

VIA CFTC PORTAL

October 3, 2023

Mr. Christopher Kirkpatrick
Commodity Futures Trading Commission
1155 21st Street NW
Three Lafayette Centre
Washington, DC 20581

LCH Limited Self-Certification: Periodic Surveys of Swaps and FX Transactions to Calculate Margin Requirements

Dear Mr. Kirkpatrick,

Pursuant to Commodity Futures Trading Commission (“CFTC”) Regulation §40.6(a), LCH Limited (“LCH”), a derivatives clearing organization registered with the CFTC, is submitting for self-certification revisions to its Procedures and FCM Procedures (“LCH Rules”) related to requiring ForexClear and SwapClear members to respond to reasonable requests for data for purposes of calculating liquidity risk margin (“LRM”) and settlement management margin (“SMM”) requirements (collectively, the “Proposed Rule Change”).

Part I: Explanation and Analysis

LCH requires ForexClear and SwapClear members to post collateral to satisfy initial margin requirements. LCH may also charge additional margin as part of the initial margin requirements, including for liquidity risk related to concentrated exposures and settlement risk associated with potential settlement failure. LCH currently engages in periodic surveys of its ForexClear and SwapClear members to obtain certain data (mainly prices) in relation to swaps or FX transactions (“Survey Data”) for the purpose of calculating the LRM and SMM requirements.

The Proposed Rule Change will require ForexClear and SwapClear members to respond to LCH’s reasonable request for Survey Data in related to calculating LRM and SMM requirements. In addition, the Proposed Rule Change aligns the LRM provisions across the FCM and non-FCM procedures.

Part II: Description of the Rule Changes

LCH will amend Section 2.1.9(a) and Section 2.2.11(b) of the FCM Procedures to amend the description of the LRM. LCH will also amend Sections 1.5.6(c) and Section 1.5.6(e) of the LCH Limited Procedures Section 2I with respect to the LRM and SMM requirements, respectively. LCH will also amend Section 1.9.3 of the LCH Limited Procedures Section 2C with respect to the LRM requirements.

The changes to the LCH Rules are included as **Appendices I - III** in black line form. The changes will be effective not earlier than October 23, 2023.



Part III: Core Principles Compliance

LCH has reviewed the Proposed Rule Change against the requirements of the Core Principles and finds it will continue to comply with all requirements and standards set forth therein. Specifically, this rule change has potential relevance to Core Principles C (Participant and Product Eligibility) and D (Risk Management).

LCH believes the Proposed Rule Change will not impact its ongoing compliance with the objectives of Core Principle C and CFTC Rule 39.12. Core Principle C requires, among other things, each derivatives clearing organization establish appropriate admission and continuing eligibility standards for members of, and participants in, the derivatives clearing organization. In addition, Core Principle C requires that participation and membership standards be objective, publicly disclosed and permit fair and open access. LCH is proposing that ForexClear and SwapClear members contribute Survey Data upon a reasonable request from LCH for purposes of calculating the LRM and SMM, as applicable. This membership requirement provides LCH with the necessary information to effectively calculate margin requirements for purposes of managing risk. In addition, the Proposed Rule Change will be uniformly applied to all ForexClear and SwapClear members as part of such members' overall membership requirements. LCH therefore believes the Proposed Rule Change is consistent with Core Principle C and CFTC Rule 39.12.

LCH believes the changes described in this filing will not impact LCH's ongoing compliance with the objectives of Core Principle D and CFTC Rule 39.13. Core Principle D requires, among other things, each derivatives clearing organization possess the ability to manage the risks associated with discharging the responsibilities of the derivatives clearing organization through the use of appropriate tools and procedures. This includes ensuring that each model and parameter used in setting margin requirements be risk-based. LCH is proposing to amend the LCH Rules to require ForexClear and SwapClear members to provide Survey Data for purposes of calculating the LRM and SMM. The requirement to provide Survey Data will ensure LCH has sufficient information for purposes of calculating risk-based margin requirements in accordance with Core Principle D and CFTC Rule 39.13.

