CONSULTATION CONCLUSIONS

HKEx CLEARING HOUSE
RISK MANAGEMENT REFORM MEASURES

March 2012

Hong Kong Exchanges and Clearing Limited
香港交易及結算所有限公司

CONTENTS

EXECUTIVE SUMMARY

1. This paper presents the results of the public consultation on the HKEx proposed changes to the stress testing methodologies and the adequacy of clearing houses' financial resources in meeting the role of a central counterparty ("CCP").

2. HKEx received a total of 626 responses from Clearing Participants ("CPs"), professional and industry associations, market practitioners and individuals. Among the 626 respondents, 273 were from HKSCC, HKCC or SEOCH CPs[1].

3. Out of all 467 HKSCC CPs, 223 responded to the consultation. This group represents about 83% by market share. 72% of CPs by market share expressed full support to all the proposals.

4. Out of all 163 HKCC CPs, 82 responded to the consultation. This group represents 92% by market share. 72% of CPs by market share expressed full support to all the proposals.

5. Out of all 64 SEOCH CPs, 44 responded to the consultation. This group represents 89% by market share. 77% of CPs by market share expressed full support to all the proposals.

6. In view of the strong support to the consultation, HKEx will proceed with the clearing house risk management reform proposals.

7. To address some of the concerns raised by the respondents, the following refinements will be made to the proposals relevant to HKSCC:

   a) Accept CPs' placement of clients' prepaid settlement monies with HKSCC in the form of specific cash collateral. CPs' unsettled positions that are covered by specific cash collateral will not be subject to margin calculation;

   b) Allow the use of favourable Marks, after netting with unfavourable Marks calculated during the mark-to-market ("MTM") processing, to offset margin requirements;

   c) Provide CPs that have unsettled positions in multiple currencies the option to pay margin in one single eligible currency;

   d) Allow the deduction of the relevant margin collected from the required cash prepayment for early release of stocks on settlement day;

   e) Allow the use of bank guarantee to satisfy up to 50% of the margin and Marks requirements, subject to the HKSCC bank guarantee acceptance policy; and

8. As for the derivatives clearing houses, HKEx is also studying other alternatives to further alleviate CPs' burden on liquid capital. We are considering the counting of Reserve Fund ("RF") contributions as liquid capital in the calculations of the existing Capital-Based Position Limits ("CBPL") of HKCC and SEOCH under their respective rules. Such arrangement, if approved, would benefit HKCC and SEOCH CPs by requiring less working capital to maintain the same level of CBPL.

9. The proposed revisions to the SEOCH Collateral assumption will tentatively take place during Q2 2012. Implementation of the other proposals is scheduled for Q3 2012 subject to the readiness of the necessary system enhancements.

[1] The number of returned questionnaires from CPs across three clearing houses (273 in total) is smaller than the summation of HKSCC respondents (223), HKCC respondents (82) and SEOCH respondents (44) since some of the CPs are common participants of two or more clearing houses, and are accounted for separately in the statistics relevant to the specific clearing houses.

10. HKEx is proactively discussing with the Securities and Futures Commission ("SFC") towards the counting of Dynamic Guarantee Fund ("GF") and Dynamic RF as liquid capital under the Securities and Futures (Financial Resources) Rules ("FRR") in the Securities and Futures Ordinance. We have provided further information to the SFC for their analysis and are also exploring with the regulator ways to further improve liquidity of these contributions, which include enhancing the relevant collection and refund mechanisms.

PART A: INTRODUCTION

11. On 8 July 2011, HKEx published the Consultation Paper on HKEx Clearing House Risk Management Reform Measures ("Consultation Paper") proposing the following changes to the risk management measures of its clearing houses:

Clearing House	Proposed Changes
All Clearing Houses	1. Counterparty Default Assumption: ▪ Removing the 30% of loss-making positions from the current assumption; and ▪ Adopting default of the single largest CP plus the fifth largest CP
HKSCC	1. Price Movement Assumption: ▪ ±22% for securities (except structured products, movement of which will remain unchanged at 100%) 2. Financial Resources: ▪ Adopt volatility-based margin methodology, minimum margin rate set at 5% ▪ Introduce Dynamic GF 3. Margin and Dynamic GF Credits: ▪ Introduce Margin Credit of HK$5mn per CP ▪ Introduce Dynamic GF Credit of HK$1mn per CP
HKCC	1. Price Movement Assumptions: ▪ ±20% for Hang Seng Index ("HSI") futures & options with a review after three years of implementation ▪ ±20% for Hang Seng China Enterprise Index ("HSCEI") futures & options 2. Collateral Assumption: ▪ Exclude assumed credits given to intra-day margin from daily RF calculation 3. HKCC Contingent Advance Capital ("HKCC Contingent Advance"): ▪ Introduce HKCC Contingent Advance the size of which is 50% of Dynamic RF
SEOCH	1. Price Movement Assumption: ▪ ±22% for stock options 2. Collateral Assumption: ▪ Credit will be given to risk margin deposit and surplus funds in daily RF calculation

12. For details of the Consultation Paper, please refer to: http://www.hkex.com.hk/eng/newsconsul/mktconsul/Documents/cp201107.pdf

13. In the Consultation Paper, HKEx sought market feedback on the proposed changes to its clearing houses' risk management measures through a list of eight questions. These questions are captured again in the sub-headings of each section in Part B.

14. During the consultation period, HKEx conducted 102 one-on-one visits and seven broker seminars to explain the proposals as well as collect feedback from market participants. In addition, meetings and seminars were held with four brokerage industry associations to better understand the views of the local brokerage community.

15. The consultation period ended on 28 October 2011. A total of 626 responses were received. Appendix I contains a list of respondents to the Consultation Paper. Their responses are available via http://www.hkex.com.hk/eng/newsconsul/mktconsul/responses/cp201107r.htm. Key responses and HKEx's feedback can be found in Part B and they should be read in conjunction with the Consultation Paper.

16. Based on discussion with our CPs during the consultation period and the feedback collected, we have made a variety of refinements to the proposal. The conclusion and implementation plan are set out in Part C.

17. We would like to take this opportunity to thank all those who have shared with us their invaluable views and insights during the consultation period.

PART B:
MARKET FEEDBACK

OVERALL

18. We have received a total of 626 responses to the Consultation Paper:

a) 288 submissions from institutions which include (i) CPs of HKSCC, HKCC and SEOCH (273 submissions); (ii) brokerage industry associations (three submissions); (iii) professional bodies (two submissions); and (iv) other non-CP institutions such as fund management firms and brokerage firms (ten submissions). The responses to each of the eight questions are as follows:

Table 1: Institutional response distribution by questions

Institution	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Agree	258	256	256	252	210	207	168	197
Disagree	18	20	21	27	8	13	0	3
Neutral[2]	12	12	11	9	70	68	120	88
Institution Total	**288**	**288**	**288**	**288**	**288**	**288**	**288**	**288**

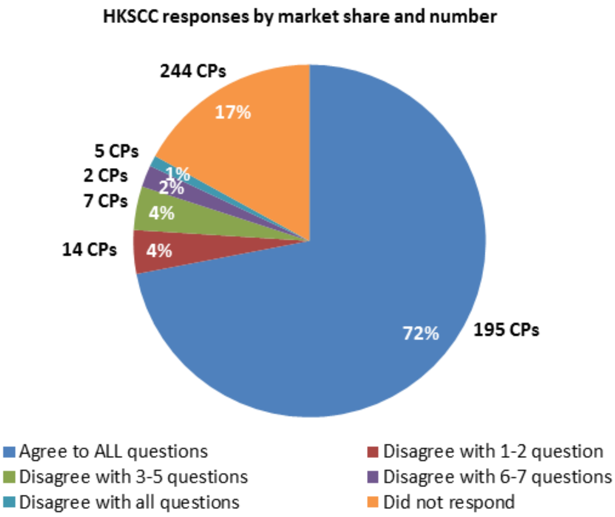
b) 338 submissions come from individuals, most of which are employees or management of our CPs. The responses to each of the eight questions are as follows:

