LCH.CLEARNET

<u>Via Electronic mail</u>

May 1, 2013
Ms. Melissa Jurgens
Secretary of the Commission
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

RE: Changes to LCH.Clearnet Limited Clearing House Procedures Section 2K - ForexClear and FCM Procedures Section 2B

Dear Ms. Jurgens:

Pursuant to §40.6(a) of the Commission Regulations, LCH.Clearnet Limited ("LCH.Clearnet"), a derivatives clearing organization registered with the Commodity Futures Trading Commission (the "CFTC"), hereby submits for self-certification amendments to LCH.Clearnet's Procedures relating to the Market Data provisions of the ForexClear service.

Part I: Explanation and Rationale for the Amendments

The operation, purpose and effect of the amendments to the Procedures is to adapt the onboarding procedure for the ForexClear clearing service and enable continued compliance with requirements that there should be "fair and open access" pursuant to CFTC Regulations § 39.12(a)(1).

The current procedures require that ForexClear Clearing Members ("FXCCMs") and ForexClear Futures Commission Merchants ("FX FCMs") be a source for Market Data and make pricing submissions to the Clearing House. This is no longer mandatory in the revised procedures and is replaced by a contractual arrangement. New members may participate in the contractual arrangement if they meet the criteria.

A slight wording change has been made to clarify the description of the VAR methodology used in the calculation of initial margin for FXCCMs and FX FCMs.

LCH.Clearnet plans to implement these changes no later than the close of business on Friday, May 17th and in accordance with CFTC Regulation §40.6(a).

Description of Changes

Clearing House Procedures Section 2K - ForexClear
Sections 2K.4 and 2K.5 have been amended to reflect that only "contributing" FXCCMs and FX

FCMs are involved in the provision of pricing data. In particular, section 2K.5.1.1 in relation to mandatory submission is deleted.

There is one minor change to 2K.3.9.2, the words "Market Data" have been removed from the end of the last paragraph of this section and the wording relating to automatic date adjustment clarified.

Additionally, there is a minor change to 2K.5.5.1, the word "filtered" has been deleted from the description of the VAR methodology used in the calculation of initial margin.

FCM Rulebook - FCM Procedures
As with the Section 2K, the FCM procedures have been amended to reflect that only "contributing" FXCCMs and FX FCMs are involved in the provision of pricing data. This includes the deletion of the first two paragraphs of 2B.10.1.

Again there are two minor amendments to 2B.8.11. The wording relating to automatic date adjustment has been clarified and the word "filtered" has been deleted from the description of the VAR methodology used in the calculation of initial margin.

The final change is made to 2B.18.4. The timetable for the transfer of client positions has been updated to align with revised operational procedures.

Changes are summarised in the table below:

Procedures Reference	FCM Procedures	Explanation
2K.3.9.2	2B.8.11	Amended to make clear the valuation date and/or the settlement date of affected ForexClear contracts will automatically be adjusted in accordance with the provisions of the EMTA template for the relevant currency pair. Reference to Market Data has been removed.
2K.4.2(a)(i)	2B.9.2	Amended to make clear the market data rules only apply to contributing FXCCMs and FX FCMs
2K.4.2(a)(ii)	2B.9.2	Amended to make clear the market data rules only apply to contributing FXCCMs and FX FCMs
2K.4.2(b)(i)	2B.9.2	Amended to make clear the market data rules only apply to contributing FXCCMs and FX FCMs
2K.4.2(b)(ii)	2B.9.2	Amended to make clear the market data rules only apply to contributing FXCCMs and FX FCMs
2K.5.1.1 (old section)	2B.10.1	'Price Submission' paragraph deleted and subsequent cross-references removed throughout.
2K.5.1.1 (new)	2B.10.1 (new)	Old 2K.5.1.2 and 2B.10.2 - re-numbering throughout.

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2K.5.5.1	2B.11	(i)Removal of reference to 5 year market data and the deleted section 2K.5.1.1. (ii) Amended to make clear the VAR methodology.
n/a	2B.18.4	The timetable for the transfer of client positions has been updated to align with revised operational processes.

Part II: Amendments to the Rules & Regulations of LCH.Clearnet

The changes are reflected in the blacklined version of the relevant documents, which are attached hereto as Exhibits A & B, respectively.

Part III: Certification by LCH.Clearnet

LCH.Clearnet certifies to the CFTC, in accordance with CFTC Regulation §40.6, that the planned changes comply with the Commodity Exchange Act and the CFTC Regulations promulgated thereunder. LCH.Clearnet further certifies that, upon the submission of this material, in compliance with §39.21 of the Commission's regulations, LCH.Clearnet will post a notice of pending certification with the CFTC and a copy of the submission on LCH.Clearnet's website at

http://www.lchclearnet.com/rules_and_regulations/ltd/proposed_rules.asp

Part IV: Compliance with Core Principles

LCH.Clearnet will continue to comply with all Core Principles following the introduction of the proposed amendments and has concluded that its compliance with Core Principles would not be adversely affected by these changes. The changes reflected herein will ensure continued compliance with the Core Principles and, in particular, with Core Principle C., since they will remove a potential barrier to membership.

