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 in 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 performing 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 2022 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 would probably 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 and Position Management

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

Risk 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 or CP's own 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 them and/or had allowed their clients to transact based on their 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. In addition, it was noted that the limits, once granted, were not subject to regular review.

Client limits should also include limits set in third party systems, including those in HKEX systems that facilitate the management of client exposures. For example, regarding General Clearing Participants' ("**GCPs**") implementation of pre-trade monitoring on its non-CP clients, it was noted that client limits (e.g. pre-trade limits) are set up but their reviews are conducted separately from other internal client limits during the GCPs' client risk assessment and risk mitigation process.

CPs are reminded to implement appropriate and adequate monitoring arrangements in this regard, including but not limited to (i) inputting the limits assigned to clients into the system for continuous monitoring and timely adjustments of the limits according to changes in client's credit risk and (ii) ensuring the monitoring arrangement is capable of timely identifying the heightened risk (e.g. intraday position monitoring is expected to ensure compliance with the Capital Based Position Limits). 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 also with reference to the admission material (Note 2 of Attachment 2 of the "*Explanatory Notes for application 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

4. Control, Monitoring and Staff Training in relation to 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 staffs 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 should also put in place funding estimation and position management procedures for collateral requirements (e.g. marks and margins) and settlement obligations, particularly in handling exceptionally large positions. This includes process to reduce the position for computation of collateral requirements, such as by providing Specific Cash Collateral or Specific Stock Collateral to HKSCC for its large long or short stock positions under CNS System respectively.

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 merely relying on internal position data (instead of Clearing Houses' date/report) during the funding forecast/arrangement process, CPs may not be able 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.

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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

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) sufficiency of liquidity buffer and overdraft facilities to provide contingency funding (including non-HKD settlement currency e.g. CNY for China Connect Participants).

CPs should keep abreast of the circulars issued by the Clearing Houses from time to time 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 (e.g. the updated requirement subsequent to the launch of VaR Platform and derivatives holiday trading in 2022).

CPs should ensure that their staffs (including their backup and holiday cover) have adequate and up-to-date knowledge pertaining to operational risk and control, payment obligations and the consequences of failure in meeting the obligations of the Clearing Houses. CPs should also arrange for staff to attend training courses and make reference to circulars such as *"Reminder on Payment Obligations of Clearing Participants"* issued by the Clearing Houses on 5 December 2022 (Ref. No. CD/CDCRM/300/2022, CD/CDCRM/301/2022 and CD/CDCRM/303/2022,) to enhance staff's awareness of payment obligations to 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 support that committee meetings had been conducted or the focus items had been discussed by senior management at those 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 ensure key risks involved in their business are effectively managed. In this connection, Attachment 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 to the Clearing Houses, CPs should develop and maintain a business continuity plan, which should clearly set out the actions that they would take during contingent scenarios. Drawing from the industry's experience in handling COVID pandemic situation, CPs should review their business continuity plan and consider whether they have granted sufficient authorization to the relevant colleagues during split team arrangement and whether the plan covered the contingency handling of the forthcoming trades (e.g. routing to a peer broker or putting timely stop to client orders) in case the operation capability was impaired (e.g. due to quarantine of a large number of operational staff). CPs should also enhance its capability to enable staff's remote access to trading/clearing system.