Table 2: Individual response distribution by questions

Individual	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Agree	329	325	324	323	304	306	93	292
Disagree	5	5	7	7	3	2	4	1
Neutral[2]	4	8	7	8	31	30	241	45
Individual Total	**338**	**338**	**338**	**338**	**338**	**338**	**338**	**338**

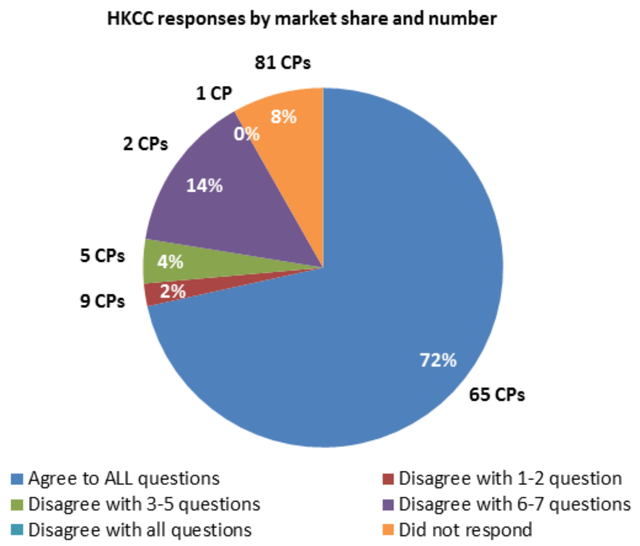
19. The following is an analysis of CPs' responses by clearing house:

a) Out of all 467 HKSCC CPs, 223 responded to the Consultation Paper. This group represents about 83% by market share[3] (48% by number). 72% of CPs by market share (42% by number) expressed full support to all the proposals.

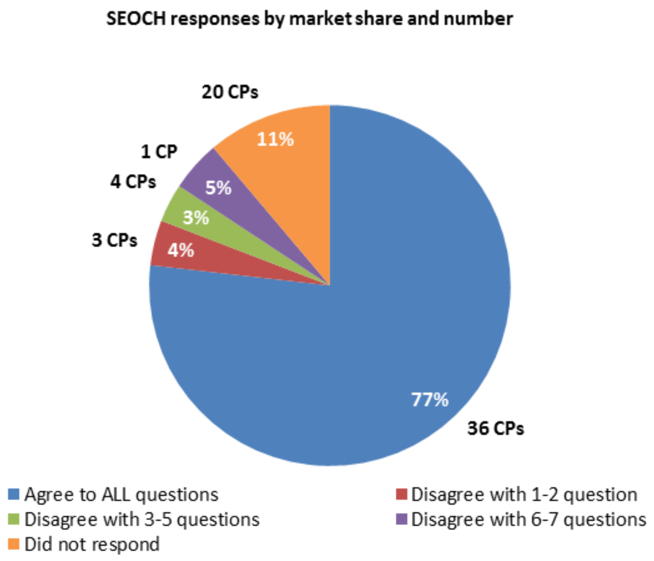


[2] Neutral denotes questions to which CP has indicated neutral position or no answer.
[3] Market share represents respondents' share of total market turnover for the nine months ended 30 September 2011.

b) Out of all 163 HKCC CPs, 82 responded to the Consultation Paper. This group represents 92% by market share[4] (50% by number). 72% of CPs by market share (40% by number) expressed full support to all the proposals.



c) Out of all 64 SEOCH CPs, 44 responded to the Consultation Paper. This group represents 89% by market share[4] (69% by number). 77% of CPs by market share (56% by number) expressed full support to all the proposals.



[4] Market share represents respondents' share of total market margin requirement as at 30 September 2011.

PROPOSAL 1: REVISE HKEx STRESS TESTING ASSUMPTIONS

Question 1: Revise Price Movement Assumptions

Do you support the proposed revision of the Price Movement assumptions in stress testing? Please provide reasons for your response and include any other suggestions or comments you may have on this question.

20. In the Consultation Paper, we proposed using a set of assumptions based on the most volatile historical price movements for HKSCC and SEOCH, with a modification for HKCC markets:

Table 3: Proposed Price Movement Assumptions

Clearing House	Key Markets	Proposed Price Movement Assumptions	Worst Case Price Movement during the Most Volatile Periods
HKSCC	Securities (except structured products movement of which will remain unchanged at 100%)	±22%	-21.75% (5 June 1989)
HKCC	HSI futures & options	±20% (plus evaluate ±25%)	+24.8% (29 October 1997)
	HSCEI futures & options	±20%	+15.92% (19 September 2008)
SEOCH	Stock options	±22%	-21.75% (5 June 1989)

21. Out of 262 CPs which responded to this question, 93% indicated agreement to the proposed revision to Price Movement assumptions for stress testing. These CPs represent 72% market share for HKSCC, 71% for HKCC and 81% for SEOCH. 99% of individuals and all of non-CP institutions also support our proposal.

Table 4: Question 1 response breakdown by number of respondents and market share of CPs

	Response by # of respondents			% by # of respondents		% of supportive response by market share		
	Agree	**Disagree**	**Total**	**Agree**	**Disagree**	**HKSCC**	**HKCC**	**SEOCH**
CP	244	18	262	93%	7%	72%	71%	81%
Non-CP	14	0	14	100%	0%			
Individual	329	5	334	99%	1%			
Total	**587**	**23**	**610**					

Specific Comments

22. While a majority of respondents have expressed support to the level of Price Movement assumptions proposed in the Consultation Paper, a number of them have different views as to how the Price Movement assumptions should be determined.

Price Movement assumptions should be determined by other approaches

23. *Responses received:* 16 CPs and one individual respondent recommended alternative approaches in determining Price Movement assumptions. The suggestions include:

   a) Using different Price Movement assumptions for upward and downward market movement;

   b) Applying different Price Movement assumptions for different baskets of securities;

   c) Setting a finite data period from which the historical price movements should be benchmarked. For example, one CP suggested that only data from the most recent 15 years should be used; and

   d) Exclusion of certain price data. For example, one CP suggested that extreme price movement with a rare chance of occurrence such as the 2008 financial crisis should be excluded. Yet another CP questioned the rationale behind the exclusion of the 1987 market crash scenario.

24. *HKEx response:* The CPSS-IOSCO Technical Committee Recommendations for Central Counterparties (November 2004) ("2004 IOSCO Recommendations") provides that in defining stress testing assumptions, "a CCP should make judgments about what constitutes "extreme but plausible" market conditions. The conditions evaluated should include the most volatile periods that have been experienced by the markets for which a CCP provides its services". As we worked with our regulator to determine the appropriate levels of Price Movement assumptions to use, we agreed to adhere to the principles of simplicity, prudence and objectivity. Therefore, we formulated the proposed Price Movement assumptions with reference to the most volatile periods in the history of the respective markets.

25. In considering the Price Movement assumptions, the market crash scenario in 1987 is excluded as the drastic drop of 33% and 44% in HSI & HSI futures markets in 1987 was exacerbated by the closure of Hong Kong markets for four days which is recognised as unlikely to recur in the future. On this basis, HKEx and its regulator have agreed on this exclusion. As to the exclusion of the worst price movement during the 2008 financial crisis, the suggestion is not relevant as the maximum price movement during 2008 was 14.35%, which was below the proposed Price Movement assumptions.

Price Movement assumptions should be lower or unchanged

26. *Responses received:* 11 CPs and one individual respondent recommended that the Price Movement assumptions should be lower or remain unchanged mainly due to the concern over negative financial impact on CPs.

