

**CCASS OPERATIONAL PROCEDURES**

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**Definitions**

- (a) For the convenience of readers, the definitions contained in the Rules are repeated below.

**“Basic Contribution”**

means a contribution made or required to be made by a Clearing Participant to the Guarantee Fund pursuant to Rule 2502(i);

**"CCMS"**

means the Common Collateral Management System, a common sub-system of CCASS and DCASS operated by HKSCC, HKFE Clearing Corporation Limited and The SEHK Options Clearing House Limited, which enables Participants to manage their collateral paid, provided or delivered to, or deposited with HKSCC;

**"CCMS Collateral Account"**

means an account established in CCMS for each Participant (other than an Investor Participant) for debiting and crediting collateral, as referred to in Rule 601A. For the

purposes of the Rules and the Operational Procedures, unless otherwise specified, the term "CCMS Collateral Account" does not include an account established in CCMS for a Participant by another Recognized Clearing House under its rules;

**“Charged Property”**

means the Collateral Securities and any Derived Assets of a Participant, as referred to in Rule 3608;

**“Collateral Security”**

means an Eligible Security which is from time to time held by or deposited with HKSCC by a Participant for credit into the CCMS Collateral Account of such Participant, in accordance with Rule 3601, 3601A, 3603 or 3608;

**“Contributions”**

means, in relation to a Clearing Participant, both the Basic Contribution and the Dynamic Contribution of the Clearing Participant;

**“Dynamic Contribution”**

means a contribution made or required to be made by a Clearing Participant to the Guarantee Fund pursuant to Rule 2502(ii);

**“Dynamic Contribution Credit”**

means a credit limit in respect of Dynamic Contribution that may be allowed to each Clearing Participant, as referred to in Rule 2502;

**“Margin”**

means an amount determined by HKSCC as required to be provided by a Clearing Participant or Clearing Agency Participant pursuant to Rule 3601A;

**“Margin Credit”**

means a credit limit in respect of Margin that may be allowed to each Clearing Participant or Clearing Agency Participant, as referred to in Section 10.10A of the Operational Procedures;

**“Margining Position”**

means the Mark-to-market value of the unsettled stock position of a Clearing Participant or Clearing Agency Participant under the CNS System, as determined by HKSCC for computation of Margin;

**“Mark”**

means an amount required to be provided by a Clearing Participant or a Clearing Agency Participant to HKSCC pursuant to Rule 3601;

**“Mark-to-market”**

means the evaluation of the extent, in money terms, to which the value of an unsettled position in Eligible Securities of a Clearing Participant or a Clearing Agency Participant has changed, in accordance with Rule 3601;

**“Relevant Clearing Participant”**

means, in relation to a Relevant Event, a Participant which participates in CCASS as a Clearing Participant on the date of occurrence of the Relevant Event, notwithstanding the subsequent cessation of its participation in CCASS of a Clearing Participant for whatever reason. For the purposes of the Rules and the Operational Procedures, unless otherwise specified, the term “Relevant Clearing Participant” includes the Clearing Participant in default (if applicable);

**“Relevant Event”**

means an event or circumstances, including but not limited to an Event of Default, which results in or, in the opinion of HKSCC, may result in payments out of the Guarantee Fund under Rule 2507 to satisfy the obligations and liabilities of HKSCC referred to in Rule 2506;

**“Specific Cash Collateral”**

means cash in the relevant Eligible Currency which is from time to time provided by a Participant to HKSCC in accordance with Rule 3601 or 3601A;

- (b) When used in the Operational Procedures, the following expressions shall have the following meanings unless the context otherwise requires:

**"Contract Currency Collateral"**

means, in relation to a Clearing Participant, (i) cash payment made by the Participant to HKSCC pursuant to CPIs or DDIs issued by HKSCC in respect of the collection of Marks, Margin and/or Collateral pursuant to Section 14 of the Operational Procedures; (ii) cash balance transferred from the General Collateral Inventory of the CCMS House Collateral Account of the Participant and provided by the Participant as cover for Marks, Margin and/or Collateral and other obligations (actual or contingent) denominated in the same currency; and (iii) cash payment made by the Participant, in its capacity as a SEOCH Participant, to a Clearing Agency Participant to satisfy the Participant's Marks, Margin and/or Collateral obligations relating to Clearing Agency Transactions, and transferred to HKSCC by the Clearing Agency Participant;