Based on the foregoing, LCH believes the Proposed Rule Change is consistent with the requirements of Core Principle C on Participant and Product Eligibility under CFTC Rule 39.12 and Core Principle D on Risk Management under CFTC Rule 39.13.

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: <https://www.lch.com/resources/rulebooks/proposed-rule-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 this proposal.

Certification

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



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Should you have any questions, please contact me at ryan.hajen@lseg.com.

Yours sincerely,

Ryan Hajen

Ryan Hajen
Senior Compliance Manager
LCH Limited



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Appendix I
FCM Procedures
Changed Pages

FCM PROCEDURES OF THE CLEARING HOUSE
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The coupon payments will be adjusted to fall on actual Business Days according to the Business Day Convention specified.

(l) *Negative Interest Rate Method*

FCM Clearing Member should note the provisions of Section 3.2 of Part A of Schedule 1 to the FCM Product Specific Contract Terms and Eligibility Criteria Manual regarding the applicability of the Negative Interest Rate Method to an FCM SwapClear Contract. FCM Clearing Members may, in the circumstances, wish to ensure that any trade submitted for registration follows that Negative interest Rate Method.

(m) *Calculation of Inflation Indices*

The Index level used for calculating the Floating Rate for an Inflation FCM SwapClear Contract is determined according to the 2008 ISDA Inflation Definitions in respect of the Index applicable to such Inflation FCM SwapClear Contract.

In the event an Index is no available to calculate the Index Final, the Clearing House will, in its sole discretion, determine a value for the Index Final.

(n) *Non-deliverable Interest Rate Swaps*

The Clearing House will calculate all coupon payments for FCM SwapClear Contracts that are non-deliverable interest rate swaps, including the Fixed Amount or Floating Amount payable under any such FCM SwapClear Contract, in USD, and all amounts due or payable under such FCM SwapClear Contracts must be paid in USD.

2.1.9 ***Initial Margin***

The Clearing House will require FCM Clearing Members to furnish it with Initial Margin. This amount will be determined by the prevailing market conditions and the expected time to close out the portfolio. The Portfolio Approach to Interest Rate Scenarios (PAIRS) will be used to calculate Initial Margin requirements for FCM SwapClear Contracts.

Separate Initial Margin calculations are performed for an FCM Clearing Member's house "H" and client "C" accounts and, within a "C" account, separately in respect of each FCM Client Sub-Account therein. No offset between the "C" and "H" accounts is permitted.

The Clearing House reserves the right to require additional amounts of Margin from a specific FCM Clearing Member or from all FCM Clearing Members in accordance with FCM Regulation 14 (*Margin and Collateral*).

(a) *Liquidity Risk Margin Multiplier*

The Clearing House may require an FCM Clearing Member to transfer Collateral to the Clearing House to meet the liquidity risk margin requirement applicable to such FCM Clearing Member. This requirement is based on the risk profile of the FCM Clearing Member (or account) and the expected cost of hedging in a default scenario. The parameters applicable to the model are reviewed on an ongoing basis.

The Clearing House undertakes periodic liquidity surveys for the purpose of calculating liquidity risk margin requirements. FCM Clearing Members are required to respond to the Clearing House's reasonable request for data as part of such liquidity surveys.

~~Risk Management applies a liquidity multiplier based on Worst Case Loss (WCL) exceeding certain thresholds on the FCM Clearing Member's whole portfolio and individual currencies. The threshold amounts and multipliers are reviewed on an on going basis. FCM Client accounts are treated as independent accounts for purposes of liquidity and will be called only in the event that the individual account exceeds the relevant threshold.~~

(b) *Intra-day Margin Calls*

In accordance with the Clearing House's FCM Regulations, the Clearing House is entitled to make additional margin calls for payment the same day (intra-day margin calls) where it is considered necessary. Intra-day margin calls can be called at any time throughout the Business Day. Intra-day margin calls will usually be made via the Protected Payments System (PPS) (see Section 2.1.10).

In certain circumstances, the Clearing House may wish to make a call for additional funds after the UK PPS cut-off time of 08:00 New York time. In this event, the Clearing House will require payment of additional funds through PPS facilities in the USA (see Section 3.2.1). Members must ensure, in these circumstances, that they are in a position to fund such calls through their nominated US PPS account within one hour of the call.