Part V: Opposing Views

There were no opposing views expressed to LCH.Clearnet by its governing board or committee members, members of LCH.Clearnet or market participants that were not incorporated into the changes.

Certification

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

Should you have any questions regarding this submission please contact me at
jay.iyer@lchclearnet.com

LCH.CLEARNET

Sincerely yours,

Jay Iyer, Chief Compliance Officer
LCH.Clearnet Limited

cc:

Gavin Wells, LCH.Clearnet
Kenji Takaki, CFTC
Adam Cohen, CFTC

Exhibit A

SECTION 2K

CONTENTS

The Clearing House will carry out the portfolio transfer. For transfers under 2, 3 and 4, this can be on a ForexClear Contract by ForexClear Contract or on a Currency Pair basis.

Before the completion of a portfolio transfer, the Clearing House will perform a margin impact analysis of the transfer to the source and destination portfolios. The Clearing House will advise the relevant FXCCM regarding any additional collateral that may be required in order to complete the portfolio transfer.

2K.3.8.2 Legal Documentation

The Transfer of ForexClear Contracts will be documented in accordance with the standard legal documentation for the transfer of ForexClear Contracts provided by the Clearing House to FXPs. Any such transfer must be authorised by all relevant parties and executed by individuals with appropriate signing authority.

2K.3.9 **Reference Data**

2K.3.9.1 Holiday Event Calendar

For the ForexClear Service the Clearing House uses the SwapsMonitor Financial Calendar (as published by Swaps Monitor Publications, INC.) the ("**SwapsMonitor Financial Calendar**") in order to determine holidays. This requires all ForexClear Participants to be licensees of the SwapsMonitor Financial Calendar. The calendars, as applicable to the ForexClear Service, will be available online for inspection and for file download from Clearing Member Reporting. SwapsMonitor is used on a daily basis across all calendars.

2K.3.9.2 Date Adjustment

When a new holiday is declared in a particular jurisdiction, an update to the holiday calendar ~~affecting ForexClear Contracts for which the Valuation Date is due on the new holiday~~ is required.

The Valuation Date and/or the Settlement Date ~~will~~of the affected ForexClear Contracts will automatically be adjusted in accordance with the provisions of the EMTA Template for the relevant Currency Pair.

The Clearing House may accede to a request from FXCCMs to suspend processing of adjustments to the relevant affected Valuation Dates and Settlement Dates so as to allow FXCCMs to cancel and rebook any ForexClear Contracts following any such adjustment. In such case, the Clearing House will inform FXCCMs as to the timing and duration of any such suspension. ~~Market Data.~~

2K.4 MARKET DATA

2K.4.1 Sources used by ForexClear Service

The ForexClear Service collates instrument quotes for the following from multiple market sources (as detailed in Section 4.2) in relation to each Currency Pair:

(a) FX spot rates ("**FX Spot Rates**");

(b) FX swap points ("**FX Swap Points**");

(c) Settlement Rate Option;

(d) Interest rate curves (see Section 4.5.2 below) ("**Interest Rate Curves**");

(e) USD LIBOR Curve;

(f) PAI rates ("**PAI Rates**"); and

(g) Country credit spreads (see Section 4.6 below) ("**Country Credit Spreads**"),

together, "**Market Data**".

FX Spot Rates and FX Swap Points are received by the Clearing House via a live link from all eligible FXCCMs during the Opening Hours (as defined in Section 2.2.2).

2K.4.2 **Market Data Sources and Frequencies**

The Clearing House receives the following updated raw prices:

(a) FX Spot Rates:

(i) Source ~~-~~ – contributing FXCCMs.

(ii) Frequency - every time updated by contributing FXCCMs up to a maximum rate of once every five minutes.

(b) FX Swap Points:

(i) Source - ~~all~~contributing FXCCMs.

(ii) Frequency - every time updated by contributing FXCCMs up to a maximum rate of once every five minutes.

(iii) Tenors – as shown in the table below.

Tenor
S/N
1 week
1 month
2 months
3 months
6 months
12 months
24 months

(c) Settlement Rate Options:

(i) Source - Reuters.

(ii) Frequency - when published (at the times shown in the table at Section 4.3 below).

(d) Interest Rate Curves:

(i) Source - internal Clearing House.

(ii) Frequency - at each SwapClear margin run.

(e) Country Credit Spreads:

(i) Source - Bloomberg.

(ii) Frequency - when published.

(f) USD LIBOR Curve:

(i) Source - SwapClear.

(ii) Frequency - at each SwapClear margin run.

(g) PAI rates:

(i) Source - LCH Treasury.

(ii) Frequency - Daily.

