sub-Account (as applicable).

- (c) The Clearing House shall, pursuant to Regulation 48A, register a separate Cash Compensation Contract in each Proprietary Account and each FCM Client Sub-Account, Cash Compensation Amount (to the extent such amounts are applicable to such account). Each FCM Clearing Member and the Clearing House (as applicable) irrevocably agrees that it shall be bound to pay the Cash Compensation Amount to the other pursuant to the terms of the related Cash Compensation Contract. Each Cash Compensation Contract shall be registered for the sole purpose of effecting the payment of the Cash Compensation Amount to which it relates. It shall operationally be recorded as having a "Notional Amount" (as defined in the FCM SwapClear Contract Terms) of EUR1, a "Termination Date" (as defined in the FCM SwapClear Contract Terms) falling two Business Days after the €STR Calculation Date, and an obligation on the Clearing House or the FCM Clearing Member (as applicable) to pay to the other the Cash Compensation Amount related to the relevant Proprietary Account, or FCM Client Sub-Account, in each case as determined pursuant to Section 4(b) above, with a positive Cash Compensation Amount representing an amount payable by the Clearing House to the FCM Clearing Member and a negative Cash Compensation Amount representing an amount payable to the Clearing House by the FCM Clearing Member. However, neither the Clearing House nor a FCM Clearing Member shall be required to pay any amounts under a Cash Compensation Contract other than the Cash Compensation Amount to which such Cash Compensation Contract relates.
- (d) Each FCM Clearing Member agrees to be bound by each Cash Compensation Contract registered pursuant to this Section 4, which shall, when registered, constitute an FCM SwapClear Contract between the Clearing House and the relevant FCM Clearing Member that has arisen by reason of the application of the Regulations to the Impacted FCM SwapClear Contracts.
- (e) Each FCM Clearing Member agrees (and in the case of (e)(iv) below, each FCM Clearing Member and the Clearing House agrees):
- (i) to use reasonable endeavors to provide each of its FCM Clients with information on (i) the change in the rate from EONIA to €STR pursuant to the terms of Regulation 48A and this Annex, and (ii) the amounts pursuant to the terms of the Cash Compensation Contracts which may be allocated to that FCM Clearing Client's FCM Client Sub-Account pursuant to the terms of this Annex. Such information shall include the terms of this Annex and any information which it has received from, or is made available by, the Clearing House in connection with this Annex;
 - (ii) that it, and each of its FCM Clients, shall be bound by the terms of any Cash Compensation Contracts registered pursuant to this Annex and all payment obligations thereunder (as determined by the Clearing House pursuant to this Annex);
 - (iii) to perform all obligations and exercise all rights under this Annex in accordance with Applicable Law; and
 - (iv) that each Cash Compensation Contract is being registered in the relevant account in connection with the matters specified in this Annex and the obligations thereunder are for the sole purpose of addressing the value impact of the change from EONIA to €STR.

5. DETERMINATIONS BINDING

Subject to Section 8, all determinations and calculations made by the Clearing House pursuant to this Annex shall be binding and may in no circumstances (other than in the case of manifest error) be called into question by any person.

6. RECORDS

The Clearing House shall update its books and records to reflect the Cash Compensation Contracts and the amounts payable thereunder and the obligation to pay, or the right to receive, any such amounts may be reflected in the books and records of the Clearing House in such manner as the Clearing House determines is necessary to meet its operational requirements.

7. MISCELLANEOUS

- (a) The obligations of the Clearing House to each FCM Clearing Member shall be to perform its obligations as principal to such FCM Clearing Member in accordance with the Rulebook, but subject to the restrictions on the Clearing House's obligations and liabilities contained in the Rulebook and Section 8.
- (b) The terms of this Annex are without prejudice to the Clearing House's rights under the Procedures to change the rate used for the purposes of (i) calculating the Price Alignment Amount, and (ii) constructing the Clearing House's zero coupon yield curves under 12.1.7 of the FCM Procedures from time to time and such terms shall not be relevant or binding on the Clearing House in respect of any such changes.
- (c) The performance by the Clearing House of its obligations hereunder shall always be subject to the provisions of the Rulebook.

