LCH.CLEARNET

April 22, 2014

Brian O'Keefe, Deputy Director
Division of Clearing and Risk
Commodity Futures Trading Commission
1155 21st Street NW
Three Lafayette Centre
Washington DC 20581

Dear Mr. O'Keefe:

We are writing to provide you with updated information regarding foreign exchange non-deliverable forward ("NDF") contracts being cleared by LCH.Clearnet Limited's ("LCH.Clearnet") ForexClear service and provide updated information on recent market trends. The information contained in this letter is intended to be read together with our submission dated August 14, 2012, under CFTC Regulation §39.5(b).

Drivers for updating the submission

1. Discussions with CFTC Staff. In our engagement with Commission staff to discuss changes in the NDF market it was brought to our attention that a market body had raised concerns about introducing regulations for a market where the primary users of the product may be the domestic banks of those underlying currencies (e.g. Brazil, China, Korea and India). The following data supports the opposite view:

   - The BIS analysis of their recent triennial survey of the FX market[1] states - "The trend towards more active FX trading by non-dealer financial institutions and a concentration in financial centres is particularly visible for emerging market (EM) currencies. A decade ago, EM currency trading mostly involved local counterparties on at least one side of the transaction. Now trading of EM currencies is increasingly conducted offshore. It has especially been non-dealer financials, often trading out of financial centres that have driven this internationalisation trend."

   - The majority of domestic banks are able to trade on-shore products only. While individual regulations are not always clear, it is only in Korea that these Regulations were relaxed as part of the FX liberalisation in 1999[2] to allow onshore banks to trade NDFs with non-residents.

   - Finally as noted in the BIS paper *"Non-deliverable forwards: 2013 and beyond"*,[3] the "offshore" NDFs which are offered by LCH.Clearnet's ForexClear service can only be traded by "offshore" entities:

     "NDFs trade principally outside the borders of the currency's home jurisdiction ("offshore"). This enables investors to circumvent restrictions on trading in the home market ("onshore") and limits on delivery of the home currency offshore. Market participants include direct and portfolio investors wishing to hedge currency risk and speculators (Ma et al (2004))."

2. The BIS Triennial Survey. Issued every three years, the Bank for International Settlements' (BIS) Triennial Central Bank Survey of Foreign exchange turnover released detailed tables last December.[4] It is of note that the FX market grew by 32% from $4 trillion average daily volume (ADV) in 2010 to $5.3 trillion ADV in 2013, but perhaps of most interest is that much of this growth occurred in the FX counterparties, products and currencies covered by the Dodd-Frank Act.

- Counterparties: The FX market has become less dealer-centric with most growth in non-dealer financial institutions. New counterparty information collected in the survey provides a much more detailed picture than before of the trading patterns of non-dealer financial institutions such as lower tier banks, institutional investors and hedge funds, and their contribution to turnover. A key driver to this has been the proliferation of prime brokerage – the first step towards clearing – allowing these client types to participate more actively. Transactions with this client group grew by 48% to $2.8 trillion ADV between April 2010 and April 2013, of which 45% is non-reporting banks, 21% is institutional investors, 20% is hedge funds, 2% is from the official sector and the remaining balance cannot be categorized. Now that trading of emerging market currencies is increasingly conducted offshore, it has been these non-dealer financials, often trading out of financial centres, that have driven this internationalization trend.[1]

- Products: The two FX products showing greatest growth are FX options (up 63% to $337 billion ADV) and outright forwards (up 43% to $680 billion).[4] While options cannot yet be cleared, subject to ongoing discussions around physical settlement, they are covered by the Dodd-Frank Act. Similarly, while outright forwards cover both deliverable and non deliverable forwards (NDFs), the growth in emerging or non-deliverable currencies is greater than that in deliverable currencies suggesting that the majority of this increased liquidity is in the NDF product.