**“Discounted Market Value”**

means the value of a collateral in the CCMS House Collateral Account of the Clearing Participant, determined in accordance with Section 10.15.2 for the purpose of the collateralization process in Section 10.15.3;

**"Ear-marked Value"**

means (i) cash Ear-marked Value, being the collateralized amount of cash in other currencies (as referred to in Section 10.15.3(iii)) in the CCMS House Collateral Account of a Clearing Participant, as referred to in Section 10.15.3(c); and (ii) non-cash Ear-marked Value, being the collateralized value of the Non-cash Collateral in CCMS House Collateral Account of a Clearing Participant, as referred to in Section 10.15.3(a);

**"General Collateral Inventory"**

means the inventory of cash, Collateral Securities, bank guarantees and other Non-cash Collateral in a CCMS Collateral Account that, in the opinion of HKSCC, can be treated as, or be used as cover or to secure against Ear-marked Value;

**“Intra-day Margin Payable Report”**

means, in relation to a Clearing Participant or Clearing Agency Participant, a report provided by HKSCC to such Participant, containing details of the computation of intra-day Margin on pending stock positions of such Participant under the CNS System, as referred to in Section 10.10A.6 and also in the CCASS Terminal User Guide for Participants;

**“Intra-day Marks and Collateral Collection Report”**

means, in relation to a Clearing Participant or Clearing Agency Participant, a report provided by HKSCC to such Participant, containing details of the computation of intra-day Marks and Concentration Collateral on unsettled stock positions and Uncovered Allocated Positions of such Participant under the CNS System, as referred to in Section 10.10.9 and also in the CCASS Terminal User Guide for Participants;

**“Margin and Pending Marks Account”**

means, in relation to a Clearing Participant or a Clearing Agency Participant, a sub-account in the Money Ledger of that Participant which is used to record (i) the Marks on pending stock positions, (ii) the Margin on all unsettled stock positions and (iii) the Concentration Collateral on all unsettled stock positions of that Participant under the CNS System, as referred to in Section 10.10.11 or 10.10A.8;

**“Margin Multiplier”**

means a parameter defined by HKSCC at individual Participant level for the purpose of computation of Margin requirement of that Participant, as referred to in Section 10.10A;

**“Margin Payable Report”**

means, in relation to a Clearing Participant or Clearing Agency Participant, a report provided by HKSCC to such Participant, containing details of the computation of Margin on unsettled stock positions of such Participant under the CNS System, as referred to in Section 10.10A.6 and also in the CCASS Terminal User Guide for Participants;

**“Margin Rate”**

means the percentage determined by HKSCC to be applied to Margining Position in the computation of Margin, as referred to in Section 10.10A;

**“Marks and Collateral Collection Report”**

means, in relation to a Clearing Participant or Clearing Agency Participant, a report provided by HKSCC to such Participant, containing details of the computation of Marks and Concentration Collateral on unsettled stock positions of such Participant under the CNS System, as referred to in Section 10.10.9 and also in the CCASS Terminal User Guide for Participants;

**“NCP Marks Projection Report”**

means, in relation to a GCP, a report provided by HKSCC to such GCP, containing details of the computation of estimated Marks on pending stock positions of each NCP of the GCP under the CNS System, as referred to in Section 10.10.9 and also in the CCASS Terminal User Guide for Participants;

**“NCP Margin Projection Report”**

means, in relation to a GCP, a report provided by HKSCC to such GCP, containing details of the computation of estimated Margin on pending stock positions of each NCP of the GCP under the CNS System, as referred to in Section 10.10A.6 and also in the CCASS Terminal User Guide for Participants;

**"Non-cash Collateral"**

means collateral not in the form of cash, including bank guarantees and Collateral Securities, that is accepted by HKSCC for credit to the CCMS House Collateral Account of a Participant to cover the Marks, Margin, Collateral and other obligations (actual and contingent) of the Participant due to HKSCC under the CNS System;

**"Non-cash Collateral Cap"**

means a percentage of Marks, Margin, Collateral and other obligations (actual and contingent) of a Participant, as determined by HKSCC from time to time in order to calculate the maximum amount of Non-cash Collateral that may be allowed as cover for the Marks, Margin, Collateral and other obligations (actual and contingent) of the Participant due to HKSCC under the CNS System. For the avoidance of doubt, the provision of Collateral Security to cover a part or the whole of a short CNS stock position from a Clearing Participant or Clearing Agency Participant for HKSCC's waiver of computation of Marks and reduction of Margining Position for computation of Margin required from such Participant will not be included in such calculation of the maximum amount of Non-cash Collateral;

**“Preferred Single Settlement Currency”**

means an Eligible Currency selected by a Clearing Participant and accepted by HKSCC as the currency for cash settlement of the shortfall in Marks, Margin and Concentration Collateral of the Clearing Participant after the collateralization process under Section 10.15.3 of the Operational Procedures;

The definitions of “Full Stock Collateralization Limit” and “Stock Collateral Cap” have been repealed.

