ISDA® Safe, Efficient Markets

Mr. Ho-Chul Lee

President & COO of Derivatives Market Division, KRX

Re: Review of clearing house risk management procedures

March 17, 2014

Dear Mr.Lee,

The International Swaps and Derivatives Association, Inc. ("ISDA")[1] supports the Korea Exchange's (KRX) establishment of a clearing service for over-the-counter (OTC) derivatives as part of Korea's G20 commitments. At the behest of ISDA's membership, following the recent default of Han Mag Securities, ISDA is writing this letter to highlight certain risk management concerns that we believe are critical to the success of KRX's clearing mission.

In review of the rulebook for each of KRX's clearing services (i.e. the securities and derivatives market, together "listed derivatives" and OTC derivatives) and the recent default event we would be grateful to discuss with KRX each of the below topics. While we appreciate that certain risk management practices (e.g. organization, default management) may rightly vary between KRX's listed and OTC clearing services, we believe that there are many governing principles that should be aligned. For this purpose, we consider that the CPSS-IOSCO Principles for Financial Market Infrastructures (PFMIs) serve as a useful guideline to inform best practice risk management procedures. We have reviewed KRX's CPSS-IOSCO PFMI self-assessment report dated July 3, 2012 ("KRX PFMI Assessment") [2] where KRX describes the development of a *comprehensive risk management system* that would encompass all of KRX's clearing services.

Our letter is organized by the risk management topics that we like to highlight for discussion. Where the topic already be addressed within one clearing service (ex. OTC derivatives) we would direct our recommendation to KRX's listed derivatives clearing service.

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[1] Since 1985, ISDA has worked to make the global over-the-counter (OTC) derivatives markets safer and more efficient. Today, ISDA has over 800 member institutions from 62 countries. These members include a broad range of OTC derivatives market participants including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure including exchanges, clearinghouses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's web site: www.isda.org.

[2] http://eng.krx.co.kr/por_eng/m7/m7_5/m7_5_8/JHPENG07005_08_01.jsp

1. CCPs should maintain comprehensive pre-trade risk controls

Comprehensive and dynamic pre-trade risk controls (e.g. risk, volume, positional based limits) would significantly reduce the potential for a clearing member to clear erroneous and/or significant trade volumes (and thereby CCP exposure) without having the requisite capacity to manage associated risks including any losses that may be realized.

KRX should establish risk thresholds, including an overall maximum exposure, it may accept from any clearing member that is monitored both on a product and an overall portfolio level. The threshold should be based on objective criteria and consider, for example, the credit quality, capital wherewithal and risk management expertise of the clearing member.

Specifically, KRX should maintain the ability to automatically reject submitted trades where the clearing member does not maintain the requisite capacity or where established thresholds would be exceeded. This would require automated pre-trade risk controls (as manual verification is untimely) that would only accept and clear trades where both the CCP and clearing member have asserted that the trades are valid and initial margin (IM) is sufficient for the risk being introduced. We raise attention to other CCPs (e.g. CME, ICE, LCH.Clearnet) that maintain dynamic and automated, near real-time pre-trade risk controls that determine whether or not to accept a trade for clearing, thereby providing clearing certainty to clearing participants. We would encourage KRX to provide greater clearing certainty to its participants through the implementation of dynamic and automated trade acceptance process to remove any unnecessarily delayed process (e.g. confirmation at T+5 business days).

Although there are varying views towards the prefunding of initial margin, we consider that KRX could require immediate funding of initial margin where established thresholds (e.g. risk, volume, positional) may or are likely to be exceeded.

2. CCP financial resources and contributed capital to its default waterfall should be proportionate to clearing house risk

It is important that a CCP maintain sufficient financial resources that are commensurate with the aggregate exposure of the CCP. It is further desirable that a CCP maintain a meaningful amount of contributed capital[3] to the default waterfall to be utilized prior to the guaranty fund contributions of non-defaulting clearing members (commonly referred to as *skin-in-the-game* or SIG).

ISDA considers that a CCP's contributed capital should not be static; rather it should increase accordingly as the overall risk exposure of the CCP increases (similar to how clearing member guaranty fund contributions scale with risk exposure). For example, a fixed initial capital contribution to cover KRW 10 million of risk in the clearing house would not be sufficient should the risk in the clearing house increase to KRW 10 billion. Therefore, we believe that CCPs should establish a framework to ensure a sufficient amount of contributed capital (including SIG) is maintained. We raise attention to other jurisdictions where CCPs have (voluntarily or through regulatory mandate) adopted such a framework; in Europe, EMIR requires a CCP to contribute SIG equal to 25% of its minimum capital requirement and in Singapore, the Monetary Authority of Singapore requires a CCP to contribute SIG equal to 25% of the aggregate guaranty fund.