2K.4.3 **Market Data**

Reference Currency	**Settlement Rate Option (or as per the relevant EMTA Template as amended from time to time)**	**Settlement Rate Publication Local Time (or as per the relevant EMTA Template as amended from time to time)**
BRL	BRL PTAX (BRL09)	13:15 (São Paolo)
CLP	CLP DÓLAR OBS (CLP10)	10:30 (Santiago)
CNY	CNY SAEC (CNY01)	09:15 (Beijing)
COP	COP TRM (COP02)	10.30 (Bogota)
IDR	IDR ABS (IDR01)	11:30 (Singapore)
INR	INR RBIB (INR01)	12:30 (Mumbai)
KRW	KRW KFTC18 (KRW02)	15:30 (Seoul)
MYR	MYR ABS (MYR01)	11:30 (Singapore)
PHP	PHP PDSPESO (PHP06)	11:30 (Manila)
RUB	RUB CME-EMTA (RUB03)	13:30 (Moscow)
TWD	TWD TAIFX1 (TWD03)	11:00 – 12:00 (Taipei)

2K.4.4 **Market Data Provision to FXCCMs**

Market Data used in a Margin Run is made available to FXCCMs via ForexClear Reporting (as defined in Section 7).

2K.4.5 **Curve Building in ForexClear**

2K.4.5.1 FX Curve (Zero Coupon/Market Rate Curve)

The Clearing House builds for each Currency Pair an FX curve (zero coupon/market rate curve) using the FX Spot Rates, FX Swap Points and the USD LIBOR Curve based on interpolation techniques agreed through the ForexClear Risk & Trading Working Group (a group comprising the Clearing House and FXCCM's risk and trading representatives) ("**RTWG**"). The USD LIBOR Curve is used for discounting; the FX curve is used for capitalisation of forward cash flows.

2K.4.5.2 Interest Rate Curve

The Clearing House applies the linear interpolation method to build the Interest Rate Curve. Linear interpolation is applied on zero coupon curves.

2K.4.5.3 Curve Use

End of day is defined as 22.00 local London time ("**EOD**"). The following EOD data is used in the calculation of risk analytics for an EOD Margin Run (as defined in Section 6.1.2):

(a) FX Spot Rates; and

(b) FX Swap Points.

2K.4.6 **Country Credit Spreads**

The Clearing House takes country credit spreads (in relation to Brazil, Russia, India, China, Chile, South Korea, Colombia, Indonesia, Malaysia, Philippines and Taiwan) from Bloomberg for use in risk multiplier calculations.

2K.5 **VALUATION AND MARGIN**

2K.5.1 **Product Valuation**

~~2K.5.1.1 Price Submission~~

~~Each FXCCM shall provide pricing data to the Clearing House in accordance with the ForexClear Market Data Interface (a document issued by LCH and as amended from time to time) as amended from time to time (save in the case of there being more than one FXCCM in the same corporate group, in which case each such FXCCM shall ensure that one of those FXCCMs complies with this requirement).~~

~~This data is used to calculate the NPV (as defined in Section 5.1.2 below) of ForexClear Contracts.~~

2K.5.1.1 ~~2K.5.1.2~~ Net Present Value ("NPV")

From (and including) the Registration Time to the EOD Margin Run on the business day preceding the Valuation Date, each ForexClear Contract is valued in USD using the current market rates and discounted from the future Settlement Date to its present value (being valued using the data submitted by FXCCMs, in accordance with Sections 4.2 ~~and 5.1.1~~).

At EOD on the Valuation Date, the Settlement Rate is used to value the ForexClear Contract.

If Valuation Postponement applies, the ForexClear Contract is valued using the current forward price (based on the data submitted by FXCCMs, in accordance with Sections 4.2 ~~and 5.1.1~~) to (and including) the date on which the Settlement Rate is determined in accordance with the ForexClear Contract Terms.

2K.5.2 **Variation Margin ("VM")**

VM for each ForexClear Contract is calculated at EOD as the change from the preceding business day in its NPV. With respect to each FXCCM, the net sum of the VM for all open ForexClear Contracts is credited to or debited from such FXCCM once a day, following the EOD Margin Run.

Cover for VM (adjusted by PAI, as set out below) will be paid each business day by or to each FXCCM in respect of all of its open ForexClear Contracts. The VM will be calculated in, and must be paid in, USD.

With respect to each ForexClear Contract, VM is calculated every business day from (and including) the Registration Time to (and including) the EOD on the business day immediately preceding the Settlement Date.

2K.5.3 **Reporting Breakdown**

ForexClear margin reports show the portfolio of open ForexClear Contracts of each FXCCM and of each FXD by Currency Pairs and in the Settlement Currency (i.e. USD).

2K.5.4 **Price Alignment Interest ("PAI")**

The effect of daily cash VM movements results in the need for PAI. Without this adjustment, the pricing of ForexClear Contracts would differ from identical uncleared trades, as cash earned from favourable daily price moves would be priced into the product.

2K.5.4.1 PAI Calculation Methodology

PAI is calculated at EOD on each business day from (and including) the first business day after the Trade Date to (and including) the business day immediately preceding the Settlement Date.

In this Section 5.4, "**T**" means any given business day; "**T-1**" means the business day immediately preceding T; "**T+1**" means the business day immediately following T; and "**MTM**" means the total value (expressed in USD)of an FXCCM's portfolio open of ForexClear Contracts after valuation in accordance with Section 5.2 at close of business on any business day. The Clearing House calculates PAI in USD once a day at EOD.

(a) Principles:

(i) MTM is calculated at EOD on T-1.

(ii) Change in MTM (net VM in respect of an FXCCM's portfolio of open ForexClear Contracts) is paid/ received on the morning of T.

(iii) PAI Rate for T to be applied is known at EOD T.