(c) *Calculation of Initial Margin*

Portfolio Approach to Interest Rate Scenarios (PAIRS)

The PAIRS calculation is a VAR based approach based on filtered historical simulations. All positions in each currency are re-valued under a series of cross portfolio yield curve scenarios to estimate the highest forecast loss and therefore the Initial Margin requirement. Further details of this method are available upon request and are detailed in the PAIRS TIP document. The PAIRS document and further information relating to Initial Margin calculations can be

obtained from the Rates team at +44 (020) 7426 6325 or +44 (020) 7426 7428.

(d) *Tenor Basis Risk Margin Add-on*

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

(e) *Default Fund Additional Margin*

The Clearing House may from time to time require an FCM Clearing Member to transfer Collateral to the Clearing House to meet the default fund additional margin requirement as determined and notified by the Clearing House to such FCM Clearing Member (“**DFAM**”). The methodology by which the Clearing House determines DFAM is available on the secure area of the Clearing House website. The Clearing House will record any Collateral an FCM Clearing Member has provided to meet its DFAM obligation to the FCM Clearing Member’s Proprietary Account.

(f) *Collateral for Stress Loss Exposure*

In response to a request from an FCM Clearing Member, the Clearing House may require additional Collateral to cover such FCM Clearing Member’s stress loss exposure with respect to an FCM Client Sub-Account (the “**Stress Loss Margin**”). The Stress Loss Margin may be subject to an additional percentage add-on as the Clearing House may require in its sole discretion. The Stress Loss Margin and any add-ons, as applicable, will be called as part of the end of day margin run and by means of morning PPS calls. The request must indicate the percentage of the stress loss exposure that will be covered by Stress Loss Margin. Any request pursuant to this paragraph is subject to the Clearing House’s consent in its sole discretion (and the Clearing house may apply a lower percentage than that requested by the SwapClear Clearing Member).

An FCM Clearing Member may cease paying Stress Loss Margin by giving not less than three (3) business days’ written notice to the Clearing House.

Before making any request to pay or notifying the Clearing House of ceasing to pay Stress Loss Margin, an FCM Clearing Member must obtain the consent of the FCM Client to which the Stress Loss Margin applies. In making any request pursuant to this paragraph, the FCM Clearing Member is deemed to represent that it has obtained such consent.

Where FCM SwapClear Contracts entered into by an FCM Clearing Member in respect of an FCM Client which has requested to pay Stress Loss Margin are transferred to a Receiving Clearing Member, such 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 FCM Client.

2.1.10 *Intra-Day Margin Call: Collateral Management*

General – Intra-day Margining

Following an intra-day margin call and unless notified otherwise by an FCM Clearing Member at the time of an intra-day margin call the Clearing House will deduct cash, in the appropriate currency, directly from the relevant FCM Clearing Member's PPS account to cover the Margin needed to meet that intra-day margin call.

Cash payments in respect of intra-day Margin requirements are accepted only in USD by the Clearing House.

It is the responsibility of the FCM to ensure that they have sufficient cash funds in place with their PPS bank(s) in order to avoid any intra-day liquidity issues.

2.1.11 *Compression*

- (a) An FCM Clearing Member may compress or decompress Eligible FCM SwapClear Compression Contracts in accordance with FCM Regulation 46(n) and this Section 2.1.11. FCM Clearing Members may request the compression or decompression of Eligible FCM SwapClear Compression Contracts as follows:
 - (A) an FCM Clearing Member can request that all Eligible FCM SwapClear Compression Contracts entered into (i) on behalf of a designated FCM Client or (ii) in such FCM Clearing Member's Proprietary Account be considered for compression by the Clearing House. Such a request shall be reconsidered by the Clearing House automatically each day (and the results notified to the FCM Clearing Member after the applicable scheduled compression run) until the FCM Clearing Member notifies the Clearing House to discontinue the compression of Eligible FCM SwapClear Compression Contracts.;
 - (B) an FCM Clearing Member may notify the Clearing House through the ClearLink API or SwapClear Portal specifying the Eligible FCM SwapClear Compression Contracts it wishes to be compressed;
 - (C) an FCM Clearing Member may notify the Clearing House through any FCM Approved Trade Source System previously approved for this purpose by the Clearing House, but only where the compression is by way of netting in respect of Eligible FCM SwapClear Compression Contracts in respect of which the position of the FCM Clearing Member (on its own behalf or on behalf of the relevant FCM Client) is (x) in the

