

## **HKEx's Proposal 1: Revise HKEx Stress Testing Assumptions**

### **I. Do you support the proposed revision of the Price Movement assumptions in stress testing?**

In view that the 2011 IOSCO Consultative Report is expected to impose more stringent capital adequacy standards and stress testing assumptions on CCPs, in principle, I am agreeable that we should stay ahead of the curve and support the revised proposal to increase HKSCC and SEOCH Price Movement assumptions from the current +/-20% to +/-22% and keep the HKCC Hang Seng index futures and options at the current +/-20%. In addition, I have the following comments to make.

1. As discussed in the consultation paper, the Projected Loss is calculated on the Price Movement and Counterparty Default assumptions. Any changes in these assumptions will affect the level of Projected Loss that in turn will affect the size of the GF/RF.
2. Similarly, any changes in the level of prescribed Margin to be collected from CPs will change the size of the Dynamic GF/RF.
3. Currently there is a wide gap between the Price Movement assumptions and the margin rate prescribed by the three CCPs. For example, in the consultation paper, a margin rate of 7.5% was applied, as opposed to the 20% price movement used to calculate the Projected Loss of defaulting CPs of HKCC. Ironically, during period of low market volatility, under the current HKCC's methodology, the margin rate applied will be lower, giving rise to a wider gap, and a bigger RF. For example, the prescribed margin rate for Hang Seng index futures can be as low as 5% of the notional value of a future contract. At this rate, the leverage is twenty times.
4. It is worth noting that the current confidence level used to determine the margin rate by CCPs of HKEX far exceeds the level recommended by IOSCO. Yet there is still a big gap between the margin rates applied in normal market condition and the Price Movement assumptions in extreme market volatility conditions.
5. In recent high market volatility conditions, the margin rate is still about 10%. There may be room to narrow the Price Movement assumptions and reduce the gap.
6. Alternatively, we can increase the minimum margin rate. Given

that derivatives are highly geared instruments, with its notional value easily worth up to twenty times the margin, collection of higher initial margin from clients trading in derivatives may not be a bad idea. It also reduces the risk to CPs and the leverage in the financial system. Whilst turnover may be impacted, it will be less than envisaged as in reality many clients have excess money in their accounts. The impact on day trading turnover will also be minimal. However, CPs of HKSCC will be required to secure more financial resources to pay for the increase in margin required and this will further increase their cost of doing business.

7. There is a 2% differential in price movement assumption between stock indices and individual stocks. This may not reflect the relative risks in reality. The volatility of many individual stocks is statistically rated much higher than its stock indices. Hence margin rates for individual stock options and futures are generally set higher than the stock indices. Even under the Financial Resource Rules, EPs are required to provide haircut from 15% to 100% for unsettled contracts in individual stocks. Majority of stocks are subjected to 40% haircut. Either the Price Movement assumptions for stocks are set too low or the indices too high or both. If the rates of the FRR are applied, and the FRR methodology is used by HKSCC to calculate the total margin requirement, CPs will have to secure significantly more financial resources to conduct its business.
8. During the Reference period, the maximum Dynamic GF Collectible is HK\$2.316B. The Dynamic GF Collectible and the Projected Loss will be higher if the calculation is based on the cross day gross CNS positions, instead of net positions, of the largest and fifth largest CPs. Yet, in the worst financial crisis of our generation, Lehman's default resulted in a loss of HK\$154M incurred by HKSCC. No loss was incurred by HKCC.

## **II. Do you support the proposed revision of the Counterparty Default assumption in stress testing?**

I support the revised proposal to include one more default CP, in addition to the largest CP, for stress testing purpose. In risk management, it pays to be cautious, but it will increase the size of the Projected Loss.

9. It is important to note that the bigger the combined market shares of the largest and fifth largest CPs, the bigger the Projected Loss. Higher Projected Loss will necessitate a bigger Dynamic GF/RF and contribution from other CPs. If the market shares of CPs are evenly

distributed, the Projected Loss will be smaller. For example, if the average total margin requirement to be collected from all the CPs of HKSCC (for simplicity, we assume to be 100) is HK\$4,000,000,000 (HK\$3,769,000,000 during the Reference Period) spread evenly among them, each CP will have to fork out HK\$40,000,000. The combined margin requirement for the largest and fifth largest will only be HK\$80,000,000. If the margin requirement is collected at the minimum margin rate of 5%, whilst we stress their margin positions to a proposed price movement of +/- 22%, the Projected Loss is estimated at HK\$272,000,000, much less than the average daily Dynamic GF Collectible of HK\$1,129,000,000 during the Reference Period.

### **HKEEx's Proposal 2: Introduce Margining and Dynamic Guarantee Fund in HKSCC**

#### **III. Do you agree with the proposed margining arrangements at HKSCC?**

In principle I am agreeable with the proposed margining arrangements at HKSCC except for the following comments.