(iv) PAI is calculated on the night of T, for MTM of T-1 for ForexClear Contracts up to the business day before their Settlement Date.

(v) PAI is paid / received on morning of T+1 via PPS.

(b) Components:

(i) PAI Rate (annualised interest applied to an FXCCM's MTM).

(ii) MTM;

(iii) Accrual Factor (factor used to convert the PAI Rate from an annual rate to a daily rate, on a basis of a year of 360 days).

(c) So:

(i) PAI T = PAIT Rate x MTMT-1 x Accrual Factor.

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

2K.5.4.2 VM/PAI Adjustment

With respect to each FXCCM, the Clearing House makes the following adjustment to the EOD VM:

(a) if, with respect to its portfolio of open ForexClear Contracts, such FXCCM has (to but excluding the relevant EOD) paid an amount in VM greater than the amount of VM it has received, such FXCCM will receive PAI; and

(b) if, with respect to its portfolio of open ForexClear Contracts, such FXCCM has (to but excluding the relevant EOD) received an amount in VM greater than the amount of VM it has paid, such FXCCM will pay PAI.

2K.5.5 **Initial Margin ("IM")**

The Clearing House will require FXCCMs to post IM.

2K.5.5.1 Calculation of Initial Margin

IM will be calculated within the day and at EOD on each business day as part of each Margin Run. 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 ~~filtered~~ historical simulation value-at-risk methodology. All open ForexClear Contracts and 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. ForexClear Clearing Members 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)~~market data submitted by FXCCMs pursuant to Section ~~5.1.1, which is adapted to current market prices.~~4.

2K.5.6 **Initial Margin Risk Multipliers**

Credit risk, liquidity risk and sovereign risk are measured and applied to FXCCMs as part of the IM calculation.

2K.5.6.1 Credit Risk Multiplier ("CRiM")

The CRiM applied will consider the FXCCM's credit worthiness, initial margin level and/or stress testing exposures in accordance with LCH.Clearnet Credit Risk Policy.

2K.5.6.2 Liquidity Risk multiplier ("LRMM").

(a) Where an FXCCM has an exposure above set thresholds in a particular Currency Pair or tenor of 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.

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

(c) The Clearing House calculates and applies LRMM as part of each Margin Run, based on the LRMM for each Currency Pair in the FXCCM's house position-keeping account.

2K.5.6.3 Sovereign Risk multiplier ("SRM").

(a) An SRM is applied when there is a perceived risk of sovereign default or a change in a country's currency regime which would impact ForexClear Contracts transacted in certain Reference Currencies. The SRM takes into account:

(i) the probability of sovereign default or a regime change event occurring; and

(ii) the depreciation or appreciation risk of the Reference Currencies.

(b) The SRM sovereign default probability is calculated by assessing the three month probability of default for the different sovereign countries, based on the country's 5-year credit default swap (CDS) spread. The probability of a regime change event is estimated based on historical events and publicly available data for the different sovereign countries. The county CDS spreads are reviewed and updated weekly.

Exhibit B

2B FOREXCLEAR

2B.1 Introduction and Interpretation

This Section 2B of the FCM Procedures governs the FCM ForexClear Service and must be read in conjunction with the other parts of the FCM Rulebook.

A reference to an "**FXCCM**" is generic and encompasses both ForexClear Clearing Members (as defined in the UK General Regulations) and FCM ForexClear Clearing Members.

Unless otherwise specified, all times are in local London time.

2B.2 Users of FCM ForexClear

The FCM ForexClear Service is an interface that processes and stores all FCM ForexClear Transactions. Those authorized by the Clearing House to submit trades (as defined below) for clearing in the FCM ForexClear Service fall into three categories – FCM Clearing Members approved by the Clearing House to clear in the FCM ForexClear Service ("**FX FCMs**"), FCM Clients of FX FCMs and Affiliates of FX FCMs. FX FCMs, FCM Clients of FX FCMs and Affiliates of FX FCMs are collectively known as ForexClear Participants ("**FXPs**"). For membership procedures, please see Section 1 of the FCM Procedures. At least one party to each FCM ForexClear Transaction submitted to the Clearing House will be an FX FCM, acting through a client or house account; the other party may be another FX FCM or may be a ForexClear Clearing Member.

For identification purposes each FX FCM is assigned a unique three-character mnemonic for purposes of the FCM ForexClear Service.

2B.3 Termination of FX FCM Status

Clearing Members should contact the Clearing House Membership Department (+44 (0)207 426 7891/7627/7063; membership@lchclearnet.com) for details of how to resign from the FCM ForexClear Service.

2B.4 Service Scope

2B.4.1 Eligibility

Non-Deliverable FX Transactions as defined in Part A of Schedule B to the FCM Regulations ("**NDFs**") may be submitted for clearing through the ForexClear Service. To be eligible to be registered as a ForexClear Contract, a trade must meet the ForexClear Eligibility Criteria (as set out in Part B of Schedule B to the FCM Regulations).

2B.4.2 Service Operating Hours

Opening Days:

The FCM ForexClear Service will be open each day, except weekends, Christmas Day and New Year's Day.