[3] CCP contributed capital refers to capital allocated prior (junior) to the guaranty fund contributions of non-defaulting clearing members (commonly referred to as skin-in-the-game or SIG) as well as that allocated following (senior) the guaranty fund contributions of non-defaulting clearing members.

In addition, for a CCP to be considered a Qualifying CCP (QCCP) under the Basel Committee on Banking Supervision's interim framework for *Capital Requirements for Bank Exposures to Central Counterparties* (BCBS227)[4], a CCP must be "based and prudentially supervised in a jurisdiction where the relevant regulator/overseer has established, and publicly indicated that it applies to the CCP on an ongoing basis, domestic rules and regulations that are consistent with the CPSS-IOSCO Principles for Financial Market Infrastructures". Accordingly, Principle 6 of the CPSS-IOSCO PFMIs highlights the need for the financial resources of a CCP (including CCP capital and member default fund contributions) to be commensurate with the amount of risk and attributes of each product, portfolio and market in the clearing house.[5]

3. KRX own assets, contributed capital and accumulated Settlement Reserves should be provided in detail

ISDA commends KRX for committing a layer of its own capital to the default waterfall before that of non-defaulting clearing members for the OTC derivative clearing service and believe it would be appropriate to similarly do so for the listed derivative clearing service. It would be further helpful to understand how KRX envisions sizing total Settlement Reserves for application to each of the OTC derivatives and listed derivatives clearing services.

We understand that KRX maintains approximately KRW 405 billion of its own capital and accumulated Settlement Reserves that are available to compensate losses in excess of clearing member contributions to the guaranty fund (i.e. Joint Compensation Fund) within the listed derivative clearing service.[6] However, the amount and proportion that could be applied to either of the clearing services or within the listed derivative clearing service (i.e. securities market or derivatives market) appears to be at the discretion of KRX. This discretion creates uncertainty for clearing members who desire and are required to assess and manage the risks and potential exposures that exist related to each clearing service.

We would encourage KRX to provide greater clarity (e.g. through a rule change) surrounding the overall sizing, distribution between clearing services and allocation of contributed capital and Settlement Reserves prior to and following the application of non-defaulting clearing member guaranty fund contributions.

4. Contributions to the guaranty fund should be dynamic and scale with risk exposure

For the listed derivative clearing service, KRX calculates each clearing member guaranty fund contribution based solely on either the average daily trading value for securities members or the average daily (initial) margin for derivatives members of the listed clearing service. We are concerned that such a methodology, based only upon a single characteristic, is not sufficiently dynamic to capture all risks and clearing member types. For example, high volume clearing members

[4] http://www.bis.org/publ/bcbs227.pdf, Basel Committee on Banking Supervision, Capital Requirements for Bank Exposures to Central Counterparties, Annex 4, Section I,A. General Terms, page 1.

[5] http://www.bis.org/publ/cpss101a.pdf, Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions, Principles for Financial Market Infrastructures, Principle 6: Margin, page 50- 56, April 2012.

[6] KRX Membership Regulation, Chapter IV. Rights and Obligations of Members, Section 1. Securities and Exchange-trade Derivatives Trading §25 Use of Joint Compensation Fund

(e.g. those cater to high frequency traders or market makers), who by their nature typically end the day flat or with little exposure and thus not maintaining significant initial margin requirements, may be inadequately contributing to the guaranty fund despite their substantial clearing activity. Recent experience clearly suggests that high frequency traders and market makers introduce risk not only to the CCP but also its clearing members; therefore, the guaranty fund methodology should include, for example, a volume based component.

The OTC derivative clearing service requires the calculation of the (two) clearing members with largest settlement exposures as the minimum overall guaranty fund size without an explicit maximum aggregate size. We believe that this approach is consistent with the CPSS-IOSCO PFMIs and other leading global CCPs and therefore encourage KRX to adopt a similar approach for its listed derivative clearing service.

5. Clearing members should have the capacity to replenish guaranty fund contributions

Each of KRX's clearing services provides the ability for KRX to request additional guaranty fund contributions from non-defaulting clearing members should the pre-funded contributions be fully utilized to compensate losses related to a defaulted clearing member. Through review of the KRX rulebooks, we understand that KRX has discretion related to the timing in which it may request additional funds and further that a specific clearing member may be provided additional time to replenish their guaranty fund. We are concerned that this may indicate that certain clearing members are without the necessary financial capacity to replenish the guaranty fund in a reasonable and transparent timeframe.

The stability of the CCP when under stress depends upon the quality of its membership; therefore, we believe that KRX's membership criteria should be stringent enough, for example, to refuse membership to institutions that would struggle to replenish their guaranty fund contributions timely.