10. The margin calculation is based on net CNS unsettled positions. No explanation is given for the difference in the methodology adopted by SEOCH and HKCC where the margin positions are calculated on a gross basis. If the calculation is harmonized with SEOCH and HKCC, the margin required will be even much higher.
11. If HKSCC has only one CP, the margin position for this only CP is zero as all positions will be netted and no margin requirement is needed. This netting feature will favour operators of alternate trading systems and dark pools when trades are crossed at HKEX. This arrangement will also encourage CPs to cross off-exchange trades as isolated trades (non-CNS trades) to minimize margin requirement.
12. Unlike SEOCH and HKCC, CPs have to use internal financial resources to fund the margin requirement of the unsettled positions of their clients. Under the new proposal, CPs would collectively contribute an additional maximum HK\$12.1B in Margin and GF during the Reference Period and this amount does not include the Fixed GF and HK\$6M granted to all CPs. See Appendix XI of the Consultation Paper. This would significantly raise the capital requirement and funding cost of CPs.

13. Not surprisingly, the additional funds collected under the proposal will benefit the HKEX in term of higher investment income earned. Based on the interim report of HKEX as at June 2011, the gross investment income was HK\$242M, part of which could be attributed to investment gain and interest earned by Corporate Fund, only HK\$1M was interest rebated to Exchange Participants. Given the big increase in the size of the Margin and GF/RF under the new proposal are funded by CPs, **a review on how the investment income is distributed will be greatly appreciated.**
14. The GF size would have been larger if the calculation is based on gross margin position and the appropriate margin rates are applied for individual stocks.
15. Nonetheless, the size of the Margin and GF seems prudent but at an excessively high cost. As mentioned earlier, in the worst financial crisis of our generation, Lehman defaulted and cause a loss of HK\$154M, a loss that could have been avoided. The annual interest cost of the Fund collected, assuming 3% per annum, will be more than enough to pay for the loss.
16. **We should revisit current T+2 settlement regime. To reduce the systemic risk the T+2 regime poses to HKSCC, it is timely for HK to reconsider past discussion to introduce T+1 settlement. Derivatives clients are expected to come up with the fund for margin requirement on T+0. Deposit first before trading has not been a problem for clients trading derivative contracts cleared by HKCC and SEOCH.**
17. To further reduce margin requirement, we may want reconsider using the current arrangement of cross-day cross-stock to calculate the net CNS position.
18. Since Specific Stock Collateral where clients' assets may be used to cover the short CNS position, to lessen the financial impact of this new proposal on CPs, similarly the cash balance of clients with unsettled positions may be used to fund the margin requirement. This is in line with the current practice of SEOCH and HKCC where the margin requirement for clients' positions is funded by clients' money.
19. The market volatility and 99.73% confidence level are used to determine the margin rate. The parameter used exceeded the IOSCO's minimum requirement of 99% confidence level. There is room to lower the confidence level used. A lower margin rate will further reduce the margin requirement.

20. For administrative simplicity, HKSCC may want to provide an option for CP to pay margin in currency other than in the original trade currency. It is envisaged the margin in currencies other than HKD is small and the cross-currency risk for HKSCC is minimal
21. Whilst the money settlement instruction, for the margin requirement, is issued at the end of each business day (T date) to the CP's designated bank with payment confirmation by 9.30 on T+1, CPs will appreciate the value date of the settlement is also on T+1 date.

#### **IV. Do you agree with the proposed Dynamic GF model at HKSCC?**

I am not agreeable to the proposed Dynamic GF model HKSCC for the following reasons.

22. In business, it is common that large clients are given incentives and preferential commission rates for their large turnover. In risk management, it is not uncommon for CPs to charge additional margin for clients with large position to control risk. Similarly, CPs with large margin positions at CCPs should also be subjected to additional margin requirements. Under the proposal, CPs are asked to contribute into the Dynamic GF to support the highly concentrated risk of these large CPs. No normal businesses would think of asking additional margin from all their clients in order to manage the highly concentrated risk of the large customers.
23. **To be fair and equitable, larger CPs and HKEX must share the greater proportion of the burden. Contributions to the Dynamic GF/RF and Margin should commensurate with the risks created.**
  - a. I would like to suggest a progressive tier rate system of calculating Dynamic Guaranteed/Reserved Funds and Margin. Large CPs will be required to come up with additional concentration contribution and margin. This would the raise the regulatory capital of large CPs. It would have the intended effect of diffusing the concentrated margin positions between the large CPs and the risk they posed to the clearing system. As there is a tendency for the large to get larger in a winner-take-all business environment, the suggestion will forestall further risk concentration. This will further decrease the Dynamic GF size. Recent statistics from HKEX confirm that the

Group A brokers are indeed getting larger.

- b. CPs with concentrated exposure in certain stocks or contracts may be subjected to additional collateral margin. Unless these CPs are the largest and the fifth largest, the additional margin will not reduce the Projected Loss or the size of the GF/RF.
- c. Lastly, I will like to propose that a major portion of the HKEx RMC should be put at risk ahead of the pooled contribution to the Dynamic RF/GF of the non-defaulting CPs. This is to better align the risk and reward and avoid the conflict of interest, as HKEx is both risk controller and business owner.