Principles:

- (A) CVS is calculated at EOD on T-1.
- (B) Variation Settlement in respect of an FX FCM's portfolio of open ForexClear Contracts) is paid/ received, subject to the netting provisions of FCM Regulation 47, on the morning of T.
- (C) The Price Alignment Amount Rate for T to be applied is known at EOD T.
- (D) The Price Alignment Amount is calculated on the night of T, for CVS of T-1 for FCM ForexClear Contracts up to the business day before their Settlement Date.
- (E) The Price Alignment Amount is paid or received on morning of T+1 via PPS.

Components:

- (F) Price Alignment Amount Rate.
- (G) Cumulative Variation Settlement of the FX FCM's portfolio open FCM ForexClear Contracts.
- (H) Accrual Factor (factor used to convert the Price Alignment Amount Rate from an annual rate to a daily rate, on a basis of a year of 360 days).

So:

- (I) $\text{Price Alignment Amount T} = \text{Price Alignment Amount T Rate} \times \text{CVS T--1} \times \text{Accrual Factor}$.

The Clearing House uses the Price Alignment Amount Rate from the relevant EOD overnight index swap curves, which is sourced from the Clearing House.

2.2.11 **Initial Margin ("IM")**

The Clearing House will require FX FCMs to furnish it with IM. This amount will be calculated intraday and at EOD on each business day as part of each Margin Run. Each FX FCM's IM requirement, is calculated for the portfolio of open FCM ForexClear Contracts and FCM ForexClear Transactions using ForexClear's Portfolio Analysis and Risk ("**FxPAR**") margining model. FxPAR is based on a modified filtered historical simulation value-at-risk methodology. All open FCM ForexClear Contracts and FCM ForexClear Transactions in each Currency Pair are re-valued under a series of cross portfolio yield curve scenarios to estimate the potential portfolio profit and loss and therefore the IM requirement.

These scenarios will be continually monitored and reviewed periodically or on an ad hoc basis according to market conditions. FX FCMs will usually be notified by the Clearing House of alterations to margin parameters no later than the day before calls are made based on the new parameters. Further details of this method are available upon request from the ForexClear Risk team.

FxPAR uses the historical (5 year) data submitted by FXCCMs pursuant to Section 2.2.9, which is adapted to current market prices.

Separate Initial Margin calculations are performed for an FX FCM's house "H" and client "C" accounts and, within a "C" account, separately in respect of each FCM Client Sub-Account therein. No offset between the "C" and "H" accounts is permitted.

The Clearing House reserves the right to require additional amounts of Margin from a specific FX FCM or from all FX FCMs in accordance with FCM Regulation 14 (*Margin and Collateral*).

(a) *Credit Risk Multiplier ("CRiM")*

The CRiM applied will consider the FX FCM's credit worthiness, Initial Margin level and/or stress testing exposures in accordance with LCH Credit Risk Policy.

(b) *Liquidity Risk MarginMultiplier ("LRMM")*

LRM reflects the additional risk due to the FX FCM having concentrated risk exposures above set thresholds in a particular Currency Pair or tenor of FCM ForexClear Contracts. The LRM requirement is calculated in accordance with parameters set by the ForexClear Default Management Group (the "FXDMG").

