HKEX 香港交易所

Appendix 2

Compliance Reminder on Risk Management
(Applicable to Clearing Participants[1] only)

Risk management is one of the key responsibilities of Clearing Participants ("CPs") of HKSCC, HKCC and SEOCH (collectively, the "Clearing Houses"), as set out under the admission materials and relevant rules and procedures of the Clearing Houses.

CPs should set up robust risk management frameworks and controls, so as to ensure the proper assessment, monitoring and mitigation of key risks (including but not limited to, credit risk, liquidity risk, operational risk, market risk and capital inadequacy) at all times.

In the 2020 Annual Attestation and Inspection Programme, control weaknesses were found in the following risk management areas:-

1. Stress Testing

- ***Absence of proper stress testing for its own or clients' exposure on HKEX's products, particularly on non-linear products such as options***

Stress testing of non-linear products (e.g. options) is crucial to CPs since the losses of non-linear products increase exponentially under extreme market conditions. CPs with significant activities in non-linear products are expected to implement and conduct stress testing regularly and at least on a weekly basis, to evaluate the potential loss of its portfolio under extreme but plausible market conditions. Proper stress testing policies and procedures should also be established to clearly set out the stress testing methodology, frequency and the review and escalation mechanism.

As a benchmark, the underlying movement adopted by Clearing Houses under extreme but plausible market conditions is ± 20% for index options and ± 22% for stock options.

Further information on stress testing can be found in the Annex.

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1 (i) Clearing Participants and General Clearing Participants of HKFE Clearing Corporation Limited, and (ii) Direct Clearing Participants and General Clearing Participants of Hong Kong Securities Clearing Company Limited and The SEHK Options Clearing House Limited

2. Credit Exposure Management - Monitoring of Position Limit and Late Payment Management

- ***Lack of sufficient and effective monitoring and control on credit exposures***

Client limits (e.g. position limit, credit limit, trading limit and/or limits granted to DvP clients in stock trading to settle on T+2) are imposed by CPs on their clients for controlling their credit exposure. It was noted that while CPs had set up limits for their clients, they had not implemented any system to monitor their clients' positions against limits assigned to such clients and/or had allowed clients to transact based on their clients' available funds instead. Policies and procedures in relation to the treatment of outstanding loan payments were also found to be inadequate where follow-up, escalation and provisioning / write-off of such loans were not clearly set out. It was also noted that client limits, once granted, were not subject to regular review.

CPs are reminded to implement appropriate and adequate monitoring arrangements in this regard, including but not limited to inputting the limits assigned to clients into the system for continuous monitoring. Failure to implement appropriate and adequate monitoring arrangements may result in regulatory breaches, which could be grounds for disciplinary actions.

3. Notification of Change in Operations and Risk Control Plan

- ***Failure to notify the Clearing Houses when there is a change in operations and risk control, including but not limited to changes arising from engaging in new business activities***

According to the responsibilities set out under CCASS Rule 1703(iii), HKCC Rule 214(n) or SEOCH Rule 403(17) and with reference to the admission material (Note 2 of Attachment 2 of the "*Explanatory Notes for applications for Participantship and Trading Right*"), CPs are required to submit to the Clearing Houses any change in the details supplied to the respective Clearing Houses at the time of admission and thereafter including, among other things, updated risk and control documents when engaging in new business activities such as (i) proprietary trading; (ii) stock lending and borrowing; (iii) China Connect market; and (iv) margin financing. CPs are advised to notify and provide the following information to the Clearing Houses (by email to clearingcreditrisk@hkex.com.hk) when you engage in new business activities:-

(i) Background of new business (including the commencement timeline, business strategic plan and target client sector)
(ii) Financial projection (including the projected size[2], revenue and profit for the first year of operation)
(iii) Capital injection / funding plan
(iv) Associated risks and corresponding risk measures

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[2] Examples of parameters to consider for each type of new businesses are set out below:
(a) for proprietary trading, asset value and value-at-risk
(b) for stock lending and borrowing, value and type of securities on loan
(c) for China Connect market, transaction volume
(d) for margin financing, list of acceptable stocks and loan book value

4. Control, Monitoring and Staff Training in relation to the Fulfillment of Settlement Obligations

- ***Inadequate monitoring and controls over Settlement Operations for ensuring the timely completion of steps essential to fulfill the settlement obligation of the Clearing Houses***

CPs should put in place adequate and comprehensive internal controls and procedures governing the relevant money and stock settlement process; and all relevant officers should strictly follow the prescribed timeline to facilitate smooth operation, especially for backup or holiday covers. Examples of effective tools for settlement controls include: a checklist with maker-checker signoff over key settlement steps (with timelines clearly set out for each step); or a system dashboard to monitor the timeliness in completing each key settlement steps with automatic escalation / alerts. For each key settlement task, sufficient buffer time should be allocated between the internal completion timeline and the Clearing Houses' settlement timelines, in order to allow exception handling process (e.g. additional transfer of funds) to be completed before the Clearing Houses' settlement timelines.