- Currencies: Average daily turnover in emerging market economy currencies has grown since 2010, and turnover has been strongest with “other financial institutions” which include as previously noted non-reporting banks, institutional investors, hedge funds and proprietary trading firms, as well as the official sector. The most rapid growth has been in offshore trading of these currencies with outright forwards up 45% and options up 102%. On aggregate, daily offshore turnover of Asian currencies contributed 35% of their 41% growth, with a similar pattern emerging for the other emerging currency regions of Latin America and Central / Eastern Europe. With 32% overall growth in FX, and 41% growth in emerging currencies, it can thus be seen that the emerging currencies are growing faster than the deliverable currencies.[5]

3. Analysis of the SDR data. Analysis of the CFTC SDR data alongside the 2013 BIS Triennial Survey indicates that a large portion of the total NDF volume is currently traded by “U.S. Persons.” For the 6 NDF currencies listed in the BIS survey, “U.S. Persons” account for 60% of BRL offshore activity and at least 30% for the other currencies except for CNY which is in the region of 20% of total daily average volumes.

The Current Situation

Liquidity in the foreign exchange market has increased amongst the counterparties, products and currencies covered by the Dodd-Frank Act (including the emerging market NDF currencies traded by Category 1 and 2 clients and settled in USD).

The FX NDF market is sufficiently liquid to risk manage and is traded by what could be considered as Category 1, 2 and 3 market participants. Since launching in March 2012, LCH.Clearnet has cleared over €1.4 trillion of FX NDFs initially focusing on dealer clearing but more recently offering client clearing allowing access to all market participants. Growth in cleared notional has been steady since July 2012, with average daily volumes in the range of $2-5 billion, however this is only between 2%-5% of total NDF volumes, representing a strong case for a clearing mandate (as explained under paragraph A of Part (ii), and in Part (iii) below).

As with the BIS data, the vast majority of ForexClear volumes are in INR -$380 billion, CNY- $350 billion, KRW - $238 billion and BRL - $132 billion, with INR accounting for 28% of total notional in the service.

Table 1: ForexClear Cumulative Cleared Notional

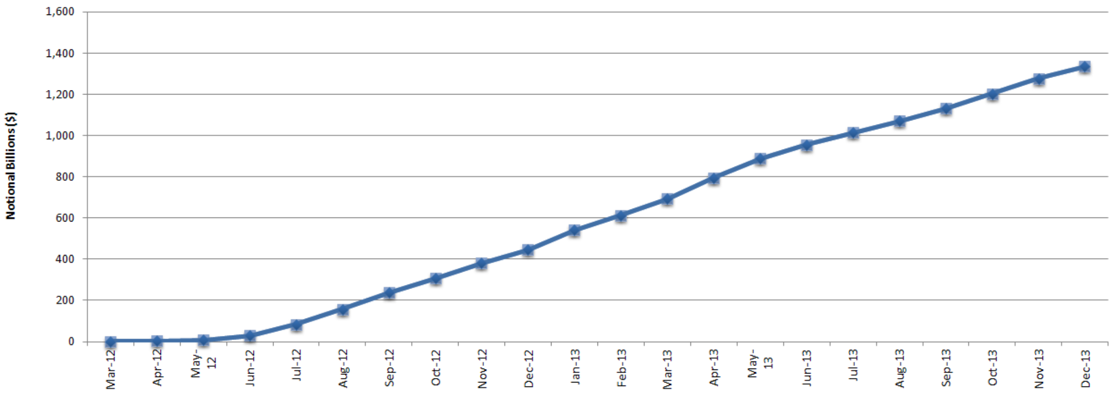
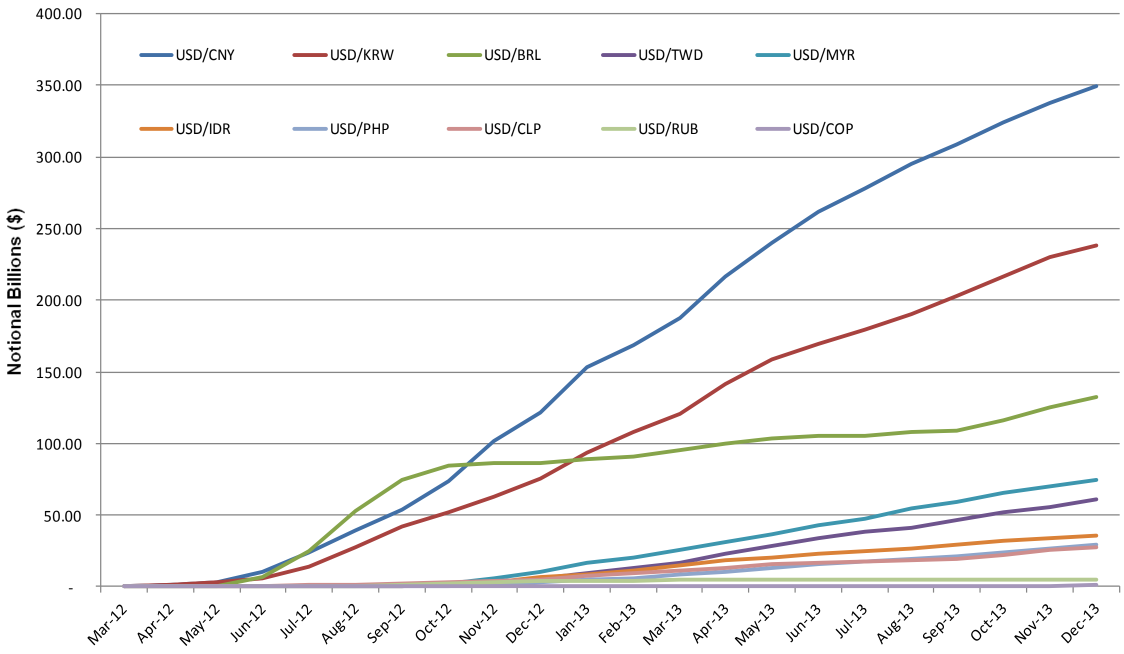