From (and including) the Registration Time to (and including) the Business Day immediately preceding the Settlement Date, changes in the daily value of open FCM ForexClear Contracts will have resulted in VM credits and debits between the parties (as set out in Section 2B.~~10.3~~10.2). With respect to each FCM ForexClear Contract, on the Business Day immediately preceding the Settlement Date, the Clearing House nets the Settlement Currency Amount against the aggregate net VM which has been paid/received through the term of the FCM ForexClear Contract, the result of which is a Net Settlement Amount ("**NSA**"), which will be reflected in the FX FCMs' cash accounts with the Clearing House on the Settlement Date. As such, with respect to each FCM ForexClear Contract, the payment in full of all the VM required during the term of such FCM ForexClear Contract shall satisfy the relevant party's obligation to pay the Settlement Currency Amount on the Settlement Date of such FCM ForexClear Contract. For the purpose of providing Nostro reconciliation, to the relevant parties, the Clearing House will provide Reporting (as defined in Section 2B.21 of these FCM Procedures) which will reflect an entry for the "Settlement Currency Amount" and a separate entry for the reversal of the aggregate net Variation Margin which has been paid/received through the term of the FCM ForexClear Contract. This paragraph applies even if the Settlement Date has been adjusted in accordance with the FCM ForexClear Contract Terms.

2B.8.11 **Reference Data**

Holiday Event Calendar:

For the FCM ForexClear Service the Clearing House uses the SwapsMonitor Financial Calendar (as published by Swaps Monitor Publications, Inc.) the ("**SwapsMonitor Financial Calendar**") in order to determine holidays. This requires all FX FCMs to be licensees of the SwapsMonitor Financial Calendar. The calendars, as applicable to the FCM ForexClear Service, will be available online for inspection and for file download from Clearing Member Reporting. SwapsMonitor is used on a daily basis across all calendars.

Date Adjustment:

When a new holiday is declared in a particular jurisdiction, an update to the holiday calendar~~ affecting FCM ForexClear Contracts for which the Valuation Date is due on the new holiday~~ is required.

The Valuation Date and/or the Settlement Date ~~will~~of the affected ForexClear Contracts will automatically be adjusted in accordance with the provisions of the EMTA Template for the relevant Currency Pair.

The Clearing House may accede to a request from FX FCMs to suspend processing of adjustments to the relevant affected Valuation Dates and Settlement Dates so as to allow FX FCMs to cancel and rebook any FCM ForexClear Contracts following any such adjustment. In such case, the Clearing House will inform FX FCMs as to the timing and duration of any such suspension.

2B.9 Market Data

2B.9.1 **Sources used by FCM ForexClear Service**

The FCM ForexClear Service collates instrument quotes for the following from multiple market sources (as detailed in Section 2B.9.2) in relation to each Currency Pair:

- FX spot rates ("**FX Spot Rates**");
- FX swap points ("**FX Swap Points**");
- Settlement Rate Option;
- Interest rate curves (see Section 2B.9.5 below) ("**Interest Rate Curves**");
- USD LIBOR Curve;
- PAI rates ("**PAI Rates**"); and
- Country credit spreads (see Section 2B.9.6 below) ("**Country Credit Spreads**"),

together, "**Market Data**".

FX Spot Rates and FX Swap Points are received by the Clearing House via a live link from all eligible FXCCMs (including FX FCMs) during the Opening Hours (as defined in Section 2B.4.2).

2B.9.2 Market Data Sources and Frequencies

The Clearing House receives the following updated raw prices:

FX Spot Rates:

- Source – contributing FXCCMs (including FX FCMs).
- Frequency - every time updated by contributing FXCCMs (including FX FCMs) up to a maximum rate of once every five minutes.

FX Swap Points:

- Source - ~~all~~contributing FXCCMs (including FX FCMs).
- Frequency - every time updated by contributing FXCCMs (including FX FCMs) up to a maximum rate of once every five minutes.
- Tenors – as shown in the table below.

Tenor
S/N
1 week
1 month
2 months
3 months
6 months
12 months

24 months

Settlement Rate Options:

- Source - Reuters.
- Frequency - when published (at the times shown in the table in Section 2B.9.3 below).

Interest Rate Curves:

- Source - internal Clearing House
- Frequency - at each SwapClear margin run.

Country Credit Spreads:

- Source - Bloomberg.
- Frequency - when published.

USD LIBOR Curve:

- Source - SwapClear.
- Frequency - at each SwapClear margin run.

PAI rates:

- Source - LCH Treasury.
- Frequency - Daily.

2B.9.3 **Market Data**

Reference Currency	Settlement Rate Option (or as per the relevant EMTA Template as amended from time to time)	Settlement Rate Publication Local Time (or as per the relevant EMTA Template as amended from time to time)
BRL	BRL PTAX (BRL09)	13:15 (São Paolo)
CLP	CLP DÓLAR OBS (CLP10)	10:30 (Santiago)
CNY	CNY SAEC (CNY01)	09:15 (Beijing)
COP	COP TRM (COP02)	10:30 (Bogota)
IDR	IDR ABS (IDR01)	11:30 (Singapore)
INR	INR RBIB (INR01)	12:30 (Mumbai)
KRW	KRW KFTC18 (KRW02)	15:30 (Seoul)
MYR	MYR ABS (MYR01)	11:30 (Singapore)
PHP	PHP PDSPESO (PHP06)	11:30 (Manila)
RUB	RUB CME-EMTA (RUB03)	13:30 (Moscow)
TWD	TWD TAIFX1 (TWD03)	11:00 – 12:00 (Taipei)

2B.9.4 **Market Data Provision to FX FCMs**

Market Data used in a Margin Run is made available to FX FCMs via ForexClear Reporting (as defined in Section 2B.21).