6. Maximum clearing member liability should be limited, predictable and quantifiable

Clearing members require transparency and certainty related to the current and potential exposures inherent in CCP membership. Through review of the KRX rulebooks for the listed derivative clearing service, there remains ambiguity and discretion related to the maximum membership liability in the case of both single and multiple defaults. Similar to the rules prescribed for the OTC derivative clearing service, the listed derivative clearing service should specify the maximum liability in the event of single or multiple defaults.

In addition, the KRX rulebook for listed derivatives outlines measures that may be taken to cancel out the open interest of a suspended or defaulted clearing member.[7] These measures include the ability of KRX to designate a clearing member to allocate the remaining open interest of a suspended or defaulted clearing member (i.e. forced allocation). As expressed in ISDA's comment letter to CPSS-IOSCO's Recovery of FMIs consultation[8], utilizing forced allocation provides a substantial amount of uncertainty and unquantifiable liabilities for clearing members. Such risks do not allow clearing

[7] KRX Derivatives Market Business Regulation, Chapter II. Clearing and Settlement Between the Exchange and Clearing Members, Section 4. Settlement by Netting and Settlement Deadline, etc. §109 Canceling Out of Open Interests of Suspended Member

[8] http://www2.isda.org/search?headerSearch=1&keyword=Recovery+of+FMIs. ISDA, the Institute for International Finance and The Clearing House October 11, 2013 response to CPSS-IOSCO Consultative Report.

members to prudently evaluate, monitor and manage exposures to a CCP on an ex-ante basis. Further, this could increase contagion risk as clearing members may opt to resign membership in fear of unquantifiable and unmanageable CCP liability.

A clearing member should be able to resign CCP membership should the potential future liabilities or exposure be inconsistent with its risk capacity. We are concerned that the KRX rulebook for listed derivatives requires form KRX Board approval before a clearing members request for membership resignation can become effective. This gives KRX discretion over the request for resignation and could subject a clearing member, who would otherwise have withdrawn membership, to adverse financial consequences through, for example, additional guaranty fund liability.

7. CCPs should predominantly accept high quality and demonstrably liquid collateral

While the CPSS-ISCO principles allow considerable latitude for a CCP accepting different types of collateral (subject to appropriate haircuts), ISDA believes that a CCP should predominantly accept high quality and demonstrably liquid collateral types. At the time of the default of a large clearing member, markets can be expected to be volatile. Historically, in these circumstances there is a “flight to quality” that increases the desirability of credit worthy sovereign debt while equities and lower quality corporate bonds typically experience a loss of liquidity and volatile price fluctuations. In addition, there is often potential for “wrong way” risk if the debt or equity collateral is that of financial institutions directly or indirectly affected by the clearing member default. To mitigate these risks, among others, ISDA considers that collateral should be subject to minimum haircuts that are unlikely to require significant adjustment under stress scenarios and therefore mitigate against pro-cyclical margin calls. Additionally, lower quality and less liquid collateral should be strictly limited to a small overall percentage of that pledged by the clearing member.

8. CCP risk management governance structure should conform to international standards

A CCP should establish and maintain a robust risk management governance structure that details the responsibilities of designated personnel responsible for operational, market and credit risk. Such designated personnel (e.g. Operational Risk Officer, Credit Risk Officer) should be afforded requisite resources to effectively manage their respective risks and report directly to the CCP’s Risk Committee. We believe that the role and remit of the Risk Committee should be transparent and consistent with guidelines outlined within the CPSS-IOSCO PFMIs.

The Risk Committee should formulate a default management strategy (including a “Default Management Playbook”) that outlines the procedures it will follow in the event of default. The default management playbook should be made available publically or at least be provided to all clearing members.

9. CCPs should disclose sufficient information to allow clearing participants to perform a detailed CCP Risk Assessment

KRX’s CPSS-IOSCO PFMI Assessment is an important and useful component to clearing member CCP due diligence procedures. It would be further helpful if KRX disclosed the clearing members of each clearing service to allow clearing members to perform an assessment of the overall credit profile of the CCP.

In addition to qualitative metrics outlined in KRX's PFMI Assessment, we consider that CCPs should disclose quantitative metrics, as recently proposed by CPSS-IOSCO's consultation *Public quantitative disclosure standards for CCPs*.[9]

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ISDA is grateful for the opportunity to raise these risk management issues with KRX and would be happy to meet with you to further discuss and clarify any of the topics raised.

Sincerely yours,

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cc. Mr. Lee Hyun Chul, Director, Capital Markets Bureau, Financial Services Commission
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[9] ISDA's response available at: http://www2.isda.org/attachment/NjE5NQ==/ISDA%20Response%20to%20CPSS114%20Quantitative%20Disclosures%20for%20CCPs%20(18Dec13)-.pdf