Table 2: Cumulative Notional by CCY Pair



A number of DCOs (listed under paragraph D of Part (ii) below) have launched or are close to launching FX offerings and it in anticipated that other CCPs will follow and may seek DCO status in due course.

There is general industry expectation that in line with Dodd-Frank commitments, NDFs will be mandated for US persons and in time fall under an EMIR clearing obligation.

In issuing a proposed determination signalling the start of this process, the Commission will create CCP risk mitigation for FX products and refresh competition amongst CCPs. Furthermore, it will also open the door to the clearing of foreign exchange and thus reinvigorate the work being done to create a viable solution for CCPs and CLS to work together such that any FX product can be cleared.

The issues pertaining to the clearing of FX options and NDFs can be separated and indeed until the NDF mandate has been implemented, market uncertainty is preventing increased focus on the larger and more challenging problem of FX option settlement.

Update to the submission

The following information may also be useful to the Commission and supplements LCH.Clearnet's original filing which detailed the factors in Commission regulation 39.5(b).

Part (i): Eligibility to clear swaps and ability to maintain compliance under a mandatory clearing determination

LCH.Clearnet submitted rule changes to introduce FX NDFs on November 4, 2011. Following a further minor amendment, LCH.Clearnet commenced accepting NDFs in six currency pairs on March 19, 2012. On July 19, 2012, LCH.Clearnet filed further rule changes to introduce five additional currency pairs. We remain committed to maintaining compliance with the Core Principles for DCOs promulgated by the Commission, as is further evidenced by the following service enhancements undertaken by the ForexClear service from 2012-2013:

- Jan 2013 - Enhanced operational resilience and geographical diversity (§39.18)
- Jan 2013 - Transaction Reporting to Swap Data Repositories (Parts 43 and 45)
- Nov 2012 & March 2013 - Timing of Acceptance for Clearing, i.e. Straight-Through Processing (§39.13)
- July 2013 - Introduction of the LSOC segregation model (Part 22)
- Nov 2013 - Launch of US FCM Client Clearing with 3 FCMs

The ForexClear service is currently live with operational capability for straight-through-processing ("STP") novation of client and member trades 24 hours per day, and 5.5 days per week.

Part (ii): Information that will assist the CFTC in making a determination against the following five factors:

A. The existence of significant outstanding notional exposures, trading liquidity, and adequate pricing data

   According to data from the Bank of International Settlements,[4] daily trading of all FX products averaged $5.3 trillion of notional across 3 million trades in April 2013. Using the data from the 2013 BIS Triennial Report, FX NDFs account for $127 billion notional per day (or 2.4% of the total FX volumes transacted). It is estimated that buy-side participants in NDF trading represent 50-55% of trading activity. The BIS survey focuses on six NDF currencies against the US Dollar (Brazil, China, India, Korea, Russia and Taiwan) which total $83billion each day, or 65% of total NDF volumes.