27. *HKEx response:* The current Price Movement assumption of ±20% across different markets does not reflect the historical extreme market conditions in each individual market as contemplated by the 2004 IOSCO Recommendations. While it is necessary to align the Price Movement assumptions with international standards, HKEx is sensitive to the potential impact that the subject reform would bring to the market. HKEx has examined holistically the market impact and as a result recommend several measures to alleviate CPs' burden (such as Margin and Dynamic GF Credits, and HKCC Contingent Advance).

Question 2: Revise HKEx Counterparty Default Assumption

Do you support the proposed revision of the Counterparty Default assumption in stress testing? Please provide reasons for your response and include any other suggestions or comments you may have on this question.

28. In the Consultation Paper, we proposed (i) removing the use of 30% of loss-making positions as Counterparty Default assumption; and (ii) adopting default of the single largest CP plus the fifth largest CP as Counterparty Default assumption.

29. Out of 262 CPs which responded to this question, 92% indicated agreement to our proposed revision to the Counterparty Default assumption for stress testing. These CPs represent 75% market share for HKSCC, 73% for HKCC and 81% for SEOCH. 98% of individuals and all of non-CP institutions also support our proposal.

Table 5: Question 2 response breakdown by number of respondents and market share of CPs

	Response by # of respondents			% by # of respondents		% of supportive response by market share		
	Agree	Disagree	Total	Agree	Disagree	HKSCC	HKCC	SEOCH
CP	242	20	262	92%	8%	75%	73%	81%
Non-CP	14	0	14	100%	0%			
Individual	325	5	330	98%	2%			
Total	**581**	**25**	**606**					

Specific Comments

30. While there is strong support to removing the 30% of loss-making positions as Counterparty Default assumption, there are different views on whether assumed default of one largest CP, two largest CPs or other combinations should be adopted.

Only single largest CP default should be assumed

31. *Responses received:* A few CPs considered Counterparty Default assumption based on one largest CP sufficient since (i) this is currently in compliance with the minimum 2004 IOSCO standard; (ii) there is concern over increase in financial burden to CPs; and (iii) it is unlikely that more than single largest CP default would happen.

32. *HKEx response:* According to paragraph 4.5.2 of the 2004 IOSCO Recommendations, "… market conditions that typically accompany a default put pressures on other participants… and a default itself tends to heighten market volatility, further contributing to stresses". Therefore, "planning by a CCP should consider the potential for two or more participants to default in a short time frame, resulting in a combined exposure greater than the single largest exposure".

33. At the same time, there is a global trend for more stringent risk management measures. In fact, the CPSS-IOSCO Principles for Financial Market Infrastructures Consultative Report (March 2011) ("2011 IOSCO Consultative Report") proposed increasing assumed default of one largest participant to as many as two participants and their affiliates that would potentially cause the largest aggregate credit exposures in extreme but plausible market conditions.

34. Results of our international benchmarking also indicated that many overseas markets have adopted more than the minimum single largest CP default assumption that is referenced in the 2004 IOSCO Recommendations for their stress testing assumptions. We would like to be in line with best practices and, where appropriate, exceed the minimum international standards.

Counterparty Default assumption should be determined by other means

35. _Responses received:_ Nine CPs and one individual respondent expressed that it is not entirely clear why the fifth largest CP default is added to the largest CP default assumption. 16 CPs and one individual have presented various combinations of Counterparty Default assumptions for our consideration:

    a) Use the default of the largest CP as a base, and use 1.2 times or 1.5 times of its size as a figure in the calculation;

    b) Use arithmetic mean of all other counterparty exposure (excluding the largest) to replace the fifth largest;

    c) Adopt the 10th largest CP instead of the fifth largest CP to strike a balance between risk management and relieve burden of CPs;

    d) Take average of a pool of CPs (e.g. average of second to 10th largest CPs, average of 10th, 20th, 30th largest CPs); and

    e) Assume the default of one CP from each of Categories A, B and C[5].

36. _HKEx response:_ As seen from the above, there could be different combinations of assumed CP default. In fact, our benchmarking study indicated that clearing houses globally adopt different combinations of default assumptions and there is no one single dominant approach. The local regulator strongly recommended that we adopt the default of an additional "reasonably large CP" in the stress testing calculation. We have had lengthy discussions with the SFC on what is considered "reasonably large CP" and have finally arrived at a consensus to use the default of the fifth largest CP.

Default of two largest CPs should be assumed for stress testing

37. _Responses received:_ Seven CPs suggested that HKSCC should assume default of the two largest CPs in stress testing since this is a more conservative measurement. A few CPs said that many CCPs are already using default of the two largest CPs in stress testing.

38. _HKEx response:_ While using assumed default of two largest CPs will yield more conservative Projected Loss, HKEx is sensitive about the financial implication to the market should such assumption be adopted. Pending publication of the conclusion to the 2011 IOSCO Consultative Report, HKEx and the SFC consider it sufficient to assume default of the largest plus fifth largest CPs. We shall keep in view of the changes in international standards and our market conditions and make further enhancement as appropriate.

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[5] Category A brokers are those ranking 1st to 14th in terms of market share, Category B brokers ranking 15th to 65th and Category C brokers ranking 66th or after.

PROPOSAL 2: INTRODUCE MARGINING AND DYNAMIC GUARANTEE FUND IN HKSCC

Question 3: Introduce HKSCC Margining Arrangements

Do you agree with the proposed margining arrangements at HKSCC? Please provide reasons for your response and include any other suggestions or comments you may have on this question.

39. In the Consultation Paper, we propose a volatility based margin measure. It applies a Value at Risk approach and estimates the worst expected losses under normal market conditions using exponentially weighted moving average over a 90-day period at a confidence level of 99.73%.

40. Out of 217 HKSCC CPs which responded to this question, 93% indicated agreement to the proposed margining arrangements at HKSCC. At the same time, 91% of HKCC and SEOCH CPs which are not CPs of HKSCC support the proposal. 98% of individual respondents and 86% of non-CP institutions also support our proposal. HKSCC CPs which support the revision to introduce HKSCC margining arrangements contribute to 78% of market share for the cash market.

Table 6: Question 3 response breakdown by number of respondents

	Response by # of respondents			% by # of respondents	
	Agree	Disagree	Total	Agree	Disagree
HKSCC CP	202	15	217	93%	7%
Non-HKSCC CP	42	4	46	91%	9%
Non-CP	12	2	14	86%	14%
Individual	324	7	331	98%	2%
Total	**580**	**28**	**608**		

Specific Comments

41. The majority of respondents agree with the need to introduce standardised margining in the cash market. Most respondents favour the "user pays" principle associated with margining. It is also clear to many that the existing financial resources may not be sufficient to cover future default, the magnitude of which can be significant. A few even went as far as suggesting a higher margin rate so that the extent of a CP's Dynamic GF contribution being used to cover default losses of other CPs could be reduced. Since our proposal is a new concept for many HKSCC CPs, it is a subject which has attracted most comments out of the eight questions in the Consultation Paper.

CPs should be allowed to pass on margin requirements to clients

42. <u>*Response received:*</u> Eight CPs, one industry association and a few individual respondents recommended that CPs should be allowed to pass on the margin requirements imposed by HKSCC to their clients and use the collected clients' margin to meet their margining requirements.

43. *HKEx response:* Our discussions with the SFC indicated that there are many regulatory constraints for a CP to pass on margin requirements to its clients. We suggest CPs to seek clarification with the SFC on their individual arrangement.