2B.9.5 **Curve Building in ForexClear**

FX Curve (Zero Coupon/Market Rate Curve):

The Clearing House builds for each Currency Pair an FX curve (zero coupon/market rate curve) using the FX Spot Rates, FX Swap Points and the USD LIBOR Curve based on interpolation techniques agreed through the ForexClear Risk & Trading Working Group (a group comprising the Clearing House's and FXCCM's (including FX FCM) risk and trading representatives) ("**RTWG**"). The USD LIBOR Curve is used for discounting; the FX curve is used for capitalization of forward cash flows.

Interest Rate Curve:

The Clearing House applies the linear interpolation method to build the Interest Rate Curve. Linear interpolation is applied on zero coupon curves.

Curve Use:

End of day is defined as 22.00 hours, London time ("**EOD**"). The following EOD data is used in the calculation of risk analytics for an EOD Margin Run (as defined in Section 2B.16.2):

- FX Spot Rates; and
- FX Swap Points.

2B.9.6 **Country Credit Spreads**

The Clearing House takes country credit spreads (in relation to Brazil, Russia, India, China, Chile, South Korea, Colombia, Indonesia, Malaysia, Philippines and Taiwan) from Bloomberg for use in risk multiplier calculations.

2B.10 FCM ForexClear Contract Valuation

2B.10.1 ~~**Price Submission**~~

~~In accordance with these FCM Procedures, each FX FCM shall provide pricing data to the Clearing House in accordance with the ForexClear Market Data Interface (a document issued by LCH and as amended from time to time) as amended from time to time (save in the case of there being more than one FXCCM in the same corporate group, in which case each such FXCCM shall ensure that one of those FXCCMs complies with this requirement).~~

~~This data is used to calculate the NPV (as defined in Section 2B.10.2 below) of FCM ForexClear Contracts.2B.10.2~~ **Net Present Value ("NPV")**

From (and including) the Registration Time to the EOD Margin Run on the business day preceding the Valuation Date, each FCM ForexClear Contract is valued in USD using the current market rates and discounted from the future

Settlement Date to its present value (being valued using the data submitted by FXCCMs, in accordance with Sections 2B.9.2~~ and 2B.10.1~~).

On the Valuation Date, the Settlement Rate is used to value the FCM ForexClear Contract.

If Valuation Postponement applies, the FCM ForexClear Contract is valued using the current forward price (based on the data submitted by FXCCMs in accordance with Sections 2B.9.2~~ and 2B.10.1~~) to (and including) the date on which the Settlement Rate is determined in accordance with the ForexClear Contract Terms.

2B.~~10.3~~10.2 Variation Margin ("VM")

VM for each FCM ForexClear Contract is calculated at EOD as the change from the preceding business day in its NPV. With respect to each FX FCM, the net sum of the VM for all open FCM ForexClear Contracts is credited to or debited from such FX FCM once a day, following the EOD Margin Run.

Cover for VM (adjusted by PAI, as set out below) will be paid each business day by or to each FX FCM in respect of all of its open FCM ForexClear Contracts. The VM will be calculated in, and must be paid in, USD.

With respect to each FCM ForexClear Contract, VM is calculated every business day from (and including) the Registration Time to (and including) the EOD on the business day immediately preceding the Settlement Date.

2B.~~10.4~~10.3 Reporting Breakdown

ForexClear margin reports show the portfolio of open FCM ForexClear Contracts of each FX FCM by Currency Pairs and in the Settlement Currency (i.e., USD).

2B.~~10.5~~10.4 Price Alignment Interest ("PAI")

The effect of daily cash VM movements results in the need for PAI. Without this adjustment, the pricing of FCM ForexClear Contracts would differ from identical uncleared trades, as cash earned from favorable daily price moves would be priced into the product.

2B.~~10.6~~10.5 PAI Calculation Methodology

PAI is calculated at EOD on each business day from (and including) the first business day after the Trade Date to (and including) the business day immediately preceding the Settlement Date.

In this Section 2B.~~10.6,~~10.5, "**T**" means any given business day; "**T-1**" means the business day immediately preceding T; "**T+1**" means the business day immediately following T; and "**MTM**" means the total value (expressed in USD) of an FXCCM's portfolio open of FCM ForexClear Contracts after valuation in accordance with Section 2B.~~10.3~~10.2 at close of business on any business day. The Clearing House calculates PAI in USD once a day at EOD.

Principles:

- MTM is calculated at EOD on T-1.

- Change in MTM (net VM in respect of an FX FCM's portfolio of open ForexClear Contracts) is paid/ received on the morning of T.

- PAI Rate for T to be applied is known at EOD T.