8. LIMITATION OF LIABILITY

8.1 Without prejudice to the generality of Regulation 44, each FCM Clearing Member agrees:

(a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any FCM Clearing Member or any other person (including, without limitation, any SwapClear Clearing Client) whether in contract, tort (including, without limitation, negligence), trust, as a fiduciary or under any other cause of action, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and

(b) to waive any claim against the Clearing House or any member of the LCH Group;

arising or that may arise in connection with:

- (i) any determination, calculation, notification, registration, publication, exercise of discretion, or decision, taken or not taken by the Clearing House or any other member of the LCH Group in connection with this Annex; or
- (ii) the determination or publication of any price, curve, data, quote or other information arising from, or in connection with, this Annex;

except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

8.2 Without prejudice to the generality of Regulation 44 and clause 8.1 above, each FCM Clearing Member further agrees:

(a) that neither the Clearing House nor any other member of the LCH Group will have any liability whatsoever to any FCM Clearing Member or any other person (including, without limitation, any FCM Client) in tort (including, without limitation, negligence), trust, as a fiduciary or under any other non-contractual cause of action, or under any implied contractual term, and whether in respect of any damages, loss or gain, cost or expense (whether direct, indirect, general, special, consequential, punitive or otherwise); and

(b) to waive any non-contractual claim or claim under any implied contractual term against the Clearing House or any member of the LCH Group;

arising or that may arise in connection with the Clearing House's performance of its contractual duties or obligations under this Annex, except in the case of fraud or wilful misconduct on the part of the Clearing House or any other member of the LCH Group.

8.3 Each FCM Clearing Member agrees that neither the Clearing House nor any other member of the LCH Group (i) owes any duty of care to any person in connection with the performance of the Clearing House's duties or obligations or exercise of its rights under this Annex, save for the express contractual duties set forth in this Annex; (ii) is under any obligation to research, investigate, supplement, or verify the veracity of, any price, data, quote or other information received from an FCM Clearing Member in connection with this Annex; (iii) is acting as a fiduciary for, or as an advisor to, any FCM Clearing Member or FCM Client in connection with this Annex or any FCM SwapClear Contract registered as a result of the matters specified in this Annex; (iv) shall be under any requirement to consult with, or individually notify (other than as expressly set out in this Annex), an FCM Clearing Member or FCM Client in connection with making its determinations, exercising its discretions or performing its duties or obligations or exercising its rights, each under this Annex; or (v) has made any representation, express or implied, in relation to this Annex, and each FCM Clearing Member acknowledges that it has not relied on any representations made by the Clearing House or any other member of the LCH Group in relation to this Annex.

8.4 For the avoidance of doubt, notwithstanding anything to the contrary herein, neither the Clearing House nor any other member of the LCH Group shall be liable for any obligations of, or to any person who is not, an FCM Clearing Member.

Appendix V
Settlement Finality Regulations

LCH Limited

CLEARING HOUSE SETTLEMENT FINALITY REGULATIONS

Introduction

The Financial Markets and Insolvency (Settlement Finality) Regulations 1999 (S.I. 1999 No. 2979) (the "**SF Regulations**") implement the Settlement Finality Directive (Directive 98/26/EC) of the European Parliament and of the Council of 19 May 1998 on settlement finality in payment and securities settlement systems (the "**SF Directive**").

The SF Directive seeks to reduce the risks associated with participation in payment and securities settlement systems by minimizing the disruption caused by insolvency proceedings brought against a participant in such a system. The protection provided by the SF Regulations is given to any system which has been designated as a "designated system" by the Financial Conduct Authority or the Bank of England as the "designating authority".

In order to obtain such designation the Clearing House is required to satisfy the relevant designating authority that the requirements of the Schedule to the SF Regulations, and certain other matters, are satisfied in respect of the Clearing House.