44. *Refinement to proposal:* We have further explored means to reduce a CP's funding requirement for trades that have been prepaid by its clients prior to settlement dates. We propose to allow a CP to place its clients' prepaid settlement monies with HKSCC in the form of specific cash collateral. A CP's unsettled positions that are covered by specific cash collateral will be excluded from the relevant CP's margin calculation. Moreover, if a CP has unsettled short positions and already received the respective stocks from its clients prior to settlement dates, we will accept the CP placing such securities with HKSCC in the form of specific stock collateral. The covered short positions will be excluded from the relevant CP's margin calculation. Acceptance of specific cash and stock collateral will be subject to the specific arrangement that will be published in the amendments to the CCASS Rules and CCASS Operational Procedures prior to the launch of the HKSCC margining.

45. We believe that specific cash collateral and specific stock collateral will effectively reduce margin requirement of eligible CPs.

Margin rate should be customised based on CPs' strength or nature of business

46. *Response received:* 10 CPs, one industry association and one individual respondent suggested that margin rate should be customised and based on CPs' financial strength, credit ratings, nature of business, settlement records and internal controls. A few respondents, including one industry association, also suggested adopting a progressive margin rate approach such that margin rates applied would be proportional to the sizes of positions held by CPs.

47. *HKEx response:* We share the view that a CP's unique characteristics such as financial strength, nature of business or effectiveness of internal controls contribute to its overall risk profile, even though the subject risk management reform is not designed to completely address these risk factors.

48. The proposed margining methodology sets out the baseline for margin calculation and the margin rate applicable to an individual CP can be adjusted upwards if required to manage additional risk exposures for specific circumstances. In addition, HKSCC has a suite of other risk management measures that can be used if necessary to mitigate the additional risk factors of a CP. These risk management measures can be applied to address specific situations and are more effective. For example, additional collateral can be imposed on a CP that has executed a sizeable trade on illiquid stock. Such collateral requirement will be specific to the relevant position and lifted after its settlement. Additional collateral can also be levied when a CP has experienced internal control or settlement problems.

49. Our international benchmarking shows that the combination of baseline margin rate and additional risk management measures is an approach commonly adopted by other major clearing houses.

Margin rate should be customised by individual securities volatility

50. *Response received:* The proposed margining methodology uses one single margin rate to be applied across different securities. Five CPs recommended that different margin rates for individual stocks or baskets of stocks should be applied.

51. *HKEx response:* We agree in principle that margin rate should reflect the risk of the underlying securities and hence, it is logical that different margin rates should be applied to different securities. However, as the concept of margining is relatively new to many HKSCC CPs, we consider the single margin rate approach easier and more practical for the market to understand and adapt at the outset. We will review this practice again in the future including the feasibility of adopting different margin rates for different types of securities, taking into account their respective volatility and liquidity.

HKSCC should set an upper limit to margin rate

52. *Response received:* A few respondents suggested that the margin rate should be capped at 10% to 20% to protect CPs against the adverse effect of pro-cyclicality.

53. *HKEx response:* The proposed HKSCC risk management framework comprises two key components, margin and Dynamic GF. The size of the Dynamic GF depends on the level of Projected Loss and the amount of margin collected from the CPs that are assumed to be in default in the stress testing scenarios. In periods of high market volatility, a margin rate cap will limit the margin requirements on CPs. However, as less margin would be collected from CPs due to the margin cap, the size of Dynamic GF would have to be increased. This in turn translates into higher level of individual CP contribution and liquid capital requirement under the current regime. Moreover, in the event of a default, the risk of loss sharing by non-defaulting CPs would be increased due to the smaller amount of margin collected from the defaulting CP. This goes against the "user pays" principle that is highly desired by the market.

54. Our benchmarking study indicates that it is uncommon for CCPs to establish caps for margining although minimum margin levels are quite common. Based on the above reasons, we consider that setting a margin rate cap is not appropriate.

HKSCC should allow cross-stock netting in calculating margining position

55. *Response received:* Four respondents suggested that in the calculation of margining positions, positions of different stocks should be allowed to offset in addition to the proposed same stock netting.

56. *HKEx response:* As different stocks have different risk attributes, it is not an acceptable risk management practice to allow cross-stock netting in margin calculation without considering the specific correlation factors between the offsetting stocks and their respective liquidity. Such arrangement could easily lead to under-collection of margin and increase the risk of loss-sharing by non-defaulting CPs in the event of default. However, it is conceptually possible that liquid stocks with sufficiently strong and stable correlation factors be considered for offset in margin calculation. For simplicity, we do not incorporate cross-stock netting in the introduction of margining to the cash market as a relatively simpler model is preferred. However, we would reconsider cross-stock netting, as appropriate in the future, alongside the review of multiple margin rates for different securities.

HKSCC should increase level of Margin Credit

57. *Response received:* 17 CPs, three industry associations and three individual respondents suggested HKSCC to increase the Margin Credit to ease CPs' financial burden. The suggested approach by these industry associations varied, and can be summarised as follows:

    a) Increase the Margin Credit from the proposed HK$5mn to between HK$7mn and HK$10mn;

    b) Temporarily increase the Margin Credit to HK$10mn as a transitional measure; and

    c) Adopt a progressive scale to Margin Credit so that CPs holding larger positions will be given higher credit.

58. *HKEx response:* According to our analysis, the proposed HK$5mn Margin Credit would have alleviated an average of 81% of CPs from paying margin during the Reference Period. We consider this level of Margin Credit as appropriate as it provides meaningful assistance to the market. In addition, our analysis shows that further increase in the Margin Credit would only yield limited incremental benefit to the market as the sizes of CPs tend to increase rapidly towards the end of the spectrum within the existing market structure. As an illustration, doubling the Margin Credit to HK$10mn would have exempted only an additional 6% of CPs from paying margin. We do not consider this an efficient way to employ financial resources. We have, in parallel, formulated various refinements to our proposals to further reduce CPs' margin obligations.

59. To adopt a progressive scale for Margin Credit will create significant complication to HKSCC risk management. A progressive scale will require HKSCC to grant Margin Credit that is commensurate with the size of a CP position. To implement such arrangement, HKSCC could either reduce the Margin Credits granted to CPs with smaller positions so that higher Margin Credits can be granted to CPs with larger positions; or to increase the Margin Credits to CPs with larger positions without reducing Margin Credits to CPs with smaller positions and thereby absorbing more risk. We consider neither of these options consistent with the original objective of providing Margin Credit, which is to alleviate some of the burden of the proposed margining on CPs with relatively limited financial resources and operational capabilities.

HKSCC should not introduce Margin Credit

60. *Response received:* Seven CPs and one non-CP institution did not agree with the introduction of Margin Credit; three of these CPs believed that all CPs in the market should contribute margin in full and be responsible for the risks they created. Also, the proposed Margin Credit would dissociate a CP's risk management consideration from its business decision making process.

61. *HKEx response:* We recognize the diversity in our market and believe that the right level of assistance has to be provided to the market to ease the transition into this important market reform. We consider the Margin Credit as an appropriate way to alleviate some, if not all, of the financial and operational burden on CPs with small positions. It is also a fair arrangement as every CP will be given the same Margin Credit disregarding the size of its position. Nevertheless, HKSCC will remain vigilant in monitoring CPs' activities and will apply other appropriate risk management measures to deter excessive risk taking activities in the market.

HKSCC should not implement margining as it duplicates with the existing Marks mechanism

62. *Response received:* Four CPs and one individual respondent questioned the necessity of HKSCC charging both Marks and margin on open positions. They commented that the proposed margining is redundant as the existing Marks mechanism has already been an effective risk management measure.

63. *HKEx response:* Marks and margin are different counterparty risk management measures that are designed to address different risks. Marks collection covers the MTM losses of a CP's unsettled positions as a result of unfavourable movements of stock prices which have already occurred. As such, collection of Marks does not provide any protection against risk of unfavourable market movements in the future. In case of a CP default, HKSCC has to close out the defaulter's unsettled positions in the market. As the closing-out prices would very likely be different from the last MTM prices, HKSCC is exposed to any subsequent unfavourable price movements against the defaulter's unsettled positions. The proposed margining would provide safeguard against such exposures within the range determined by the proposed margining methodology. Therefore, conceptually there is no duplication between Marks and margin collection.