CPs are advised that the review of funding sufficiency at market close should be based on the actual position data or settlement reports disseminated by Clearing Houses. By relying on internal position data (instead of Clearing Houses' date/report) during the funding forecast/arrangement process, CPs may fail to capture errors caused by internal system or manual process e.g. incorrect/incomplete positions net-down in HKCC/SEOCH. This would lead to an incorrect forecast of the settlement amount and may result in payment failure.

CPs are also advised to regularly review its operational and funding backup arrangements to ensure their effectiveness. The review should include but not limited to (i) holiday backup arrangement of settlement and accounting officers; (ii) enabling money transfer through e-banking between house / client accounts and CPs' designated account for settlement and (iii) setting up overdraft facilities to provide contingency funding (including non-HKD settlement currency, e.g. CNY for China Connect Participants).

CPs should keep abreast of circulars issued by the Clearing Houses and conduct regular reviews on their operation procedures to ensure compliance with the relevant rules and requirements at all times. Among other things, CPs should ensure that their settlement arrangements (including arrangements during holiday periods) comply with the latest requirements stipulated by the Clearing Houses.

CPs should ensure that their staffs (including their backup and holiday cover) have adequate and up-to-date knowledge on operational risk and control, payment obligations and the consequences of failure in meeting the obligations of the Clearing Houses. CPs should arrange for staff to attend training courses, such as the one mentioned in the circular *"Training course jointly organized by HKEX and HKSI Institute"* issued by the Clearing Houses on 31 December 2018 (Ref. No. CD/CDCRM/243/2018) and make reference to circulars such as *"Reminder on Payment Obligations of Clearing Participants"* issued by the Clearing Houses on 7 February 2020 (Ref. No. CD/CDCRM/034/2020, CD/CDCRM/035/2020 and CD/CDCRM/036/2020) to enhance the staff's awareness on payment obligations of the Clearing Houses.

5. Risk Governance, Operational Capability and Risk Culture

- ***Inadequate control in relation to risk management governance***

A proper risk governance framework usually involves establishment of a risk committee for exercising senior management oversight over key risk areas. In some instances, CPs did not keep proper meeting records/reports to show that a committee meeting has been conducted or the focus items discussed by senior management at the meeting.

CPs should establish a proper risk governance framework (e.g. by setting up a risk committee with regular meetings) and maintain documentation to demonstrate senior management's oversight of issues and to keep track of their discussion and monitoring over key risk areas, in particular, on the treatment of credit risk, concentration risk and monitoring of sufficiency of liquid capital.

CPs should also establish detailed policies and procedures to effectively manage the key risks. In this connection, the Appendix 2 of the *"Explanatory Notes for Application for Participantship and Trading Right"* can serve as a reference of the Clearing House's latest expectation on a CP's risk management practices.

6. Third party service management

- ***Inadequate control in relation to system changes***

CPs should establish proper review and testing procedures in relation to any system changes. In some instances, CPs failed to spot the logic error during critical system enhancement (e.g. system changes on margin offset claim logic) made by third party system providers.

CPs are advised to strengthen its control on critical system changes, for example, system changes that has impact on settlement and margin calculation. Such controls should include (i) thorough user acceptance testing and (ii) parallel run to ensure a smooth transition.

7. Business Continuity Plan and Contingency Funding Arrangement

- ***Inadequate arrangement in place to ensure its fulfillment of the Clearing Houses' settlement obligations under contingent situation***

To cope with disruptions that may impair CPs' ability to meet settlement obligations with the Clearing Houses, CPs should develop and maintain a business continuity plan, which should clearly set out the actions that the firm would take during contingent scenarios. In view of the latest COVID pandemic situation, CP should review its business continuity plan to consider whether it has granted sufficient authorization to the relevant colleagues during split team arrangement and whether the plan covering the contingency handling of the forthcoming trades (e.g. routing to a peer broker or timely stop the client orders) in case the operation capability is heavily impacted (e.g. due to quarantine of a large number of operational staff). CP should also enhance its capability to enable staff to remote access trading/clearing system.