These Settlement Finality Regulations (which form part of these Regulations) have been promulgated by the Clearing House in order to meet such of those requirements as are not addressed elsewhere in these Regulations.

1. Definitions

- 1.1 "**Concentration Bank**" means a bank or other credit institution which has a current agreement with the Clearing House to participate in the Clearing House Protected Payments System (as described in the Regulations) as a concentration bank.
- 1.2 "**Institution**" shall have the same meaning as in the SF Regulations.
- 1.3 "**The Clearing House System**" means the standardized formal arrangements, common rules, procedures as described in the Regulations, Procedures and service descriptions (each as amended from time to time) published from time to time by the Clearing House pursuant to which LCH acts as clearing service provider, and related functionality which:
 - (a) enable the Clearing House in operating its Clearing House Protected Payments System to give instructions to place at the disposal of its Members (as set out the Regulations) amounts of money on the accounts of certain banks or other credit institutions; and
 - (b) enable Members through the Clearing House Protected Payments System to give instructions to place at the disposal of the Clearing House (as set out in the Regulations) amounts of money on the accounts of certain banks or other credit institutions; and
 - (c) enable Members to give instructions to place amounts of money at the disposal of the Clearing House through crediting a nominated cash account provided by a Settlement Service Provider to the Clearing House; and
 - (d) enable the Clearing House to give instructions to Securities Systems Operators to transfer title to, or interest in securities; and

- (e) enable the Clearing House to give instructions to a Settlement Service Provider in relation to the Clearing House's use of settlement services provided by such Settlement Service Provider; and
 - (f) enable Members and Non Member Participants to give instructions to Securities Systems Operators to transfer title to or interest in securities; and
 - (g) enable the Clearing House to become central counterparty to Members in respect of eligible trades in certain derivative instruments, equities, repos, bonds GC and €GC and products, as described in the Regulations; and
 - (h) enable the Clearing House and Members to fulfil the obligations they incur in respect of contracts registered by the Clearing House and in respect of which it has become central counterparty; and
 - (i) facilitate supplementary and incidental matters.
- 1.4 **"Member"** has the same meaning as in the Regulations.
- 1.5 **"Member Settlement Bank"** means a bank or other credit institution, including a central bank, approved by the Clearing House from time to time for the provision of settlement services in connection with settlements on behalf of a Member under the ForexClear Service not taking place through the Clearing House Protected Payment System.
- 1.6 **"Non Member Participant"** means a person:
- (a) who is not a Member or an exchange, and who is party to any one or more of the following agreements as described in the Regulations:
 - (i) a RepoClear Dealer Clearing Agreement;
 - (ii) a SwapClear Dealer Clearing Agreement; or
 - (iii) a ForexClear Dealer Clearing Agreement; or
 - (b) who acts as settlement agent for any person described in section 1.6(a) above; or
 - (c) who is a Non-Clearing Participant.
- 1.7 **"PPS Bank"** means a bank or other credit institution which has a current agreement with the Clearing House to participate, other than solely as a Concentration Bank, in the Clearing House Protected Payment System, as described in the Regulations.
- 1.8 **"Participant"** means all or any of the following:
- (a) LCH Limited ("the Clearing House");
 - (b) any Member;
 - (c) any Non-Member Participant;
 - (d) any PPS Bank;
 - (e) any Settlement Service Provider;
 - (f) any Member Settlement Bank.