64. *Refinement to proposal:* We recognize that a CP might have favourable Marks related to unsettled positions that have MTM gains. To relieve CPs' added burden due to the introduction of margining, we propose to offer a CP with offset between the amount of favourable Marks calculated from its unsettled positions and its margin requirements. The detailed arrangement will be published in the amendments to the CCASS Rules and CCASS Operational Procedures prior to the launch of HKSCC margining.

HKSCC should allow flexibility in margin collection currency

65. *Response received:* 16 CPs and one individual respondent suggested HKSCC to accept margin payment in a single currency by converting margin requirements with respect to positions denominated in different trade currencies to one eligible currency.

66. *HKEx response:* We recognise the benefit to CPs' operational efficiency by converting margin requirements in different currencies to one single currency.

67. *Refinement to proposal:* Considering respondents' requests, we plan to revise the proposal and to provide CPs with the options to pay margin either in the original trading currencies of their positions or in one alternative eligible currency of their choice. To mitigate cross-currency risk, in converting margin payments from the original trade currencies to the currency selected by the CPs, appropriate haircuts will be applied. The haircut ratios will be determined by HKEx with reference to the prevailing exchange rate volatility and will be reviewed and revised from time to time. A list of eligible currencies and haircut ratios will be published on the HKEx website for CPs' reference.

Margin should be allowed to offset cash prepayment requirement on settlement day

68. _Response received:_ A few CPs suggested that the existing cash prepayment arrangement for early stock release on settlement day should be revised to allow for offset of the margin already collected prior to settlement day with respect to such positions.

69. _HKEx response:_ We understand the merits of CPs' suggestion in allowing offsetting of margin with cash prepayment on settlement day.

70. _Refinement to proposal:_ We will revise the proposal to allow for deduction from the required cash prepayment the amount of margin collected with respect to stocks for early release on settlement day. The specific arrangement of this refined operation will be published in the amendments to the CCASS Rules and CCASS Operational Procedures prior to the launch of the HKSCC margining.

HKSCC should allow CPs to use non-cash collateral in settling margin requirement

71. _Response received:_ 11 CPs recommended HKSCC to increase the flexibility of the use of non-cash collateral to meet margin requirement. A few CPs also suggested HKSCC to accept a guarantee provided by affiliated banks.

72. _HKEx response:_ We recognise the market's need in utilising bank guarantee in settling margin requirement. However, under HKSCC's bank guarantee acceptance policy, group company bank guarantees are not acceptable due to affiliation risk. This practice is also consistent with the recommended principle on collateral acceptance in the 2011 IOSCO Consultative Report[6].

73. _Refinement to proposal:_ To relieve CPs' financial burden after the introduction of margining, we propose that up to 50% of the margin and Marks requirements can be met in form of bank guarantee, subject to the HKSCC bank guarantee acceptance policy.

[6] Paragraph 3.5.2 of the 2011 IOSCO Consultative Report stated that a financial market infrastructure, such as a clearing house, should avoid wrong-way risk by not accepting collateral that would likely lose value in the event that the participant posting the collateral defaults.

Question 4: Introduce HKSCC Dynamic GF Model

Do you agree with the proposed Dynamic GF model at HKSCC? Please provide reasons for your response and include any other suggestions or comments you may have on this question.

74. In the Consultation Paper, we proposed to introduce Dynamic GF, a scalable pooled measure, as a second line of support against potential excess default losses in extreme but plausible situations. The size of the Dynamic GF will be determined from the daily stress testing performed by HKSCC. It is designed to cover any residual Projected Loss under the stress testing assumptions after deducting the margin from the CPs assumed to default in the stress scenario, and the amount of the Fixed GF.

75. Out of 218 HKSCC CPs which responded to this question, 91% indicated agreement to the proposed Dynamic GF model. At the same time, 85% of HKCC and SEOCH CPs which are not CPs of HKSCC and 98% of the individual respondents support the proposal. HKSCC CPs which support the proposed HKSCC Dynamic GF model contribute 78% of market share in the cash market.

Table 7: Question 4 response breakdown by number of respondents

	Response by # of respondents			% by # of respondents	
	Agree	**Disagree**	**Total**	**Agree**	**Disagree**
HKSCC CP	198	20	218	91%	9%
Non-HKSCC CP	40	7	47	85%	15%
Non-CP	14	0	14	100%	0%
Individual	323	7	330	98%	2%
Total	**575**	**34**	**609**		

Specific Comments

Dynamic GF size should be determined on a rolling average basis

76. *Response received:* A few CPs, one industry association and one individual respondent commented that the determination of the required Dynamic GF size based on previous month's market information could not keep pace with rapid change in market volatility. Instead, they suggested that the determination of the Dynamic GF size should be made on a 15 to 20 day rolling average basis so that more recent market information will be reflected.

77. *HKEx response:* According to the proposal, the Dynamic GF size of a given month is determined with reference to the daily stress testing results of the preceding month. The required Dynamic GF size of the current month will be the largest daily stressed Dynamic GF size of the preceding month. Calculation will be performed on the first business day and collection will be made on the fourth business day of a month. To calculate the required Dynamic GF size on a rolling average basis would require collections on different days of a month and hence, increase operational uncertainty to CPs. However, in periods of extreme market volatility, HKSCC will continue to have the rights under its Rules to require ad hoc contributions from CPs at any point during a month. HKSCC will inform CPs of the detailed triggering conditions for ad hoc contribution collection prior to the implementation of the proposal.

Dynamic GF Credit should be increased

78. *Response received:* Ten CPs and one individual respondent would like HKSCC to increase the level of Dynamic GF Credit and one CP suggested HKSCC to adopt Dynamic GF Credit based on the same model as the HKCC Contingent Advance.

79. *HKEx response:* We believe that the proposed Dynamic GF Credit of $1mn is already substantial enough to alleviate burden of a broad range of CPs. Our back testing analysis indicates that 79% of CPs would have been exempted from contributing to the Dynamic GF during the Reference Period with the proposed Dynamic GF Credit.

80. We consider that a model similar to the proposed HKCC Contingent Advance for the futures market is not as appropriate as the proposed Dynamic GF Credit due to the different market structure between the cash and futures markets. If a model similar to the HKCC Contingent Advance is adopted for the cash market, even though 50% of the Dynamic GF contribution requirements would be exempted, CPs would still be required to contribute the remaining 50% to the Dynamic GF. For CPs with limited financial resources and operational capabilities, the added burden would still be significant. On the other hand, the proposed Dynamic GF Credit will exempt most CPs with small positions from having to contribute to the proposed Dynamic GF.

PROPOSAL 3: REVISE HKCC RESERVE FUND CALCULATION

Question 5: Revise Collateral Assumption of HKCC

Do you support the proposed revisions to the HKCC Collateral assumption? Please provide reasons for your response and include any other suggestions or comments you may have on this question.

81. Currently, HKCC assumes intra-day margin call collateral which is not yet on hand as received and gives credit to the amount in daily RF calculation. Since it is difficult to predict reliably whether collateral after an intraday margin call could be collected ahead of an assumed CP default, HKEx recommended removing the assumed intraday margin credits from stress testing in the Consultation Paper.

82. Out of 77 HKCC CPs which responded to this question, 95% indicated agreement to the proposed revisions to the HKCC Collateral assumption. These CPs account for 91% market share of the futures market. At the same time, 97% of HKSCC and SEOCH CP respondents which are not CPs of HKCC and 99% of individual respondents support the proposal.