   LCH.Clearnet's ForexClear service clears NDFs in these six currencies and five additional (Chile, Colombia, Indonesia, Malaysia and Philippines); and based upon analysis of member trade portfolios we estimate that these eleven currencies provide 93% coverage of NDF traded notional. ForexClear accepts trades with a remaining maturity between 3 business days and 2 years, and thus through choice of currency and tenor offers the products with deepest liquidity in the FX NDFs traded.

   The price data used in the ForexClear service is provided in real-time directly by clearing members, including FX spot rates and swap points for specified tenors for all currency pairs. Price data is automatically snapped and cleaned by LCH.Clearnet at least every thirty minutes, up to a maximum frequency of once every five minutes. The price data received is considered highly reliable (as further defined in Part (v) below).

   LCH.Clearnet believes that trading volumes and liquidity in the FX NDF contracts that it currently clears are substantial and that pricing is robust and sufficiently standardised to provide a significant opportunity for clearing. During the month of November 2013, ForexClear cleared an average total notional amount per day of approximately $3.5 billion; the SDR currently shows approximately $61 billion of NDFs being reported each day – all of these contracts are industry standard, as are those cleared by LCH.Clearnet, and thus daily cleared volumes have the scope to increase significantly.

As at the end of March 2014, two years after the launch of the ForexClear service, more than 130,000 trades, representing a total notional in excess of $1.4trillion, had been cleared by the service, and of of this 95% of trades have been cleared under 3 seconds.

B. The availability of rule framework, capacity, operational expertise and resources, and credit support infrastructure to clear the contract on terms that are consistent with the material terms and trading conventions on which the contract is then traded

In developing an OTC clearing service, LCH.Clearnet ensured that the contracts it clears are economically equivalent to the contracts with the same underlying attributes traded bilaterally. These FX NDF contracts are cleared under a rule framework and operational infrastructure accepted by the clearing members, currently the largest participants in FX trading. As such LCH.Clearnet's ForexClear service allows bilaterally traded FX NDF contracts to be cleared on identical terms to those defined by the Emerging Markets Trade Association (EMTA).

When considering the eligibility of a new product for clearing, a key question addressed by LCH.Clearnet is whether it has the appropriate risk management, operations, default management, and technology in place to be able to dispose of positions in that new product in a member default scenario. It is naturally only prudent for any DCO to clear a product where it possesses a high degree of confidence that it can exit a position in that product during a default.

In order to be able to securely risk manage, and technologically and operationally process FX NDF trades, LCH.Clearnet has developed very sophisticated operational models, controls and risk algorithms to ensure that LCH.Clearnet complies with the 60-second novation requirement and can process trades rapidly, safely, and with minimal impact on day-to-day industry activity. In order to ensure transparency LCH.Clearnet has full connectivity to the SDR in compliance of Part 45 and sends daily files directly to the CFTC in compliance with Commission regulation § 39.19. Customers of FCMs are afforded protection under the "LSOC" segregation model and business as usual position/collateral portability is available for all customer accounts. The technology, operational and risk processes, alongside the reporting infrastructure are all scalable in line with any increase in trade and notional volume. Operational resilience and client services are provided to member and customers across London and New York centres with local risk, operations, product management and technology presence.

FX Industry Clearing Readiness

Since the late 1990s, the FX markets have grown almost continuously supported by industry investment in technology, operations and STP client services but more importantly, the legal structure that underpins the relationships between the Executing Brokers (EB), buy side clients and their Prime Brokers (PB). In the FX PB "model", the EBs and FX PBs have master agreements in place which imply that an EB does not remain at risk directly to the client and instead the client trades under the name of the FX PB. Post execution, from a legal perspective, the EB is only at risk to the FX PB and not the client; in addition, if the FX PB does not take up the trade, the EB has compensation agreements in place that enable the recovery of any losses.

This legal framework and technology investment has been an important factor in the large growth seen in the FX market with average daily volumes standing at $5.3trillion.[1] The primary beneficiaries of this increased liquidity have been buy side clients as they are able access dealers who would otherwise not be able to execute with them.