1.9 “Payment Transfer Order” means

- (a) an instruction given by the Clearing House by means of a SWIFT message or other means to a PPS Bank to place at the disposal of a Member (by crediting a nominated account held by that Member at that bank) an amount of money to be debited from a nominated account held by the Clearing House at that bank (“a Credit Member/Debit LCH transfer order”); or
- (b) an instruction given by the Clearing House by means of a SWIFT message or other means to a PPS Bank to place at the disposal of the Clearing House (by crediting a nominated account held by the Clearing House at that bank) an amount of money to be debited from a nominated account held by a Member at that bank (“a Credit LCH/Debit Member transfer order”); or
- (c) an instruction given by the Clearing House to a Securities System Operator to place at the disposal of the Clearing House (by crediting a nominated cash account held by the Clearing House) an amount of money to be debited from a nominated account held by that Securities System Operator for a Member or Non-Member Participant, as the case may be (“an Inward Cash Account Transfer Order”); or
- (d) an instruction given by the Clearing House to a Securities System Operator to place at the disposal of a Member or Non-Member Participant, as the case may be, (by crediting a nominated cash account held by such Member or Non-Member Participant) an amount of money to be debited from a nominated account held by that Securities System Operator for the Clearing House (“an Outward Cash Account Transfer Order”); or
- (e) an instruction in the form of an electronic message forwarded by or on behalf of a Member or Non-Member Participant to the Clearing House or its agent or contractor containing data constituting particulars of an exchange contract, SwapClear Transaction, Post-Compression Contract, ForexClear Transaction, RepoClear Transaction, Repo Trade or Bond Trade, EquityClear ATP Match or Eligible RepoClear GC Transaction and submitted to the Clearing House for registration by the Clearing House in accordance with the Regulations;
- (f) an instruction by the Clearing House for itself and on behalf of a Member authorising the exercise of the Clearing House’s powers under Regulation 101 to register a Mandatory ForexClear Swap Contract in the name of such Member, arising upon the occurrence of a ForexClear Liquidity Event in accordance with Regulation 101 in relation to that Member;
- (g) an instruction forwarded by the Clearing House for itself and on behalf of a Member to the Clearing House, in exercise of the Clearing House’s powers under Regulation 60B, containing data constituting particulars of a transaction determined by the Clearing House on the terms of a Rate Change Annex and submitted to the Clearing House for registration by the Clearing House as a SwapClear Contract in accordance with the Regulations;
- ~~(g)~~(h) an open Cleared Exchange Contract, SwapClear Contract, ForexClear Contract, RepoClear Contract, RepoClear GC Contract, or EquityClear Contract which has been registered by the Clearing House; or
- ~~(h)~~(i) an instruction given by the Clearing House to a PPS Bank by means of a SWIFT message or other means to place at the disposal of the Clearing House (by crediting a nominated account of the Clearing House at a Concentration Bank) an amount of

money to be debited from a nominated account held by the Clearing House at that PPS Bank; or

~~(j)~~(i) an instruction given by the Clearing House to a Concentration Bank by means of a SWIFT message or other means to place at the disposal of the Clearing House (by crediting a nominated account of the Clearing House at a PPS Bank) an amount of money to be debited from a nominated account held by the Clearing House at that Concentration Bank; or

~~(j)~~(k) an instruction given by or on behalf of a Member by means of a SWIFT message or other means to a Member Settlement Bank to place at the disposal of the Clearing House (through crediting a nominated cash account provided by a Settlement Service Provider to the Clearing House) an amount of money to be debited from a nominated account held by that Member at such Member Settlement Bank; or

~~(k)~~(l) an instruction by the Clearing House for itself and on behalf of a Member authorising the exercise of the Clearing House's powers under Regulation 101 to effect the discharge of certain payment obligations of that Member to the Clearing House and the corresponding assumption of another payment obligation of that Member to the Clearing House, arising upon the occurrence of a ForexClear Liquidity Event in accordance with Regulation 101 in relation to that Member; or

~~(j)~~(m) an instruction given by the Clearing House to a Concentration Bank or a central bank by means of a SWIFT message or other means to place at the disposal of the Clearing House (through crediting a nominated cash account provided by a Settlement Service Provider to the Clearing House) an amount of money to be debited from a nominated account held by the Clearing House at that Concentration Bank or central bank; or

~~(m)~~(n) an instruction given by the Clearing House to a Settlement Service Provider by means of a SWIFT message or other means to place at the disposal of a Member (by crediting a nominated cash account held by that Member at a Member Settlement Bank) an amount of money to be debited from a nominated account provided by that Settlement Service Provider to the Clearing House; or

~~(n)~~(o) an instruction given by the Clearing House to a Settlement Service Provider by means of a SWIFT message or other means to place at the disposal of the Clearing House (by crediting a nominated cash account held by the Clearing House at a Concentration Bank or a central bank) an amount of money to be debited from a nominated account provided by that Settlement Service Provider to the Clearing House.