Table 8: Question 5 response breakdown by number of respondents

	Response by # of respondents			**% by # of respondents**	
	Agree	**Disagree**	**Total**	**Agree**	**Disagree**
HKCC CP	73	4	77	95%	5%
Non-HKCC CP	124	4	128	97%	3%
Non-CP	13	0	13	100%	0%
Individual	304	3	307	99%	1%
Total	**514**	**11**	**525**		

Specific Comments

83. Most CPs supported our proposal to align closer to the IOSCO principles and considered that to be more reasonable and prudent. A minority of CPs which were not agreeable to the proposed change were concerned with the consequential negative financial impact. Apart from responding to the question related to the Collateral assumption, some CPs recommended setting a higher level of margin for derivatives products.

Higher margin requirements for derivatives products

84. *Responses received:* A few respondents, including one industry association, suggested that margin requirements on derivatives products should be increased. These CPs believe that doing so would reduce the level of Dynamic RF contribution and the extent that non-defaulting CPs would need to share the loss in a default situation. Moreover, it would allow CPs to request more margins from investor clients and hence be better protected from investor client default.

85. *<u>HKEx response:</u>* HKCC and SEOCH have revised two margin parameters[7] between November 2011 and January 2012 to better address the prevailing risks of the derivatives market. Such revisions have generally increased the margin requirements for options positions hence providing CPs with better safeguards against volatile market situations. HKCC and SEOCH will continue to monitor market situations and further revise margin parameters where appropriate.

Higher margin requirements for CPs with large risk exposures

86. *<u>Responses received:</u>* A few respondents, including one industry association, suggested that higher margins should be imposed on CPs with large risk exposures so as to reduce the Dynamic RF contribution shared by other CPs with relatively lower risk exposures.[8]

87. *<u>HKEx response:</u>* It is already an existing arrangement in HKCC and SEOCH to impose concentration risk margin on CPs with concentrated risk exposures in any particular market. Considering respondents' request, HKCC and SEOCH will review and further enhance the existing concentration risk arrangement to cover concentration risk at the participant level.

[7] The two margin parameters are short option minimum charge and volatility scan range. For details, please refer to the Participant circulars: http://www.hkex.com.hk/eng/market/partcir/Partindex.htm.

[8] Dynamic RF amount equals Projected Loss less margin collectible of defaulting CPs and Fixed RF. The higher the total margin collectible, the lower the total Dynamic RF contribution required by CPs.

Question 6: Introduce HKCC Contingent Advance

Do you support the use of HKCC Contingent Advance in relieving burden of CPs? Please provide reasons for your response and include any other suggestions or comments you may have on this question.

88. In recognition of the substantial increase in Dynamic RF collectible due to the proposed stress testing changes, as an immediate measure to alleviate CPs' burden, HKEx proposed in the Consultation Paper the HKCC Contingent Advance through which HKCC shares 50% of daily Dynamic RF collectible with CPs.

89. Out of 77 HKCC CPs which responded to this question, 91% support the proposed HKCC Contingent Advance. These CPs constitute 72% market share in the futures market. At the same time, 96% of HKSCC and SEOCH CP respondents which are not CPs of HKCC and 99% of individual respondents support the proposal.

Table 9: Question 6 response breakdown by number of respondents

	Response by # of respondents			% by # of respondents	
	Agree	**Disagree**	**Total**	**Agree**	**Disagree**
HKCC CP	70	7	77	91%	9%
Non-HKCC CP	126	5	131	96%	4%
Non-CP	11	1	12	92%	8%
Individual	306	2	308	99%	1%
Total	**513**	**15**	**528**		

Specific Comments

HKCC should not introduce HKCC Contingent Advance

90. *Responses received:* Most CPs support HKCC's proposal to share the cost of risk management with CPs and to reduce the daily liquid capital burden of the market. However, some respondents are not in favour of the proposed HKCC Contingent Advance as they are concerned that relieving part of CPs' responsibilities would create a moral hazard problem.

91. *HKEx response:* While we acknowledge the concerns raised by some of our CPs, we are also aware of the financial implications of our proposed changes to HKCC's stress testing assumptions. After weighing the costs and benefits and taking into account that a majority of the respondents support the HKCC Contingent Advance, HKCC will implement this proposal. The HKEx Risk Management Capital[9] ("HKEx RM Capital") provides a reliable source of support for the HKCC Contingent Advance which can be reliably drawn on in an event of default. HKCC will, nevertheless, keep in view changes in market activities and risk profile and adjust the amount and source of funding where appropriate.

[9] The HKEx RM Capital is provided by HKEx to further strengthen the risk management regime of HKEx's clearing houses and to support their roles as CCPs. It is solely funded by HKEx through setting aside HK$4bn of its shareholders' funds. For more information on the HKEx RM Capital, please refer to paragraphs 18 to 23 of the Consultation Paper.

HKCC should provide permanent relief for Dynamic RF instead of an advance

92. *Responses received:* Four respondents commented that while the use of the HKCC Contingent Advance could relieve CPs' daily working capital requirement, non-defaulting CPs would still be liable for the default loss sustained by the HKCC Contingent Advance, including the unpaid Dynamic RF contribution of the defaulting CP in the event of default. These CPs advocated that the HKCC Contingent Advance be undertaken by HKCC as a "permanent relief" rather than a "temporary advance". Some of these respondents cited that the HKEx RM Capital and the future Risk Management Fund[10] ("RMF") may be used in place of the HKCC Contingent Advance. A few CPs also expressed concern about the need for non-defaulting CPs to replenish the HKCC Contingent Advance utilised in an event of default, the size of which cannot be readily ascertainable.

93. *HKEx response:* HKCC has set the size of the HKCC Contingent Advance to as large as half of Dynamic RF chiefly because of its nature as an "advance" to the CPs (but fully backed by the HKEx RM Capital). The main purpose of the HKCC Contingent Advance is to reduce daily liquid capital requirements and not CPs' obligation in an event of default. Note that there is no cap to the size of the HKCC Contingent Advance – it is unsustainable and imprudent to rely solely on the balance sheet of HKEx to cover an unlimited liability on a permanent basis.

HKCC should grant Dynamic RF credit in addition to HKCC Contingent Advance to HKCC CPs

94. *Responses received:* A few respondents suggested that a Dynamic RF credit similar to the HKSCC Dynamic GF Credit should also be granted to HKCC CPs.

95. *HKEx response:* In formulating the proposed funding support models for each clearing house, we have taken into account the unique characteristics of each clearing house as well as the size of their participantships. While we believe the Dynamic GF Credit would provide an effective relief to a significant portion of the HKSCC CPs with relatively small risk exposures, the HKCC Contingent Advance will be more meaningful in relieving the daily liquid capital burden for a majority of HKCC CPs. Granting a Dynamic RF credit to each HKCC CP in addition to the HKCC Contingent Advance would not be the most effective use of HKEx's financial resources.

[10] The idea of the RMF is to establish a fund contributed by the SFC, HKEx and the market in equal proportion to support risk management. The objective is to ensure long term sustainability and scalability of funding and to mitigate any higher funding requirements for CPs. For more explanation on the RMF, please refer to paragraphs 107 to 111 of the Consultation Paper and paragraphs 114 to 116 of this Consultation Conclusions.

Question 7: Counting GF and RF Contribution as Liquid Capital

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?

96. Since before publication of the Consultation Paper in July 2011, HKEx has been lobbying the SFC to consider allowing GF and RF contributions to be counted as liquid capital, in line with the practices of some overseas markets. This arrangement, if approved, would benefit CPs of all three clearing houses.

97. All 154 CPs which responded to this question agreed that GF / RF contributions should be counted as liquid capital under the FRR. 96% of individuals and all of non-CP institutions also highly support the idea. CPs which support the proposal account for 77% market share for HKSCC, 78% for HKCC and 84% for SEOCH.