As noted in the GFMA's request for time-limited relief relating to SEFs and Reporting,[7] the introduction of US CFTC SEF rules in October 2013 and the non-mandatory clearing status of NDFs/FX Options, have led to some complications with the US FX SEF execution process which were not seen in the IRD/CDS markets. In essence the FX PB "model", has not been incorporated into SEFs and therefore when an EB transacts with a client on a SEF, the EB will remain at risk to the client for the duration of the trade, or until the FX PB agrees to execute an equal and offsetting "off-market" trade with the client and EB. As a result most US Persons' NDF volume has remained on "voice-to-SEF", however more importantly progress on SEF clearing flows has been muted, at best, due to focus on the bilateral transaction issues.

An NDF clearing mandate would yield clarity for the market around structural issues and in effect enable the NDF SEF execution process to evolve as have the IRD and CDS markets. Specifically, SEF platforms would have the impetus to invest in building out to clearing houses, but more importantly, once there is a mandate to clear, the legal issues would not be present for NDFs as the EB would be at risk to the DCO and the FX PB would be replaced by the FCM (non-intermediation model). Ultimately, US clients would again have access to execution liquidity and post-trade services in an STP manner.

C. <u>The effect on the mitigation of systemic risk, taking into account the size of the market for such contract and the resources of the derivatives clearing organization available to clear the contract</u>

When the appropriate contracts are mandated for clearing, the inevitable result will be a less disparate environment from a risk perspective. This can most easily be seen by comparing the relative margin levels of a CCP with those of the existing Prime Brokers. Whilst margin levels between brokers vary, the analysis of client NDF portfolios carried out by LCH.Clearnet, at clients' request, along with the feedback from those clients suggests that:

- Within a DCO such as LCH.Clearnet, the benefits of robust risk management and regulator-approved margin models lead to significant reductions in margin levels driven by thoroughly tested correlation offsets and multilateral netting
- Prime Brokers have historically used simplified risk models based on a gross margining approach, which do not recognise inter-product correlations and which are often based on bespoke arrangements with individual clients

A table showing the latest IM levels for the LCH.Clearnet ForexClear service is included below for your information (note that the figures shown are calculated for each individual currency pair in isolation without the benefit of offsets – diversified portfolios would benefit from offsets as suggested by the figures on the far right which provide indicative margin levels for a hypothetical portfolio containing equal positions in each currency pair).

LCH.CLEARNET

Matrix As at: 28-Feb-14

		IM % of Notional											Book IM% of notional
Tenor	**BUY/SELL**	**USD/BRL**	**USD/RUB**	**USD/INR**	**USD/CLP**	**USD/CNY**	**USD/KRW**	**USD/COP**	**USD/IDR**	**USD/MYR**	**USD/PHP**	**USD/TWD**	
S/N	BUY	8.05%	5.46%	3.66%	5.88%	0.54%	6.26%	5.88%	6.25%	2.88%	2.43%	1.75%	3.08%
	SELL	5.59%	3.80%	3.79%	4.26%	1.03%	6.47%	4.92%	5.32%	2.72%	2.21%	2.22%	2.14%
1W	BUY	8.07%	5.55%	3.71%	5.90%	0.58%	6.25%	5.88%	5.85%	2.89%	2.56%	1.70%	3.01%
	SELL	5.59%	3.80%	3.91%	4.26%	1.00%	6.48%	4.92%	5.36%	2.72%	2.22%	2.25%	2.14%
1M	BUY	8.09%	5.96%	3.92%	5.93%	0.88%	6.21%	5.98%	5.89%	2.90%	2.92%	1.75%	2.98%
	SELL	5.59%	3.85%	4.46%	4.29%	0.94%	6.44%	4.91%	5.42%	2.73%	2.25%	2.32%	2.16%
2M	BUY	8.07%	6.26%	4.20%	5.94%	1.14%	6.14%	6.04%	6.36%	2.91%	3.26%	1.78%	3.05%
	SELL	5.61%	3.90%	4.88%	4.30%	0.98%	6.42%	4.95%	5.48%	2.74%	2.29%	2.38%	2.22%
3M	BUY	8.06%	6.61%	4.43%	5.96%	1.33%	6.07%	6.01%	6.83%	2.91%	3.47%	1.79%	3.14%
	SELL	5.60%	3.97%	5.15%	4.29%	1.13%	6.41%	4.95%	5.56%	2.75%	2.34%	2.42%	2.28%
6M	BUY	8.00%	7.47%	4.66%	5.91%	1.72%	5.92%	6.11%	7.64%	2.89%	3.74%	1.86%	3.24%
	SELL	5.61%	4.20%	5.20%	4.25%	1.38%	6.43%	4.99%	5.84%	2.77%	2.45%	2.42%	2.36%
9M	BUY	8.03%	8.02%	4.91%	5.89%	2.04%	5.86%	6.16%	8.53%	3.00%	4.14%	1.93%	3.32%
	SELL	5.63%	4.52%	5.39%	4.24%	1.58%	6.42%	4.99%	5.99%	2.87%	2.55%	2.45%	2.44%
1Y	BUY	8.08%	7.80%	4.69%	5.84%	2.15%	5.86%	6.16%	8.21%	3.11%	4.14%	1.97%	3.37%
	SELL	5.65%	4.74%	5.12%	4.22%	1.59%	6.41%	4.97%	6.07%	2.98%	2.61%	2.44%	2.48%
2Y	BUY	8.81%	11.15%	5.25%	5.70%	3.01%	5.93%	6.11%	8.26%	6.13%	3.94%	2.36%	4.01%
	SELL	5.91%	6.57%	5.40%	4.27%	2.27%	6.42%	4.90%	5.79%	6.44%	3.42%	2.82%	2.64%