- PAI is calculated on the night of T, for MTM of T-1 for FCM ForexClear Contracts up to the business day before their Settlement Date.

- PAI is paid / received on morning of T+1 via PPS.

Components:

- PAI Rate (annualized interest applied to an FX FCM's MTM).

- MTM

- Accrual Factor (factor used to convert the PAI Rate from an annual rate to a daily rate, on a basis of a year of 360 days).

So:

- PAI T = PAI_T Rate x MTM_{T-1} x Accrual Factor.

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

2B.~~10.7~~10.6 **VM/PAI Adjustment**

With respect to each FX FCM, the Clearing House makes the following adjustment to the VM at EOD:

- if, with respect to its portfolio of open FCM ForexClear Contracts, such FX FCM has (to but excluding the relevant EOD) paid an amount in VM greater than the amount of VM it has received, such FX FCM will receive PAI; and

- if, with respect to its portfolio of open FCM ForexClear Contracts, such FX FCM has (to but excluding the relevant EOD) received an amount in VM greater than the amount of VM it has paid, such FX FCM will pay PAI.

2B.11 Initial Margin ("IM")

The Clearing House will require FX FCMs to post IM. This amount will be calculated within the day and at EOD on each business day as part of each Margin Run. With respect to each FX FCM, it 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)~~market data submitted by FXCCMs pursuant to Section 2B.~~9, which is adapted to current market prices.~~9.

Separate Initial Margin calculations are performed for an FX FCM's house "H" and client "C" accounts.

The Clearing House reserves the right to require additional amounts of cover from a specific FX FCM or from all FX FCMs in accordance with FCM Regulation 9.

2B.11.1 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.Clearnet Credit Risk Policy.

2B.11.2 Liquidity Risk Multiplier ("LRMM")

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.

2B.11.3 Sovereign Risk multiplier ("SRM")

An SRM is applied when there is a perceived risk of sovereign default or a change in a country's currency regime which would impact FCM ForexClear Contracts transacted in certain Reference Currencies. The SRM takes into account:

i. the probability of sovereign default or a regime change event occurring; and

ii. the depreciation or appreciation risk of the Reference Currencies.

The SRM sovereign default probability is calculated by assessing the three month probability of default for the different sovereign countries, based on the country's 5-year credit default swap (CDS) spread. The probability of a regime change event is estimated based on historical events and publicly available data for the different sovereign countries. The country CDS spreads are reviewed and updated weekly.

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

2B.18.4 **Timetable for FCM Client Transfer**

Time (all references below are to New York time, unless stated otherwise)	**Partial Transfer**	**Full Transfer (with collateral)**	**Full Transfer (without collateral)**
Day 0: 15:00	Deadline for receipt from Receiving FCM Clearing Member of FCM Client Partial Transfer Form.	Deadline for receipt from Receiving FCM Clearing Member of FCM Full Transfer Form and confirmation that cover is to be transferred.	Deadline for receipt from Receiving FCM Clearing Member of FCM Full Transfer Form.
Day 1: 05:00	Deadline for notification by the Clearing House to the Carrying FCM Clearing Member and the Receiving FCM Clearing Member that it intends to transfer certain FCM ForexClear Contracts pursuant to a request from the Receiving FCM Clearing Member.	Deadline for notification by the Clearing House to the Carrying FCM Clearing Member and the Receiving FCM Clearing Member that it intends to transfer FCM ForexClear Contracts pursuant to a request from the Receiving FCM Clearing Member.	Deadline for notification by the Clearing House to the Carrying FCM Clearing Member and the Receiving FCM Clearing Member that it intends to transfer FCM ForexClear Contracts pursuant to a request from the Receiving FCM Clearing Member.
Day 2: 09:00	Deadline for notification (if any) from Carrying FCM Clearing Member that: (i) the FCM Client has become insolvent and/or (ii) the FCM Client has unsatisfied outstanding obligations to the Carrying FCM Clearing Member (in accordance with FCM Regulation 8(c)(v)) and that the Carrying FCM Clearing Member is therefore objecting to the transfer.	Deadline for notification (if any) from Carrying FCM Clearing Member that: (i) the FCM Client has become insolvent and/or (ii) the FCM Client has unsatisfied outstanding obligations to the Carrying FCM Clearing Member (in accordance with FCM Regulation 8(b)(v)) and that the Carrying FCM Clearing Member is therefore objecting to the transfer. Deadline for confirmation from Carrying FCM Clearing Member of the collateral which is to be ported to the Receiving FCM Clearing Member.	Deadline for notification (if any) from Carrying FCM Clearing Member that: (i) the FCM Client has become insolvent and/or (ii) the FCM Client has unsatisfied outstanding obligations to the Carrying FCM Clearing Member (in accordance with FCM Regulation 8(b)(v)) and that the Carrying FCM Clearing Member is therefore objecting to the transfer.
		~~Deadline for confirmation from Carrying FCM Clearing Member of the collateral which is to be ported to the Receiving FCM Clearing Member.~~	