**Section 2**

**Participants**

**2.3 STOCK ACCOUNTS AND CCMS COLATERAL ACCOUNTS**

**2.3.10 Stock Collateral Control Account**

The Stock Collateral Control Account of a Clearing Participant will be used to record the Collateral Securities that have been transferred from the Stock Accounts of that Participant to its CCMS Collateral Account(s) to secure:

- (i) Payment of Marks, Margin and/or Collateral payable by that Participant pursuant to the Rules;
- (ii) all obligations and liabilities (actual or contingent) of such Participant to

HKSCC arising directly in connection with HKSCC ensuring the settlement of Market Contracts to which such Participant is a party;

- (iii) the discharge and satisfaction of all liabilities (actual or contingent) of the Participant to HKSCC arising from a loss of or defects affecting Eligible Securities pursuant to Rule 812, Rule 813, Rule 814 and Rule 815; and
- (iv) the discharge and satisfaction of all other obligations (actual or contingent) of the Participant to HKSCC.

Such Collateral Securities will also secure HKSCC's waiver of computation of Marks and reduction of Margining Position for computation of Margin required from the Participant.

### **2.3.12 CCMS Collateral Accounts**

HKSCC shall have the absolute discretion to allocate to each Participant (other than an Investor Participant) one CCMS House Collateral Account and/or any other CCMS Collateral Accounts with or without receiving an application from the Participant.

Cash in Hong Kong dollar and other currencies recorded as credit entries in any CCMS Collateral Account of the Participant are amounts paid by the Participant to HKSCC. The only obligation of HKSCC to the Participant shall be to pay such Participant an amount equal to the balance remaining after satisfaction of all obligations and liabilities (actual or contingent) of such Participant to HKSCC.

HKSCC shall have a first fixed charge over the Collateral Securities from time to time credited to any CCMS Collateral Account of the Participant and the Derived Assets.

Participants will not be allowed to use or withdraw the Collateral Securities credited to the CCMS Collateral Account of a Participant except as permitted by HKSCC (see Section 10.15).

Under the Rules, HKSCC may sell or apply the Charged Property of a Participant without further reference to the Participant and the only obligation of HKSCC to such Participant in respect of the Charged Property shall be to pay such Participant an amount equal to the balance remaining after satisfaction of all obligations and liabilities (actual or contingent) of such Participant to HKSCC and/or to return to such Participant the balance of the Charged Property remaining after satisfaction of the said obligations and liabilities (actual or contingent).

The bank guarantees provided for use as collateral for Marks, Margin and Collateral of the Participant from time to time shall be recorded in the CCMS House Collateral Account (or any other CCMS Collateral Account as determined by HKSCC) of the Participant. Such bank guarantees shall be a continuing guarantee in accordance with its terms and shall form a separate security.

HKSCC may exercise all rights under the bank guarantees without notice or further reference to the Participant.

The operation of the CCMS House Collateral Account and other CCMS Collateral Accounts, including but not limited to the credit or debit entries made thereto, shall be in accordance with the Rules.

## 2.4 MONEY LEDGER

### 2.4.2 Sub-accounts of a Money Ledger

A Money Ledger of a Participant in respect of an Eligible Currency may consist of the following sub-accounts :

- (i) Settlement Account;
- (ii) Margin and Pending Marks Account;
- (iii) Overdue Position Marks Account;
- (iv) Entitlements Account;
- (v) Billing Account; and
- (vi) Miscellaneous Account.

Only Clearing Participants will have the first three sub-accounts, namely the Settlement Account, the Margin and Pending Marks Account and the Overdue Position Marks Account. All these sub-accounts are relevant to the operation of the CNS System.

## Section 6

### Operational and Service Schedule

## 6.2 DAILY PROCESSING AND SERVICE SCHEDULE

The daily processing and service schedule in CCASS below only sets out the available time of some CCASS events. For more details on service schedule and function availability in CCASS, please refer to the CCASS Terminal User Guide for Participants.