Note:

1. Values are calculated based on a single position per currency pair/tenor, ignoring portfolio effects, and can change over time.
2. "BUY" indicates the direction with regards to the local currency. e.g. Buy BRL/Sell USD.
3. "SELL" indicates the direction with regards to the local currency. e.g. Sell KRW/Buy USD.

D. The effect on competition, including appropriate fees and charges applied to clearing

LCH.Clearnet believes that the CFTC should use the NDF clearing mandate to spur competition between DCOs, and to encourage DCOs to be innovative in developing the capability to safely clear new types of swaps and ways to collateralize those swaps.

From the inception of the Dodd-Frank Act, the FX industry has invested heavily in defining, building and maintaining end-to-end processing for clearing the NDF product, including straight-through processing for trade novation, swap data reporting, LSOC compliance, SEF onboarding as well as more rigorous risk modelling and default management procedures.

Today there are three DCOs with capacity to clear FX NDFs:

- LCH.Clearnet;
- SGX Group, who launched a regional offering in Asia in November 2011 and have recently extended this to the US; and
- CME Group, who launched their US service in April 2012.

Both LCH.Clearnet and the CME Group offer member and client clearing across a range of currency pairs. In addition, regional clearing houses have indicated the intent to clear FX NDFs, including NASDAQ OMX, Eurex Group, and HKEx.

As the CCP universe for NDFs expands, we support the vigilance of the CFTC in permitting new products to be cleared only when the DCOs have demonstrated that they have appropriate processes, procedures, risk management and default procedures in place for these products.

E. The existence of reasonable legal certainty in the event of the insolvency of the relevant derivatives clearing organization or one or more of its clearing members with regard to the treatment of customer and swap counterparty positions, funds, and property

LCH.Clearnet has obtained IOSCO-compliant legal opinions which demonstrate the existence of such legal certainty in relation to the protection of customer and swap counterparty positions, funds, and property in the event of the insolvency of one or more clearing members. These opinions are refreshed periodically and have been made available to Commission staff.

LCH.Clearnet has also obtained a legal opinion from US counsel regarding compliance with the protections afforded to FCM customers under New York law. Insofar as legal certainty in the event of the insolvency of the DCO is concerned, LCH.Clearnet would be wound down under English law and has provided opinions to the CFTC on this point. These opinions are refreshed periodically.

Part (iii): Product specifications

Product specifications, including generally accepted terms and standard practices, for FX NDFs have been established by members of the Emerging Markets Trade Association (EMTA). EMTA publishes standard market documentation[6] and standard conventions and market practices. These EMTA recommendations and standards are widely adopted by participants in FX NDF trading.