~~The Clearing House undertakes periodic liquidity surveys for the purpose of calculating LRM requirements. FX FCMs are required to respond to the Clearing House's reasonable request for data as part of such liquidity surveys. Where an FXCCM has an exposure above set thresholds in a particular Currency Pair or tenor of FCM ForexClear Contracts, the LRMM is applied and additional IM is charged. The LRMM is calculated in accordance with parameters set by the ForexClear Default Management Group (the "FXDMG") according to tenor and notional concentration. The thresholds are reviewed quarterly and use prevailing perceptions of market conditions as seen by the FXDMG.~~

~~LRMM increases IM called due to concentrated Currency Pair exposure by tenor of FCM ForexClear Contracts. Additional IM is called to mitigate the risk of a position not being closed out in seven days and/or the extra hedging costs that may be incurred.~~

~~The Clearing House calculates and applies LRMM as part of each Margin Run, based on the IM for each Currency Pair in the FX FCM's house position-keeping account.~~

(c) *Sovereign Risk Multiplier (“SRM”)*

SRM reflects the additional risk related to a potential country default or a change in a country's currency regime, including risk relating to a country's external debt or level of foreign exchange reserves, which would impact FCM ForexClear Contracts transacted in certain Reference Currencies. The SRM calculation considers the probability of sovereign default occurring and the depreciation or appreciation risk of the Reference Currencies.

(d) *Default Fund Additional Margin*

The Clearing House may from time to time require an FX FCM to transfer Collateral to the Clearing House to meet the default fund additional margin requirement as determined and notified by the Clearing House to such FX FCM (“**DFAM**”). The methodology by which the Clearing House determines DFAM is available on the secure area of the Clearing House website. The Clearing House will record any Collateral an FX FCM has provided to meet its DFAM obligation to the FX FCM's Proprietary Account.

2.2.12 ***Additional Margin, ForexClear Tolerance, MER Buffer, Completion Margin and Intraday Margin Calls***

(a) *Additional Margin*

The Clearing House may require an FX FCM to furnish additional amounts of Margin (in addition to Initial Margin) as security for the performance by an FX FCM of its obligations to the Clearing House in respect of FCM ForexClear Contracts to which such FX FCM is a party in accordance with FCM Regulation 14 (*Margin and Collateral*). This may be required from time to time where, in the opinion of the Clearing House, the risk inherent in FCM ForexClear Contracts to which such FX FCM is a party is not adequately covered by Initial Margin. This may cover instances where stress testing losses under various scenarios provided in the ForexClear Default Fund Supplement have increased.

(b) *Minimum Excess Requirement Buffer (“**MER Buffer**”)*

To facilitate the intraday registration of FCM ForexClear Contracts, at each EOD Margin Run, the Clearing House will call from each FX FCM, separately in respect of its Proprietary Account and each of its FCM Client Sub-Accounts, an amount of IM in respect of its and its FCM Clients' potential intraday Liabilities (as defined below in Section 2.2.17) for the following day (“**MER Buffer**”), provided that the Clearing House shall not call MER Buffer from an FX FCM that (i)



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Appendix II

LCH Limited Procedures – Section 2I – ForexClear Clearing Service
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LCH LIMITED
PROCEDURES SECTION 2I
FOREXCLEAR CLEARING SERVICE

- (ii) Components:
 - (A) PAA Rate (annualised interest applied to an FXCCM's MTM).
 - (B) MTM.
 - (C) Accrual Factor (factor used to convert the PAA Rate from an annual rate to a daily rate, on a basis of a year of 360 days).
- (iii) So:
 - (A) $PAA\ T = PAAT\ Rate \times MTMT-1 \times Accrual\ Factor.$

The Clearing House uses the PAA Rate from the relevant EOD overnight index swap curves, which is sourced from the Clearing House.

1.5.6 *Initial Margin:* The Clearing House will require FXCCMs to transfer Collateral to the Clearing House in respect of their initial margin obligations. Each FXCCM's initial margin obligation will be calculated on an aggregate basis across its ForexClear Contracts within the ForexClear Non-Deliverable Service and ForexClear Deliverable Service.

- (a) *Calculation of Initial Margin:* Separate initial margin calculations are performed for an FXCCM's Proprietary Account, each Client Account (other than an Indirect Gross Account) and each Indirect Gross Sub-Account within an Indirect Gross Account. No offset between the Proprietary Accounts and the Client Accounts is allowed (except pursuant to Rule 8(d) of the Default Rules or any Insufficient Resources Determination Rule) and no offset between any Client Accounts is allowed (except pursuant to Rule 15(a)(ii) of the Default Rules, a Cross-ISA Client Excess Deduction or any Insufficient Resources Determination Rule).