Time	CCASS events
7:00 a.m.	Revaluation of General Collateral Inventory
11:00 a.m.	Revaluation of General Collateral Inventory and collateralization of intra-day Marks, Concentration Collateral and (if HKSCC collects intra-day Margin on such date which is a Trading day with no Afternoon Session) intra-day Margin
2:00 p.m.	Third Batch-settlement-run.

Deadline for submitting Transfer Instructions to HKSCC.

Deadline for inputting Cash Prepayment Instructions with “CHATS” selected as the payment method.

Deadline for submitting Tender Instructions to HKSCC in respect of an issue of Government Bonds or CMU Instruments whose application lists close on such day.

Collateralization of intra-day Margin (if HKSCC collects intra-day Margin on such date which is a normal Trading day)

7:00 p.m.

Close of SI/ISI maintenance and upload, Cash Prepayment / TSF Payment Standing Instruction maintenance, Intra-day Payment Standing Instruction maintenance, Nominee Payment (Evening) Standing Instruction maintenance, ATI/STI input and upload, Mass ATI/Mass STI maintenance, CCMS cash transfer and stock collateral maintenance services and Tender Instructions, subscription, election, voting and Corporate Representative/Proxy instructions maintenance functions

Close of all enquiries through CCASS Terminals and Participant Gateways, except for CCMS enquiry and Enquire Broadcast Message functions

Deadline for inputting subscription instructions where the deadline for subscription imposed by the relevant Issuer falls on the next Business Day at or before 12:00 noon

Ninth batch of scrip entitlement distribution

Generation of DDIs, DCIs and EPIs by HKSCC for settlement in the next Business Day

7:15 p.m. (after) Revaluation of General Collateral Inventory and collateralization of day-end Marks, Concentration Collateral and day-end Margin.

## Section 10

### Exchange Trades – CNS System

#### 10.9.2 General principles

To ensure that Short Clearing Participants comply with the relevant CCASS procedures and to minimize its risk exposure to such Short Clearing Participants, HKSCC may, under the Rules, require Short Clearing Participants to provide cash Collateral or to purchase relevant securities, or HKSCC may itself purchase the relevant securities.



HKSCC will normally redeliver the cash Collateral upon receipt from the Short Clearing Participant of the relevant securities required, or if that is not possible or reasonably practicable, at such other time as HKSCC considers appropriate.

## **10.10 RISK MANAGEMENT : MARKS**

### **10.10.1 General**

As settlement counterparty to Clearing Participants under the CNS System, HKSCC is exposed to market risks as a result of unfavourable fluctuations of prices in respect of the unsettled stock positions of Clearing Participants under the CNS System. In this Section 10.10, any unsettled stock positions in Eligible Securities under the CNS System are referred to as “CNS stock positions”.

To monitor and control such risk exposure, HKSCC will Mark-to-market the CNS stock positions of Clearing Participants and collect Marks from Clearing Participants. In respect of the CNS stock positions in any Eligible Security, HKSCC will compute Marks in accordance with the provisions of this Section 10.10 in the Eligible Currency in which that Eligible Security is traded. HKSCC will collect Marks from the Clearing Participant in the same Eligible Currency unless the Clearing Participant has maintained a Preferred Single Settlement Currency.

Where the Clearing Participant has maintained a Preferred Single Settlement Currency, HKSCC will convert Marks calculated and denominated in its original Eligible Currency to the Preferred Single Settlement Currency at such exchange rate and subject to such haircut rate as determined by HKSCC from time to time, and collect Marks from the Clearing Participant in the Preferred Single Settlement Currency. Unless HKSCC otherwise agrees, the Clearing Participant shall pay Marks to HKSCC in the Preferred Single Settlement Currency. Notwithstanding the foregoing, HKSCC reserves the right to collect the required amount of Marks in any Eligible Currency.

Mark-to-market of a CNS stock position involves the evaluation of the risk exposure of a Clearing Participant to HKSCC relating to the CNS stock position by reference to the extent to which the Mark-to-market value of the CNS stock position has moved against the value originally agreed in respect of such CNS stock position.

Under the Rules, HKSCC has the right to collect Marks from Clearing Participants in respect of all CNS stock positions, whether or not due for settlement and whether or not such CNS stock positions may be subsequently amended or excluded or not accepted for settlement under the CNS System in accordance with the Rules.