The NDFs currently eligible for clearing in ForexClear make up 93% of trading volume; additional currency pairs such as USD/PEN are being offered by competing clearing houses, and members and clients are showing interest in USD/ARS. LCH.Clearnet will only consider these additional pairs if they meet liquidity requirements, if stable and reliable pricing information is available, and if the products can effectively be managed in a default.

Part (iv): Participant eligibility standards

In order to participate in the ForexClear service as a *Clearing Member*, applicants must meet the following eligibility requirements, which are set out in Section 1 of the Clearing House Procedures:

- have a net capital of US$50 million or more;
- have evidenced the operational and technical capabilities required by LCH.Clearnet;
- successfully participate, or demonstrate that it has (i) an affiliated ForexClear Clearing Member that can successfully participate in a ForexClear firedrill, or (ii) an LCH.Clearnet Approved Outsourcing Party that can successfully participate in a ForexClear firedrill;
- be able to participate, or demonstrate that it has (i) an affiliated ForexClear Clearing Member that can successfully participate in the ForexClear Default Management Process (DMP), or (ii) an LCH.Clearnet Approved Outsourcing Party that can successfully participate in the ForexClear DMP;
- have, within its corporate group, at least one banking, credit or investment institution licensed in the US or an EU member state, or an equivalent in another jurisdiction;
- in the event of a default, be able to receive and process relevant contracts;
- complete all relevant documentation; and
- complete all necessary testing and training as required by LCH.Clearnet.

In addition, FCMs applying to join the FCM client clearing service must:

- be registered with the CFTC as an FCM; and
- be incorporated or otherwise organized under the laws of a State within the United States.

These requirements are set out in Section 1 of the FCM Procedures.

ForexClear places no access criteria upon *clients* of FCMs. FCMs are free to take on the business of clients based on their own due diligence and analysis and become responsible for the performance of the trades upon registration.

A full list of members of the ForexClear service is available at
http://www.lchclearnet.com/membership/ltd/current_membership.asp.

Part (v): Pricing sources, models and procedures

As noted under (ii)(A) above, the price data used in the ForexClear service is provided in real-time directly by clearing members. Price data received includes FX spot rates and swap points for specified tenors for all currency pairs. Based on a market data control framework, price data is automatically snapped and cleaned by LCH.Clearnet at least every thirty minutes, up to a maximum frequency of once every five minutes. Interest rate swap curves are sourced from LCH.Clearnet's SwapClear service.
The ForexClear market data control framework was designed to ensure that market data used for the purposes of risk management and settlement remains timely, accurate and reliable.
The framework seeks to promote the integrity of market data through a robust approach to market data determination, validation, monitoring and governance.

Pricing sources, models and procedures for the ForexClear service are set out in Section 2K of the Clearing House Procedures (2K.4 – 2K.5), and Section 2B of the FCM Procedures.

The reference indices used for pricing are the Settlement Rate Options for NDFs specified in Section 2K.4.3 of the Clearing House Procedures and Section 2B.9.3 of the FCM Procedures. The Procedures set out the name of the index and the time and location of publication. This information, including all 11 currency pairs, is reproduced below for reference, as of April 2014.[6]

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 JISDOR (IDR04)	10:00 (Jakarta)
INR	INR RBIB (INR01)	12:30 (Mumbai)
KRW	KRW KFTC18 (KRW02)	15:30 (Seoul)
MYR	MYR PPKM (MYR03)	11:10 (Kuala Lumpur)
PHP	PHP PDSPESO (PHP06)	11:30 (Manila)
RUB	RUB CME-EMTA (RUB03)	13:30 (Moscow)
TWD	TWD TAIFX1 (TWD03)	11:00 – 12:00 (Taipei)

On the fixing date with respect to each ForexClear Contract, the Settlement Rate will be retrieved from the Settlement Rate Option in accordance with the relevant EMTA Templates (as referenced in the Schedule to the ForexClear Regulations). These fixings are market standards; the definitions, methodologies and time and place of publication are as set out in the ISDA 1998 FX and Currency Options Definitions, Annex A, as amended.

Part (vi): Risk management procedures

ForexClear risk management policies and procedures adhere to the principles adopted within LCH.Clearnet based on its extensive experience in OTC clearing.

LCH.Clearnet undertakes detailed assessment of all clearing members to ensure that adequate membership standards are met and maintained at all times; membership criteria includes minimum regulatory, legal, financial, operational, and risk standards.