The initial margin obligation is calculated on a real-time (or near real-time) basis throughout each day. With respect to each FXCCM, it is calculated for the portfolio of open ForexClear Contracts and ForexClear Transactions using ForexClear's Portfolio Analysis and Risk ("**FxPAR**") margining model. FxPAR is based on a modified historical simulation expected shortfall methodology. All open ForexClear Contracts and ForexClear Transactions in each Currency Pair are re-valued under a series of FX rate and yield curve scenarios to estimate the potential portfolio profit and loss and therefore the initial margin requirement.

The adequacy of the initial margin calculation is reviewed daily. ForexClear Clearing Members will usually be notified by the Clearing House of alterations to margin model parameters no later than the day

before calls are made based on the new parameters. Further details of this method are available upon request from the ForexClear Risk team.

FxPAR uses the market data submitted by FXCCMs pursuant to paragraph 1.5.1(a) (*Product Valuation*).

Initial Margin Add-ons: Credit risk, liquidity risk and sovereign risk margin add-ons are measured and applied to FXCCMs as part of the initial margin requirement calculation.

- (b) *Credit Risk Margin ("CRiM")*: CRiM reflects the additional risk related to the FXCCM's credit quality. The CRiM calculation considers the FXCCM's credit worthiness, initial margin obligation level and/or stress testing exposures in accordance with LCH Credit Risk Policy.
- (c) *Liquidity Risk Margin ("LRM")*: LRM reflects the additional risk due to the FXCCM having concentrated risk exposures above set thresholds in a particular Currency Pair ~~or ForexClear Currency Pair~~ or tenor of ForexClear Contracts. The LRM requirement is calculated in accordance with parameters set by the ForexClear Default Management Group (the "FXDMG").

The Clearing House undertakes periodic liquidity surveys for the purpose of calculating LRM requirements. FXCCMs are required to respond to the Clearing House's reasonable request for data as part of such liquidity surveys.

- ~~(e)~~(d) *Sovereign Risk Margin ("SRM")*: SRM reflects the additional risk related to a potential country default or a change in a country's currency regime, including risk relating to a country's external debt or level of foreign exchange reserves, which would impact ForexClear Contracts transacted in certain Reference Currencies. The SRM calculation considers the probability of sovereign default occurring and the depreciation or appreciation risk of the Reference Currencies.

- (e) *Settlement Management Margin ("SMM")*: SMM reflects the additional risk associated with a potential settlement failure. The SMM calculation considers the FXCCM's future settlement obligations in each of the relevant currencies and the potential cost of utilising and replenishing liquidity provisions, where required, to fulfil those settlement obligations. The SMM is calculated in respect of ForexClear Deliverable Contracts only.

The Clearing House undertakes periodic surveys for the purpose of calculating SMM requirements. FXCCMs are required to respond to the Clearing House's reasonable request for data as part of such surveys.

- ~~(d)~~(f) *Default Fund Additional Margin*: The Clearing House may from time to time require an FXCCM to transfer Collateral to the Clearing House

to meet the default fund additional margin requirement as determined and notified by the Clearing House to such FXCCM ("**DFAM**"). The methodology by which the Clearing House determines DFAM is available on the secure area of the Clearing House website. The Clearing House will record any Collateral an FXCCM has provided to meet its DFAM obligation to the FXCCM's Proprietary Account.

~~(e)~~(g) *Additional Margin*: The Clearing House may require an FXCCM to transfer additional Collateral to the Clearing House (in addition to amounts of Collateral already transferred to the Clearing House in respect of any initial margin and variation margin obligations) as security for the performance by an FXCCM of its obligations to the Clearing House in respect of ForexClear Contracts to which such FXCCM is a party in accordance with Regulation 20 (*Margin and Collateral*). This may be required from time to time where, in the opinion of the Clearing House, the risk inherent in ForexClear Contracts to which such FXCCM is a party not adequately covered by the Collateral transferred in respect of the initial margin or any variation margin obligations. This may cover instances where stress testing losses under various scenarios provided in the ForexClear Default Rules have increased.