#### HKEx's Proposal 3: Revise HKCC Reserve Fund Calculation

V. Do you support the proposed revisions to the HKCC Collateral assumption?

I will like to make the following suggestions

- 23 The increase in contribution to the Dynamic RF is partly attributed to HKEX recommendation to remove the assumed IDM credits from daily RF calculation because of its difficulty to predict reliably whether collateral after an IDM call could be collected ahead of an assumed CP default. It is worth pointing out that under the FRR, CPs are required to have regulatory liquid capital to support their clients' position they maintain with HKCC. In practice, CPs will have more than the minimum regulatory liquid capital and secure additional credit facilities with financial institutions to response to the IDM call by HKCC.
- 24 HKCC may also want to reconsider the continuation of existing practice since it is permissible under existing 2004 IOSCO recommendation
- 25 Alternatively, or in conjunction with the above, the HK\$3.1B HKEX RM Capital set aside to cover the portion of the Projected Loss can be used to guarantee the good payment of an IDM call. This will lessen the financial impact on CPs, reduce the size of the RF and reduce the number of days that Dynamic RF Collectible are subject to increment.

**VI. Do you support the use of HKCC Contingent Advance in relieving burden of CPs?**

I support any initiative that will help relieve the financial burden of CPs. However, I prefer the existing regime where HKEX set aside HK\$3.1B of RM Capital to cover the portion of the Projected Loss

26 Under the new proposal, the HKCC Contingent Advance will be recoverable from CPs. In addition, CPs' obligations are clearly spelled out and under a new replenishment agreement mandated to contribute up to two times the amount (not specified) requested by HKCC.

27 How would the CP's obligation under the HKCC Contingent Advance and the new replenishment agreement categorize in the CP's Balance Sheet? Would they be required to provide haircut against these obligations in their FRR calculation? **If the Contingent Advance is treated as a liability in the book of the CP, it may relieve the funding cost but not the capital requirement of CP.**

**VII. What is your view on allowing RF contribution to be counted as liquid capital? Will this help your company in terms of reducing liquid capital funding burden?**

28 Currently, contributions to RF and Fixed GF cannot be counted as liquid capital. By the same argument, contribution to Dynamic GF and RF also cannot be considered as liquid capital. These contributions are pooled and meant to cover portion of the loss of defaulting CPs whilst the principle behind the FRR is to ensure that the CP has assets that are liquid enough to support the risk exposure of its clients.

29 If in the unlikely case that the non-defaulting CP Dynamic GF/RF Contribution has to be used, and if the Contribution is considered as liquid capital, there is a real danger than the non-defaulting CPs will have breached the FRR. This is a reason for the suggestion that the Contribution should be the last line of support and ranked behind the HKEX RMC.

30 As the contributions to RF and GF increase significantly under the new proposal, any initiative to relieve the funding burden of CPs will be welcome. **If the Dynamic GF and RF are ranked behind the RMC, there is good justification to allow the Contribution or**

part of the Contribution to be counted as liquid capital.

**HKEx's Proposal 4: Revise SEOCH Reserve Fund Calculation**

**VIII. Do you support the proposed revisions to the SEOCH Collateral assumption?**

- 31 As a practitioner, the proposed revisions are long overdue. But it is better late than never. This excessively conservative practice has unnecessarily increased the cost of doing business and more importantly, it may have hindered the development of the stock options in Hong Kong. Despite that, Hong Kong has overtaken Australia to become the largest stock option market in Asia. Stock options is a niche business but it has great potential. We only need to witness the turnover of derivative warrants and Callable Bull and Bear contracts. Stock options is a business where Hong Kong still has an edge and head start over other Asia financial centres.
- 32 If it is possible, SEOCH should deal with this proposal separately and expeditiously to reduce the capital needed to support this business

**My Proposal 5: Order of Application and Investment Income of GF and RF**

**IX. Do you agree with the order of application of GF and RF?**

- 33 The order of application of GF and RF should be as follows:
  - a. The assets of the defaulting CPs, pooled and non-pooled, should be used to cover the loss. This should be the first line of support.
  - b. The HK\$6M grant, the Fixed GF and RF and their associated earned income where both CPs and CCPs contributed should be the second line of support.
  - c. Thirdly, CCPs should contribute significantly to cover the Projected Loss via the Risk Management Capital. This will be the third line of support.
  - d. Fourthly, the pooled contribution of other non-defaulting CPs should be the last line of support.



- e. Ultimately, but I don't think it will be necessary, to raise or use public money via a levy or fund, as the last line of support.

34 As the CCPs act as risk controllers and business owners, their shareholders must be made to bear the brunt of the loss resulting from defaulting members lest losses are socialized and profit privatized. In the proposal, any further losses will be covered by the GF/RF before it hits the RMC provided solely by the HKEX.

**X. How do you think the investment income from the contribution of CPs to the GF and RF should be distributed?**

35 Currently, it is stated in the 2011 interim report of HKEX, the gross investment income was HK\$242M, part of which could be attributed to investment gain and interest earned by Corporate Fund, only HK\$1M was rebated to Exchange to Exchange Participants.