1.10 **"Procedures"** means the practices and procedures of the Clearing House, as amended from time to time, including but not limited to the Procedures.

1.11 **"Regulations"** means the General Regulations, Default Rules and Procedures of the Clearing House as amended from time to time and **"the Procedures"** shall mean that part of the Regulations by that name.

1.12 **"Securities System Operator"** means:

(a) an operator of a securities depository and/or securities settlement system (including but not limited to Euroclear UK & Ireland Ltd, Euroclear Bank, Clearstream Frankfurt and Clearstream Luxemburg); or

- (b) a bank or other credit institution (including but not limited to the National Bank of Belgium and Deutsche Bank AG) which provides securities holding and/or securities settlement services to the Clearing House as a nominee or otherwise through its participation in any securities settlement system or otherwise.

1.13 **“Securities Transfer Order”** means

- (a) an instruction, given by the Clearing House on its own behalf or on behalf of a Member or Non-Member Participant, to a Securities System Operator to transfer the title to or interest in securities to a Member, a Non-Member Participant, the Clearing House or other person by means of a book entry on the register maintained by that Securities System Operator, or otherwise; or
- (b) an instruction given by a Member or Non-Member Participant to a Securities System Operator to transfer the title to or interest in securities to the Clearing House by means of a book entry on the register maintained by that Securities System Operator, or otherwise; or
- (c) an instruction in the form of an electronic message forwarded by or on behalf of a Member or Non-Member Participant to the Clearing House containing data constituting particulars of an exchange contract for the transfer of Securities, RepoClear Transaction, Bond Trade, Repo Trade, EquityClear ATP Match or Eligible RepoClear GC Transaction submitted for registration by the Clearing House in accordance with the provisions of the Regulations; or
- (d) an open Cleared Exchange Contract for the transfer of Securities, a RepoClear Contract, a RepoClear GC Contract or an EquityClear Contract for the transfer of Securities which has been registered by the Clearing House.

1.14 **“Settlement Finality Directive”** means Directive 98/26/EC of the European Parliament and of the Council of 19 May 1998 on settlement finality in payment and securities settlement systems.

1.15 **“Settlement Service Provider”** means CLS Bank International or any other entity approved by the Clearing House from time to time for the provision to the Clearing House of settlement services in connection with settlements under the ForexClear Service not taking place through the Clearing House Protected Payment System.

1.16 **“SF Regulations”** means The Financial Markets and Insolvency (Settlement Finality) Regulations 1999 (S.I. 1999 No. 2979).

1.17 **“Transfer Order”** includes a Payment Transfer Order or a Securities Transfer Order.

2. Transfer Orders – Specific Provisions

2.1 A Transfer Order takes effect and enters the Clearing House System in accordance with the following:

- (a) Payment Transfer Orders
 - (i) A Payment Transfer Order of the type set out in sections 1.9(a), 1.9(b), 1.9(c), 1.9(d), 1.9(ih), 1.9(ji), 1.9(ml), 1.9(nm) and 1.9(om) above takes effect and enters the Clearing House System when the relevant SWIFT message, or other electronic message or fax or other communication is sent by the Clearing House.