1.5.7 *Initial Margin Management Events Service ("IMMES")*: IMMES aims to find risk and initial margin reducing ForexClear Contracts amongst participating FXCCMs. IMMES can be run on all Currency Pairs that are cleared through the ForexClear Service, although the primary focus will be on those Currency Pairs that contribute to the largest Collateral requirement.

FXCCMs who wish to obtain further information about, or to participate in, IMMES should contact ForexClear Risk on 0207 426 7527. To be eligible to participate in IMMES, an FXCCM must enter into an IMMES agreement with the Clearing House (the "**IMMES Agreement**").

1.6 General Margining Process

A "**Margin and Settlement Run**" is the process by which the Clearing House calculates an FXCCM's initial margin requirement (if any) and, during an EOD Margin and Settlement Run (i) in respect of each ForexClear CTM Contract, its variation margin requirement and PAI adjustment (if required) or (ii) in respect of each ForexClear STM Contract, its NPV Payment and PAA adjustment (if required) (together the "**Margin or Settlement Requirements**"), and in the case of (i) only, applies that FXCCM's Collateral to satisfy the Margin Requirements for that FXCCM in respect of the ForexClear Contracts within that FXCCM's portfolio.

1.6.1 *Types of Margin and Settlement Runs*: There are three types of Margin and Settlement Run:

(a) *ITD/Ad Hoc - Day Margin and Settlement Run*

(i) ITD/Ad-hoc London daytime Margin and Settlement Runs are initiated as and when dictated by the schedule published by the



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Appendix III

LCH Limited Procedures – Section 2C – SwapClear Clearing Service
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LCH LIMITED
PROCEDURES SECTION 2C
SWAPCLEAR CLEARING SERVICE

The Clearing House will calculate all coupon payments for SwapClear Contracts that are non-deliverable interest rate swaps, including the Fixed Amount or Floating Amount payable under any such SwapClear Contract, in USD, and all amounts due or payable under such SwapClear Contracts must be paid in USD.

1.9 Initial Margin

The Clearing House will require SCMs to transfer Collateral in respect of their initial margin obligations, which are not discharged. This amount will be determined by the prevailing market conditions and the expected time to close out the portfolio. The Portfolio Approach to Interest Rate Scenarios (PAIRS) will be used to calculate initial margin requirements for SwapClear Contracts.

Separate initial margin calculations are performed for an SCM's Proprietary Accounts and for each Individual Segregated Account, Custodial Segregated Account, Omnibus Segregated Account (other than an Omnibus Gross Segregated Account), and Indirect Gross Sub-Account within an Indirect Gross Account. In respect of each Omnibus Gross Segregated Clearing Client (other than a Combined Omnibus Gross Segregated Clearing Client) separate initial margin calculations are performed in respect of the SwapClear Contracts entered into by the relevant SCM on behalf of each such Omnibus Gross Segregated Clearing Client. In respect of a group of Combined Omnibus Gross Segregated Clearing Clients a single initial margin calculation is performed in respect of SwapClear Contracts entered into by the relevant SCM on behalf of each such group of Combined Omnibus Gross Segregated Clearing Clients.

No offset between the "C" and the "H" accounts is allowed (except (i) pursuant to Rule 8(d) of the Default Rules or any Insufficient Resources Determination Rule, or (ii) in relation to the transfer of House Excess or Client Buffer in accordance with the Rulebook) and no offset between any Client Accounts is allowed (except pursuant to Rule 15(a)(ii) of the Default Rules, a Cross-ISA Client Excess Deduction or any Insufficient Resources Determination Rule).

1.9.1 Margin Parameters

The Clearing House Risk Management Department uses appropriate yield curve scenarios, both in terms of shape and magnitude of movement, to capture potential losses based on an observed history - the primary component of the initial margin calculation. These scenarios will be continually monitored and reviewed periodically or on an ad hoc basis according to market conditions. However, in accordance with the Regulations, the Clearing House retains the right at its discretion to vary the rates for the whole market or for a specific SCM's Proprietary Account and/or Client Accounts.

1.9.2 Counterparty Risk Multiplier

The Clearing House reserves the right to require additional amounts of Collateral from a specific SCM or from all SCMs in accordance with Regulation 20 (*Margin and Collateral*).