Table 10: Question 7 response breakdown by number of respondents and market share of CPs

	Response by # of respondents			% by # of respondents		% of supportive response by market share		
	Agree	Disagree	Total	Agree	Disagree	HKSCC	HKCC	SEOCH
CP	154	0	154	100%	0%	77%	78%	84%
Non-CP	14	0	14	100%	0%			
Individual	93	4	97	96%	4%			
Total	**261**	**4**	**265**					

Specific Comments

98. Most of the respondents which support counting of RF contribution as liquid capital also expressed that same treatment should be extended to GF contribution. The four individuals who disagreed with the idea are of the view that the change would not be helpful in reducing CPs' burden.

Allow GF and RF contributions to be counted as liquid capital under the FRR

99. *Responses received:* Almost all respondents strongly supported that GF and RF contributions should be counted as liquid capital to help reduce their funding burden.

100. *HKEx response:* HKEx is proactively discussing with the SFC towards the counting of Dynamic GF and Dynamic RF as liquid capital under the FRR in the Securities and Futures Ordinance. We have provided information to the SFC for their analysis and are also exploring with the regulator ways to further improve liquidity of these contributions, which include enhancing the relevant collection and refund mechanisms.

101. *Refinement to proposal:* In parallel, we are studying alternatives to further alleviate CPs' liquid capital burden, such as the counting of RF contributions as liquid capital in the calculations of the existing CBPL of HKCC and SEOCH under their respective rules. Such arrangement, if approved, would benefit HKCC and SEOCH CPs by requiring less working capital to maintain the same level of CBPL.

PROPOSAL 4: REVISE SEOCH RESERVE FUND CALCULATION

Question 8: Revise Collateral Assumption of SEOCH

Do you support the proposed revisions to the SEOCH Collateral assumption? Please provide reasons for your response and include any other suggestions or comments you may have on this question.

102. HKEx proposes aligning with the practice of HKCC to give credit to risk margin deposit and surplus funds in the daily RF calculation. The proposed change is expected to benefit the market with an overall reduction in SEOCH CPs' Dynamic RF collectible.

103. Out of 41 SEOCH CPs which responded to this question, 98% indicated agreement to the proposed revision to the SEOCH Collateral assumption. At the same time, 99% of HKSCC and HKCC CP respondents which are not CPs of SEOCH and all of individual respondents support the proposal. SEOCH CPs which support the proposal account for 80% of the stock options market.

Table 11: Question 8 response breakdown by number of respondents

	Response by # of respondents			% by # of respondents	
	Agree	Disagree	Total	Agree	Disagree
SEOCH CP	40	1	41	98%	2%
Non-SEOCH CP	144	2	146	99%	1%
Non-CP	13	0	13	100%	0%
Individual	292	1	293	100%	0%
Total	**489**	**4**	**493**		

Specific Comments

104. The four respondents who disagree with the proposed revision to the SEOCH Collateral assumption have either not provided any valid reason or simply required clarification on the proposal.

Requests for an early implementation of the proposed revisions to the SEOCH Collateral assumption

105. *Responses received:* Almost all respondents supported the proposal that credit should be given to risk margin deposit and surplus funds in the daily RF calculation. A few of them suggested an early implementation of the proposal.

106. *HKEx response:* Considering the respondents' request, HKEx will effect this SEOCH proposal during Q2 2012 ahead of other proposals under the implementation plan.

OTHER SPECIFIC COMMENTS

Reducing T+2 settlement cycle to T+1 or T+0 to reduce risk

107. *Responses received:* A few respondents suggested HKSCC to review the existing T+2 settlement arrangement with the aim to shorten the settlement cycle in order to reduce HKSCC's exposures.

108. *HKEx response:* The current T+2 settlement arrangement allows sufficient time for investors to complete the necessary post-trade operations within a two-day settlement cycle. This is particularly important to overseas investors who operate in different time zones and through different intermediaries. According to the Cash Market Transaction Survey 2010/11 conducted by HKEx, overseas investors contributed 46% of the total market turnover in Hong Kong and 69% of the overseas investors were from Europe and US. Most overseas investors will find it impractical to operate in a settlement cycle that is shorter than the current T+2 arrangement.

109. Our international benchmarking shows that the current T+2 settlement cycle is amongst the shortest in major international markets.

Insurance should be used as a financial resource for the clearing houses

110. *Responses received:* A few respondents suggested the use of insurance as one of the funding resources such that the Dynamic GF/RF level may be reduced.

111. *HKEx response:* HKSCC, HKCC and SEOCH were previously covered in part by an insurance policy with an aggregate HK$798mn coverage against defaults of their CPs. The insurance policy was terminated with effect from January 2007. To maintain the robustness of the risk management regime, HKEx set aside additional shareholders' funds of HK$1.6bn in 2006 and HK$900mn in 2011 which brought the HKEx RM Capital to HK$4bn. HKEx maintains the position that insurance is not an ideal financial resource for the following reasons:

    a) Concentration risk – Due to the nature of the policy, few insurance companies were able to provide the coverage for CCPs. Today, only one insurance company globally is able to offer insurance to protect clearing houses against default of participants. In other words, the risk is concentrated in one single insurer, leaving us with uncertainty in securing an alternative source of capital should this insurer run into financial difficulties.

    b) Cost – With the unique nature of the insured business and the lack of insurance provider, the premium of such policy and the deductible is set at a high level. In fact, the amount of deductible is so high that even default loss similar to that during the default of Lehman Brothers Securities Asia Limited would not have been covered by the insurance. HKEx does not consider this a cost efficient financial resource.

112. We are open to consider re-introducing insurance as a funding resource should the situation change more favourably.

Establishment of RMF

113. *Responses received:* Six CPs and one industry association support the establishment of the RMF which would be contributed by the SFC, HKEx and the market. Four other CPs also indicated support for the establishment of an investor contributed fund for risk management purposes but without making specific reference to the RMF.

114. *HKEx response:* The RMF model is based on the principle that all key stakeholders, including market players, the CCP and the regulator should support the stability of the securities and derivatives markets. Tighter regulatory regime and growth in market activities would inevitably result in higher risk management capital requirement from both the clearing houses and market participants. As the size of RMF accumulates over time, it would provide a new source of funding to support the risk management regime.

115. Although we did not specifically consult the market on the establishment of the RMF, we have received feedback from market participants as side comments. We will take note of these comments in conjunction with other key considerations such as:

    a) What are the parties that should contribute to the RMF?

    b) What are the appropriate market levies to be imposed on the cash and derivatives markets?

    c) When should we suspend and restart the market levies collection?

    d) Which legal entity should own and administer the RMF?

    e) What should be the appropriate governance structure of the legal entity to ensure RMF integrity and accountability?

    f) How should the RMF be allocated to the three clearing houses?

116. As seen in the preceding paragraph, we need thorough consideration in establishing the RMF, and the process may involve public consultation and legislative approval. As such, the implementation timetable would not coincide with that of the subject risk management reform. HKEx will nonetheless work closely with the HKSAR Government and the regulator to achieve this goal as soon as practicable.

PART C:
CONCLUSION AND IMPLEMENTATION PLAN

Conclusion

117. Responses to the consultation show very strong support to the proposals. The vast majority of respondents indicated support to the proposals as outlined in the Consultation Paper. At the same time, some respondents also shared their comments on some of the proposals which have been discussed in Part B above.

118. In view of the strong support to the consultation, HKEx will proceed with the clearing house risk management reform proposals.