Time (all references below are to New York time, unless stated otherwise)	**Partial Transfer**	**Full Transfer (with collateral)**	**Full Transfer (without collateral)**
Day 2: 11:00		LCH notifies the Receiving FCM Clearing Member of the collateral that will be transferred or that collateral will not be transferred. Where collateral will not be transferred, transfer is treated as a full transfer (without collateral).	
Day 2: 17:00	Deadline for receipt by the Clearing House of consent of transfer from the Receiving FCM Clearing Member.	Deadline for receipt by the Clearing House of consent of transfer and associated collateral from the Receiving FCM Clearing Member.	Deadline for receipt by the Clearing House of consent of transfer from the Receiving FCM Clearing Member.
~~Day 3: 08:00~~	~~Clearing House performs the transfer process of certain FCM ForexClear Contract(s) to be included within the 14:30 London time margin run.~~	~~Clearing House performs the transfer process of FCM ForexClear Contracts to be included within the 14:30 London time margin run.~~	~~Clearing House performs the transfer process of FCM ForexClear Contracts to be included within the 14:30 London time margin run.~~
Day 3: ~~10~~07:00	Target deadline for notification by Clearing House to the Carrying FCM Clearing Member or the Receiving FCM Clearing Member of whether any additional cover is required to enable the transfer.	Target deadline for notification by Clearing House to the Carrying FCM Clearing Member or the Receiving FCM Clearing Member of whether any additional cover is required to enable the transfer.	Target deadline for notification by Clearing House to the Carrying FCM Clearing Member or the Receiving FCM Clearing Member of whether any additional cover is required to enable the transfer.
Day 3: ~~11~~08:00	Deadline for receipt by Clearing House of any additional cover from the Carrying FCM Clearing Member or the Receiving FCM Clearing Member required to enable the transfer.	Deadline for receipt by Clearing House of any additional cover from the Carrying FCM Clearing Member or the Receiving FCM Clearing Member required to enable the transfer.	Deadline for receipt by Clearing House of any additional cover from the Carrying FCM Clearing Member or the Receiving FCM Clearing Member required to enable the transfer.
Day 3: 08:15	Clearing House performs the transfer process of certain FCM ForexClear Contract(s) to be included within the 14:00 (London time) Risk Run, providing both FCM are sufficiently collateralised to enable the transfer.	Clearing House performs the transfer process of certain FCM ForexClear Contract(s) to be included within the 14:00 (London time) Risk Run, providing both FCM are sufficiently collateralised to enable the transfer.	Clearing House performs the transfer process of certain FCM ForexClear Contract(s) to be included within the 14:00 (London time) Risk Run, providing both FCM are sufficiently collateralised to enable the transfer.

Time (all references below are to New York time, unless stated otherwise)	**Partial Transfer**	**Full Transfer (with collateral)**	**Full Transfer (without collateral)**
Day 3: ~~11~~09:00	Clearing House transfers FCM ForexClear Contracts.	Clearing House transfers FCM ForexClear Contracts and associated collateral.	Clearing House transfers FCM ForexClear Contracts.
Day 3: ~~11~~10:~~30~~00	Clearing House ~~publication of relevant transfer reporting in relation to the FXM ForexClear Contracts. transferred to both~~will publish to the Carrying FCM Clearing Member and the Receiving FCM Clearing Member the relevant transfer reporting in relation to the transferred FCM ForexClear Contracts	Clearing House ~~publication of relevant transfer reporting in relation to the FXM ForexClear Contracts transferred to both~~will publish to the Carrying FCM Clearing Member and the Receiving FCM Clearing Member~~.~~ the relevant transfer reporting in relation to the transferred FCM ForexClear Contracts	Clearing House ~~publication of relevant transfer reporting in relation to the FXM ForexClear Contracts. transferred to both~~will publish to the Carrying FCM Clearing Member and the Receiving ~~FXM~~FCM Clearing Member~~.~~ the relevant transfer reporting in relation to the transferred FCM ForexClear Contracts

2B.19 Proprietary Account Position Transfers

The FCM ForexClear Clearing System provides functionality for the transfer of positions from an FCM Clearing Member's Proprietary Account, either in respect of FCM ForexClear Contracts held on an FCM Clearing Member's own behalf or in respect of FCM ForexClear Contracts held on behalf of an Affiliate. In either case, any such transfer may only occur if the Receiving FCM Clearing Member is an Affiliate of the Carrying FCM Clearing Member. An FCM Clearing Member who wishes to effect a position transfer to another FCM Clearing Member should contact the Clearing House's Risk Management Department.

Before the completion of a portfolio transfer, the Clearing House will perform a margin impact analysis of the transfer to the source and destination portfolios. The Clearing House will advise the relevant FX FCM regarding any additional collateral that may be required in order to complete the portfolio transfer. Transfers will only be effected once adequate cover has been provided by both parties to the transfer. Transfers of Affiliate positions shall not be permitted to another FCM Clearing Member's Proprietary Account unless such Affiliate is an Affiliate of the FCM Clearing Member receiving the transferred position.

2B.20 FCM Clearing Member's Client Fund Transfer

The FCM ForexClear Clearing System provides functionality for the transfer of an individual FCM ForexClear Contract whereby an FCM Client has incorrectly booked the FCM ForexClear Contract to a fund, and wishes to re-locate the FCM ForexClear Contract to an alternative fund within the accounts of the same FCM Clearing Member.