1.9.3 *Liquidity ~~Multiplier~~Risk Margin*

~~The Clearing House may require an SCM to transfer Collateral to the Clearing House to meet the liquidity risk margin requirement applicable to such SCM. This requirement is based on the risk profile of the SCM (or account) and the expected cost of hedging in a default scenario. The parameters applicable to the model Risk Management apply a liquidity multiplier based on scenario values exceeding certain thresholds on the SCM's whole portfolio and individual currencies. The threshold amounts and multipliers~~ are reviewed on an ongoing basis.

The Clearing House undertakes periodic liquidity surveys for the purpose of calculating liquidity risk margin requirements. SCMs are required to respond to the Clearing House's reasonable request for data as part of such liquidity surveys.

1.9.4 *Intra-day Margin Calls*

In accordance with the Regulations, the Clearing House is entitled, where considered necessary, to demand that a Clearing Member transfer additional Collateral to the Clearing House the same day (intra-day margin calls). Intra-day margin calls can be made at any time (between 08:30 and 21:00 (London time) on a business day). Intra-day margin calls will usually be made via the protected payments system (see Section 1.11).

In certain circumstances the Clearing House may require a Clearing Member to transfer additional cash Collateral to the Clearing House after the closure of London PPS facilities at 16:00 hours London time. In this event the Clearing House will require payment of additional cash Collateral through PPS facilities in the USA (see Section 1.3 of Procedure 3 (*Financial Transactions*)). **Members must ensure, in these circumstances, that they are in a position to comply with such demands through their nominated US PPS account within one hour of the demand.**

1.9.5 Calculation of Initial Margin

Portfolio Approach to Interest Rate Scenarios (PAIRS)

PAIRS is a historical model which takes historical events that occurred within the look-back period and from these calculates initial margin in line with the Clearing House's risk policies (which also take into account regulatory requirements). All positions in each currency are revalued under a series of scaled historical market moves and initial margin is calculated as the Expected Shortfall (ES) of the portfolio. Further details of this method are available upon request and are detailed in the PAIRS TIP document. The PAIRS document and further information relating to initial margin calculations can be obtained from SwapClear Risk on +44 (0)20 7 426 7549.

1.9.6 *Default Fund Additional Margin*

The Clearing House may from time to time require an SCM to transfer Collateral to the Clearing House to meet the default fund additional margin requirement as determined and notified by the Clearing House to such SCM (“**DFAM**”). The methodology by which the Clearing House determines DFAM is available on the secure area of the Clearing House website. The Clearing House will record any Collateral an SCM has provided to meet its DFAM obligation to the SCM’s Proprietary Account.

1.9.7 *Collateral for Stress Loss Exposure*

In response to a request from a SwapClear Clearing Member, the Clearing House may require additional Collateral to cover such SwapClear Clearing Member’s stress loss exposure with respect to a Client Account (the “**Stress Loss Margin**”). The Stress Loss Margin may be subject to an additional percentage add-on as the Clearing House may require in its sole discretion. The Stress Loss Margin and any add-ons, as applicable, will be called as part of the end of day margin run and by means of morning PPS calls. The request must indicate the percentage of the stress loss exposure that will be covered by Stress Loss Margin. Any request pursuant to this paragraph is subject to the Clearing House’s consent in its sole discretion (and the Clearing House may apply a lower percentage than that requested by the SwapClear Clearing Member.)

A SwapClear Clearing Member may cease paying Stress Loss Margin by giving not less than three (3) business days’ written notice to the Clearing House.

Before making any request to pay or notifying the Clearing House of ceasing to pay Stress Loss Margin, a SwapClear Clearing Member must obtain the consent of the SwapClear Clearing Client(s) to which the Stress Loss Margin applies. In making any request pursuant to this paragraph, the SwapClear Clearing Member is deemed to represent that it has obtained such consent.

Where SwapClear Contracts entered into by a SwapClear Clearing Member in respect of a SwapClear Clearing Client which has requested to pay Stress Loss Margin are transferred to a Backup Clearing Member or a Receiving Clearing Member (including an FCM Clearing Member), such Backup Clearing 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.