Initial Margin (IM) is collected from each clearing member to cover potential losses in the event of that member's default, assuming a five-day holding period (seven days for client positions) and a confidence level of 99.7%. The ForexClear IM methodology, *FxPAR (Foreign Exchange Portfolio Analysis and Risk)*, is based on a conditional value-at-risk (commonly referred to as Expected Shortfall) historical simulation model. The model uses approximately ten years (2500 scenarios) of historical market data to simulate potential changes in portfolio value. An estimate of potential loss is calculated based on the average of the eight worst case simulated losses, which reflects a minimum confidence level of 99.7%. ForexClear also calculates and applies additional margin add-ons in relation to each clearing member's credit risk, liquidity risk and sovereign risk exposures.

Variation Margin (VM) and Price Alignment Interest (PAI) are calculated every day through a trade's life up to settlement day for all cleared trades. VM is payable/receivable in cash in the settlement currency. PAI adjustments are made in order to equalise the economic effects between identical cleared and uncleared trades.

The ForexClear default fund is a segregated fund whereby member contributions cannot be utilised for meeting losses other than those relating to the ForexClear service. The ForexClear Default Fund

Supplement to LCH.Clearnet's Default Fund Rules sets out rules for determining the size of the ForexClear default fund and how it is funded by members.

Similar to LCH.Clearnet's other OTC clearing services, ForexClear operates a Default Management Group consisting of senior representatives from its clearing members and LCH.Clearnet senior management, who are responsible for defining and executing the default management process in the event of a member default.

Detailed risk management procedures for the ForexClear service are set out in Section 2K of the Clearing House Procedures (2K.5). Equivalent provisions are set out at Section 2B of the FCM Procedures.

Part (vii): Applicable rules, manuals, policies and procedures

The applicable rules, manuals, policies and procedures that currently apply are available publicly on LCH.Clearnet's website at http://www.lchclearnet.com/rules_and_regulations/ltd/default.asp

The main provisions relating specifically to the ForexClear service are:

- General Regulations, 103-109 and the ForexClear Schedule
- Clearing House Procedures, Section 1 (membership), subsections 1.2.4 and 1.9.3
- Clearing House Procedures, Section 2K (ForexClear)
- Default Rules, ForexClear DMP Annex
- Default Fund Rules, ForexClear Default Fund Supplement
- FCM Regulations, 40-43, and Schedule B
- FCM Procedures, Section 2B.
-

Should you have any questions regarding this submission please contact me at +44 207 426 7247, or Gavin.Wells@lchclearnet.com

Yours sincerely,

Gavin Wells, Global Head ForexClear, LCH.Clearnet Limited

Cc:
Michael Davie, CEO LCH.Clearnet Limited

For details of footnotes please see next page

Footnotes

1. *BIS paper "The anatomy of the global FX market through the lens of the 2013 triennial survey" (http://www.bis.org/publ/qtrpdf/r_qt1312e.htm)*
2. *Foreign exchange intervention and foreign exchange market development in Korea (http://www.bis.org/publ/bppdf/bispap24q.pdf)*
3. *BIS paper "Non-deliverable forwards: 2013 and beyond" (https://www.bis.org/publ/qtrpdf/r_qt1403h.pdf)*
4. *BIS Triennial Central Bank Survey of foreign exchange and derivatives market activity in 2013 (http://www.bis.org/publ/rpfx13.htm)*
5. *BIS paper "FX and Derivatives markets in emerging economies and the internationalisation of their currencies" (http://www.bis.org/publ/qtrpdf/r_qt1312g.htm)*
6. Current recommended EMTA template terms for NDF Transactions, available at http://www.emta.org/template.aspx?id=2275#current
7. *GFMA – Request for time-limited relief to Commissioners Regulation Parts 37, 43 and 45 , available at*
   http://www.gfma.org/initiatives/foreign-exchange-(fx)/gfma-submits-comments-to-the-cftc-requesting-time-limited-relief-relating-to-sef-s-and-reporting/

   and

   http://www.gfma.org/initiatives/otc-derivatives/gfma-submits-comments-to-the-cftc-requesting-additional-relief-relating-to-sefs/