- (ii) A Payment Transfer Order of the type set out in section 1.9(kj) takes effect and enters the Clearing House System when the relevant SWIFT message, or other electronic message or fax or other communication is sent by the relevant Member.
- (iii) A Payment Transfer Order of the type set out in section 1.9(f) and 1.9(lk) takes effect and enters the Clearing House System upon the occurrence of a ForexClear Liquidity Event in accordance with Regulation 101 in relation to the relevant Member.
- ~~(iii)~~(iv) A Payment Transfer Order of the type set out in section 1.9(g) containing data constituting particulars of a transaction determined by the Clearing House on the terms of a Rate Change Annex and submitted to the Clearing House for registration by the Clearing House as a SwapClear Contract takes effect and enters the Clearing House System when such particulars are received by the Clearing House.
- ~~(iv)~~(v) A Payment Transfer Order of the type set out in section 1.9(e) takes effect and enters the Clearing House System when such particulars are received by the Clearing House or its agent or contractor.
- ~~(v)~~(vi) A Payment Transfer Order of the type set out in section 1.98(hg) takes effect and enters the Clearing House System at the time of registration. Details of registration timings are given in the Procedures.

(b) Securities Transfer Orders

- (i) A Securities Transfer Order of the type set out in section 1.13(a) takes effect and enters the Clearing House System when the relevant SWIFT message, or other electronic message or fax is sent by the Clearing House.
- (ii) A Securities Transfer Order of the type set out in section 1.13(b) takes effect and enters the Clearing House system when the relevant SWIFT message, or other electronic message or fax is sent by the Member or Non-Member Participant.
- (iii) A Securities Transfer Order of the type set out in section 1.13(c) takes effect and enters the Clearing House system when the particulars thereof are received by the Clearing House or its agent or contractor.
- (iv) A Securities Transfer Order of the type set out in section 1.13(d) takes effect and enters the Clearing House system at the time of registration. Details of registration timings are given in the Procedures.

2.2 A Payment Transfer Order shall be irrevocable at the time specified below for that type of Payment Transfer Order.

- (a) A Credit Member/Debit LCH transfer order shall be irrevocable at the time when the relevant PPS Bank sends a SWIFT confirmation message or otherwise confirms to the Clearing House that such payment will be made.
- (b) A Credit LCH/Debit Member transfer order shall be irrevocable at the time when the relevant PPS Bank sends a SWIFT confirmation message or otherwise confirms to the Clearing House that such payment will be made.

- (c) An Inward Cash Account Transfer Order shall be irrevocable from the time prescribed from time to time by the relevant Securities System Operator as being the time after which such instruction may not be revoked by a participant or other person.
- (d) An Outward Cash Account Transfer Order shall be irrevocable from the time prescribed from time to time by the relevant Securities System Operator as being the time after which such instruction may not be revoked by a participant or other person.
- (e) An instruction in the form of an electronic message forwarded by or on behalf of a Member or Non-Member Participant to the Clearing House or its agent or contractor containing data constituting particulars of an exchange contract, RepoClear Transaction, SwapClear Transaction, Post-Compression Contract, ForexClear Transaction, or Eligible EnClear Trade and submitted for registration by LCH in accordance with the Regulations shall be irrevocable from the time of its registration by the Clearing House.
- (f) An instruction in the form of an electronic message forwarded by or on behalf of a Member or Non-Member Participant to LCH, or its agent or contractor, containing data constituting particulars of a Bond Trade, Repo Trade, RepoClear GC Transaction or EquityClear ATP Match submitted to LCH for registration in accordance with the Regulations shall be irrevocable from the time when, having passed all relevant checks required by the Clearing House, it passes through the relevant Computer Gateway. For these purposes a relevant Computer Gateway shall mean a computer gateway of a system operated by LCH or by an agent or contractor of the Clearing House for the purposes, inter alia, of receiving such electronic messages and carrying out such checks.
- (g) An open Cleared Exchange Contract, SwapClear Contract, ForexClear Contract, RepoClear Contract, RepoClear GC Contract, EquityClear Contract or LCH EnClear Contract which has been registered by the Clearing House shall be irrevocable from the time of its registration by the Clearing House.
- (h) An instruction given by the Clearing House to a PPS Bank by means of a SWIFT message or other means to place at the disposal of the Clearing House (by crediting a nominated account of the Clearing House at a Concentration Bank) an amount of money to be debited from a nominated account held by the Clearing House at that PPS Bank shall be irrevocable at the time when the relevant PPS Bank confirms to the Clearing House that such payment will be made.
- (i) An instruction given by the Clearing House to a Concentration Bank by means of a SWIFT message or other means to place at the disposal of the Clearing House (by crediting a nominated account of the Clearing House at a PPS Bank) an amount of money to be debited from a nominated account held by the Clearing House at that Concentration Bank shall be irrevocable at the time when the Concentration Bank confirms to the Clearing House that such payment will be made.
- (j) An instruction given by or on behalf of a Member by means of a SWIFT message or other means to a Member Settlement Bank to place at the disposal of the Clearing House (through crediting a nominated cash account provided by a Settlement Service Provider to the Clearing House) an amount of money to be debited from a nominated account held by that Member at such Member Settlement Bank shall be irrevocable at the time when the relevant Member Settlement Bank sends a SWIFT confirmation message or otherwise confirms to the relevant Member that such payment will be made.