Marks will normally be collected in the form of cash although HKSCC may accept Clearing Participants providing collateral for Marks obligations by means of bank guarantees. HKSCC may in exceptional cases collect Marks in the form of Collateral Securities acceptable to it. Any bank guarantee arranged by a Clearing Participant to provide cover for the Marks obligations of such Clearing Participant must be subject to the Rules.

This Section 10.10 describes the extent to and the manner in which Marks from Clearing Participants will be collected and redelivered by HKSCC.

The provisions of this Section 10.10 shall also be applicable, in so far as they are relevant to risk management measures detailed in Section 12.2.9(i), in respect of Clearing Agency Transactions.

#### **10.10.2 Various terms explained**

For the purpose of this Section, the term "Favourable Mark" refers to a Mark computed by the Mark-to-market of a CNS stock position which is favourable to a Clearing Participant and the term "Unfavourable Mark" has the opposite meaning.

A "pending CNS stock position" refers to an unsettled CNS stock position of a Clearing Participant which is not yet due for settlement and an "overdue CNS stock position" refers to a CNS stock position of a Clearing Participant which is due for settlement but not yet settled.

The "Settlement Cap" of a Clearing Participant that is a licensed corporation licensed to carry on Type 1 regulated activity under the Securities and Futures Ordinance, which is used by HKSCC to determine how Marks are to be collected on the pending CNS stock positions of a Clearing Participant, is a multiple of the liquid capital of a Clearing Participant determined in accordance with the Financial Resources Rules made under Section 145 of the Securities and Futures Ordinance (or where applicable, its apportioned liquid capital as notified to HKSCC under Section 19.2.5 of these Operational Procedures). The "Settlement Cap" of a GCP which is a registered institution registered to carry on Type 1 regulated activity is a multiple of liquid capital assigned by HKSCC from time to time for the sole purpose of computing such "Settlement Cap". The value of the multiple will be determined by HKSCC and may be subject to review from time to time.

#### **10.10.3 Computation of Marks**

The value of the Mark on a CNS stock position of a Clearing Participant is the difference between:

- (i) the money position of that CNS stock position (see Section 10.5.2); and
- (ii) the prevailing market value of such CNS stock position (as determined by HKSCC).

The Marks on CNS stock positions of any Eligible Security will be calculated and denominated in the Eligible Currency in which the Eligible Security is traded. Favourable Marks and Unfavourable Marks in the same Eligible Currency will offset against one another to arrive at the Favourable Marks or Unfavourable Marks in that Eligible Currency.

Favourable Marks or Unfavourable Marks in an Eligible Currency will then be offset against the Unfavourable Marks or Favourable Marks, as the case may be, in other Eligible Currencies in the sequence as HKSCC considers appropriate to arrive at the Net Favourable Marks or Net Unfavourable Marks on the CNS stock positions. For the purpose of performing such cross-currency offset, Favourable Marks and Unfavourable Marks in Eligible Currencies other than Hong Kong

dollar will be converted to Hong Kong dollar equivalent at such exchange rate and subject to such haircut rate as determined by HKSCC from time to time for computation. After cross-currency offset, any remaining Net Favourable Marks or Net Unfavourable Marks will be re-converted back to the original Eligible Currency immediately prior to the cross-currency offset at the same exchange rate and subject to the same haircut rate.

Where a Clearing Participant has provided the relevant quantity of Collateral Security to cover a part or the whole of a short CNS stock position not due for settlement to HKSCC pursuant to Rule 3601, the short CNS stock position covered by the Collateral Security will be waived from computation of Marks. HKSCC has absolute right to use such Collateral Security to settle the covered portion of the short CNS stock position on or before its Settlement Day.

Where a Clearing Participant has provided the relevant amount of Specific Cash Collateral to cover the corresponding money position of a part or the whole of a long CNS stock position not due for settlement to HKSCC pursuant to Rule 3601, the long CNS stock position covered by the Specific Cash Collateral will be waived from computation of Marks and Concentration Collateral. HKSCC has absolute right to use such Specific Cash Collateral to settle the money position of the covered portion of the long CNS stock position on or before its Settlement Day.