119. To address some of the concerns raised by the respondents, the following refinements will be made to the proposals relevant to HKSCC:

    a) Accept CPs' placement of clients' prepaid settlement monies with HKSCC in the form of specific cash collateral. CPs' unsettled positions that are covered by specific cash collateral will not be subject to margin calculation;

    b) Allow the use of favourable Marks, after netting with unfavourable Marks calculated during the MTM processing, to offset margin requirements;

    c) Provide CPs that have unsettled positions in multiple currencies the option to pay margin in one single eligible currency;

    d) Allow the deduction of the relevant margin collected from the required cash prepayment for early release of stocks on settlement day;

    e) Allow the use of bank guarantee to satisfy up to 50% of the margin and Marks requirements, subject to the HKSCC bank guarantee acceptance policy; and

120. As for the derivatives clearing houses, HKEx is also studying other alternatives to further alleviate CPs' burden on liquid capital. We are considering the counting of RF contributions as liquid capital in the calculations of the existing CBPL of HKCC and SEOCH under their respective rules. Such arrangement, if approved, would benefit HKCC and SEOCH CPs by requiring less working capital to maintain the same level of CBPL.

Implementation Plan

121. The proposed revisions to the SEOCH Collateral assumption will tentatively take place during Q2 2012.

122. Implementation of the other proposals is scheduled for the Q3 2012 subject to the readiness of the necessary system enhancements.

123. Prior to implementation of the reform, HKEx will kick off a communication programme which may include briefing sessions, circulars, margin and Dynamic GF simulation reports to ensure CPs have a practical understanding of the various changes to the rules, operational procedures and systems in relation to this reform.

APPENDIX I: LIST OF RESPONDENTS

Clearing Participants (273 out of a total of 649 Clearing Participants)

1	Asa Securities Limited
2	Bloomyears Limited
3	BOCI Securities Limited
4	BOCOM International Securities Limited
5	Bright Smart Futures & Commodities Company Limited
6	Bright Smart Securities International (H.K.) Limited
7	Celestial Commodities Limited
8	Celestial Securities Limited
9	Cheer Pearl Investment Limited
10	China Merchants Futures (HK) Co., Limited
11	China Merchants Securities (HK) Co., Limited
12	Chow Sang Sang Futures Limited
13	Chow Sang Sang Securities Limited
14	Citibank N.A.
15	Daiwa Capital Markets Hong Kong Limited
16	Daiwa Capital Markets Trading Hong Kong Limited
17	DL Brokerage Limited
18	Ewarton Securities Limited
19	Grand Cathay Securities (Hong Kong) Limited
20	Haitong International Futures Limited
21	Hip Hing Securities Limited
22	HSBC Securities Brokers (Asia) Limited
23	Hui's Brothers Financial Group Limited
24	Hung Sing Futures Limited
25	Hung Sing Securities Limited
26	J.P. Morgan Broking (Hong Kong) Limited
27	Kee Cheong Securities Company Limited
28	Lippo Futures Limited
29	Lippo Securities Limited
30	Macquarie Capital Securities Limited
31	Malahon Securities Limited
32	Marigold International Securities Limited
33	Merrill Lynch Far East Limited
34	MF Global Hong Kong Limited (suspended from clearing as of 1 November 2011)
35	National Resources Securities Limited
36	Newedge Broker Hong Kong Limited
37	Newedge Financial Hong Kong Limited
38	One China Securities Limited
39	Ping An of China Securities (Hong Kong) Company Limited
40	SBI E2-Capital Commodities Limited
41	SBI E2-Capital Financial Services Limited
42	Shun Heng Securities Limited
43	Sinomax Securities Limited
44	SKN Securities Limited
45	South China Commodities Limited
46	South China Securities Limited

47	SynerWealth Financial Limited
48	Tai Ning Stock Company Limited
49	Tang Kee Securities Limited
50	Tang Ping Kong Limited
51	Tanrich Futures Limited
52	Tanrich Securities Company Limited
53	Telecom Digital Securities Limited
54	Treasure Securities Limited
55	Tung Shing Futures (Brokers) Limited
56	Tung Shing Securities (Brokers) Limited
57	UOB Kay Hian (Hong Kong) Limited
58	UOB Kay Hian Futures (Hong Kong) Limited
59	Wing On Securities Limited
60	Worldwide Brokerage Limited
61	The Hongkong and Shanghai Banking Corporation Limited
62-273	212 Clearing Participants requested anonymity

Brokerage Industry Associations (3 in total)

274	Hong Kong Securities Association
275	Hong Kong Securities Professionals Association
276	The Institute of Securities Dealers Limited

Professional Bodies (2 in total)

277	Members of Derivatives Market Consultative Panel of HKEx
278	The Alternative Investment Management Association Limited

Other Non-CP Institutions (10 in total)

279	Bright Smart Securities & Commodities Group Limited
280	Hai Tong Asset Management (HK) Limited
281	Haitong International Asset Management Limited
282	Haitong International Bullion Limited
283	Haitong International Capital Limited
284	Haitong International Investment Managers Limited
285	Haitong International Investment Services Limited
286	Haitong International Research Limited
287-288	2 other non-CP institutions requested anonymity

Individuals (338 in total)

289	Au Yeung Siu Yin
290	Brian Wong
291	Chan Hing Wah
292	Chan Mei Lin
293	Chan Tai Wai David
294	Chan Yuet Fong Elaine
295	Cheng Tai Foon
296	Cheng Yau Lam
297	Chiu Che Leung Stephen
298	Chow Lai Wah

299	Chung Lai Yung
300	Da Rosa David
301	Fu Lai Ying
302	Ho Chi Hon
303	Hui Sai Tsun Peter
304	Jacqualine Law
305	Jim Kin Ting
306	Jorge Marrero
307	Kwan Kin Man
308	Kwong Chi Kong
309	Lam Wing Yee Winnie
310	Lee Ka Chun
311	Lee Sung Yin
312	Lee Yat Hung
313	Leung Sai Mui
314	Lo Chi Yan
315	Lo Kai Ngai
316	Ma Tor Fuk Dick
317	Maggie So
318	Ng Wai Man
319	Ng Yok Bor
320	Noel Watt
321	Patrick Chu
322	So Yung Chun
323	Stanley Shaw
324	Sze Tung
325	Tang Ping Kong
326	Tang Ping Sun Sammy
327	Tsoi Wai Keung
328	Wong Chung Sze
329	Wong Kim Kiu Cambridge
330	Wong Kwong Tung
331	Wong Long Sau Ivis
332	Yip Chor Wai
333	耿偉東
334	許加滾
335	陳志華
336	陳洪齡
337	陸錦源
338-626	289 individuals requested anonymity

APPENDIX II: GLOSSARY

2004 IOSCO Recommendations	CPSS-IOSCO Technical Committee Recommendations for Central Counterparties (November 2004)
2011 IOSCO Consultative Report	CPSS-IOSCO Principles for Financial Market Infrastructures Consultative Report (March 2011)
CBPL	Capital-Based Position Limits
CCASS Rules	General Rules of CCASS
CCP	Central counterparty
Collateral assumption	Treatment of collateral in stress testing
Consultation Paper	Consultation Paper on HKEx Clearing House Risk Management Reform Measures
CPs	Clearing Participants
CPSS	Committee on Payment and Settlement Systems
Dynamic GF	Dynamic Guarantee Fund
Dynamic RF	Dynamic Reserve Fund
FRR	The Securities and Futures (Financial Resources) Rules under the Securities and Futures Ordinance
GF	Guarantee Fund
HKCC	The HKFE Clearing Corporation Limited
HKCC Contingent Advance	HKCC Contingent Advance Capital
HKEx	Hong Kong Exchanges and Clearing Limited
HKEx RM Capital	HKEx Risk Management Capital
HKSCC	The Hong Kong Securities Clearing Company Limited
HSCEI	Hang Seng China Enterprises Index
HSI	Hang Seng Index
IOSCO	International Organization of Securities Commissions
Marks	Mark-to-market losses of a CP's unsettled CNS positions
MTM	Mark-to-market
Projected Loss	Default loss projected under stress testing assumptions
Reference Period	Three-year period of September 2007 through December 2010
RF	Reserve Fund
RMF	Risk Management Fund
SEOCH	The SEHK Options Clearing House Limited
SFC	Securities and Futures Commission, Hong Kong