- (k) An instruction given by the Clearing House to a Concentration Bank or any central bank by means of a SWIFT message or other means to place at the disposal of the Clearing House (through crediting a nominated cash account provided by a Settlement Service Provider to the Clearing House) an amount of money to be debited from a nominated account held by the Clearing House at that Concentration Bank or central bank shall be irrevocable at the time when that Concentration Bank or central bank sends a SWIFT confirmation message or otherwise confirms to the Clearing House that such payment will be made.
- (l) An instruction by the Clearing House for itself and on behalf of a Member of the type set out in section 1.9(f) or 1.9(~~l~~k) shall be irrevocable upon the occurrence of a ForexClear Liquidity Event in accordance with Regulation 101 in relation to that Member.
- ~~(m)~~(n) An instruction by the Clearing House for itself and on behalf of a Member of the type set out in section 1.9(g) containing data constituting particulars of a transaction determined by the Clearing House on the terms of a Rate Change Annex and submitted to the Clearing House for registration by the Clearing House as a SwapClear Contract shall be irrevocable when such particulars are received by the Clearing House.
- ~~(m)~~(n) An instruction given by the Clearing House to a Settlement Service Provider by means of a SWIFT message or other means to place at the disposal of a Member (by crediting a nominated cash account held by that Member at a Member Settlement Bank) an amount of money to be debited from a nominated account provided by that Settlement Service Provider to the Clearing House shall be irrevocable at the time when the Settlement Services Provider first sends confirmation to the Clearing House that such payment will be made.
- ~~(n)~~(o) An instruction given by the Clearing House to a Settlement Service Provider by means of a SWIFT message or other means to place at the disposal of the Clearing House (by crediting a nominated cash account held by the Clearing House at a Concentration Bank or a central bank) an amount of money to be debited from a nominated account provided by that Settlement Service Provider to the Clearing House shall be irrevocable at the time when the Settlement Service Provider first sends confirmation to the Clearing House that such payment will be made.

2.3 Subject to section 2.5 below, a Securities Transfer Order shall be irrevocable at the time specified hereafter for the relevant type of Securities Transfer Order.

- (a) An instruction given by the Clearing House (on its own behalf or on behalf of a Member or Non-Member Participant) to a Securities System Operator of the kind referred to in section 1.13(a) to transfer the title to or interest in securities to a Member, Non-Member Participant, to the Clearing House or other person by means of a book entry on the register maintained by that Securities System Operator shall be irrevocable at the time prescribed from time to time by that Securities System Operator as being the time after which such instruction may not be revoked by a participant or other person.
- (b) An instruction given by a Member or, where permitted or required by the Regulations, a Non-Member Participant to a Securities System Operator of the kind referred to in section 1.13(a) to transfer the title to or interest in securities to the Clearing House by means of a book entry on the register maintained by that Securities System Operator shall be irrevocable at the time prescribed from time to time by that Securities System Operator as being the time after which such instruction may not be revoked by a participant or other person.