#### 10.10.4 Example (Computation of Marks)

CNS stock position	CNS money position (HK\$)	Mark-to-market unit value (HK\$)	Market value (HK\$)	Marks (HK\$)
1. -100(short)	+100	1.1	-110	-10(U)
2. +200(long)	-220	1.2	+240	<u>+20(F)</u>
				<u>+10(F)</u>
	(US\$)	(US\$)	(US\$)	(US\$)
3. -200(short)	+200	1.2	-240	-40(U)
4. +100(long)	-100	1.1	+110	<u>+10(F)</u>
				-30(U)

Conversion of Unfavourable Marks in US dollar to Hong Kong dollar equivalent:

-US\$30(U) = -HK\$235.17(U) at the exchange rate USD1=HKD7.8 and haircut rate 0.5%

Cross-currency offset of the Unfavourable Marks in Hong Kong dollar equivalent:

-HK\$235.17(U) + HK\$10(F) = -HK\$225.17(U)

Re-conversion of remaining Unfavourable Marks in Hong Kong dollar equivalent back to US dollar:

-HK\$225.17(U) = -US\$28.72(U) at the exchange rate USD1=HKD7.8 and haircut rate 0.5%

U = Unfavourable Marks

F = Favourable Marks

#### **10.10.5 Marks on overdue CNS stock positions**

In respect of the overdue CNS stock positions of a Clearing Participant, the Favourable Marks and the Unfavourable Marks on such overdue CNS stock positions in the same Eligible Currency will be offset against each other to arrive at the Net Favourable Marks or Net Unfavourable Marks on overdue CNS stock positions in that Eligible Currency.

The Net Favourable Marks or Net Unfavourable Marks on overdue CNS stock positions in an Eligible Currency will offset against the Net Unfavourable Marks or Net Favourable Marks, as the case may be, on overdue CNS stock positions in other Eligible Currencies to arrive at the Net Favourable Marks or Net Unfavourable Marks on overdue CNS stock positions. For details of the cross-currency offset and re-conversion back to the original Eligible Currency after the cross-currency offset, reference should be made to Section 10.10.3. HKSCC will collect the Net Unfavourable Marks on overdue CNS stock positions after cross-currency offset from the Clearing Participant at day end. Such Net Unfavourable Marks will be collected as day-end Marks on a daily basis. The Net Favourable Marks on overdue CNS stock positions will be used to offset day-end Margin, if any, of the Clearing Participant in accordance with the provisions in Section 10.10A.2.

In respect of the collection of intra-day Marks, the Net Favourable Marks and/or Net Unfavourable Marks, as the case may be, on overdue CNS stock positions in different Eligible Currencies will be subject to further offset as follows - (i) the Net Unfavourable Marks on overdue CNS stock positions in an Eligible Currency will further offset against the Net Favourable Marks on Uncovered Allocated Positions in the same Eligible Currency of the Clearing Participant or (ii) the Net Favourable Marks on overdue CNS stock positions in an Eligible Currency will offset against the Net Unfavourable Marks on Uncovered Allocated Positions in the same Eligible Currency of the Clearing Participant, as the case may be, to arrive at the Net Favourable Marks or the Net Unfavourable Marks on overdue CNS stock positions and Uncovered Allocated Positions in that Eligible Currency.

Such Net Favourable Marks or Net Unfavourable Marks on overdue CNS stock positions and Uncovered Allocated Positions in an Eligible Currency will offset against the Net Unfavourable Marks or Net Favourable Marks, as the case may be, on overdue CNS stock positions and Uncovered Allocated Positions in other Eligible Currencies to arrive at the Net Favourable Marks or Net Unfavourable Marks on overdue CNS stock positions and Uncovered Allocated Positions. For details of the cross-currency offset and re-conversion back to the original Eligible Currency after the cross-currency offset, reference should be made to Section 10.10.3. After such cross-currency offset and re-conversion, any Net Unfavourable Marks on overdue CNS stock positions and Uncovered Allocated Positions will be collected daily from the Clearing Participant by HKSCC as intra-day Marks as a matter of course.

Net Favourable Marks on overdue CNS stock positions resulted from the computation of day-end Marks and Net Favourable Marks on overdue CNS stock position and Uncovered Allocated Positions resulted from the computation of intra-day Marks, if any, will not be paid to the Clearing Participant by HKSCC.

**10.10.7 Marks on pending CNS stock positions**

HKSCC will also collect Marks on pending CNS stock positions of Clearing Participants daily as a matter of course.

Under a T+2 settlement system, pending CNS stock positions of a Clearing Participant on a Business Day will derive from the Exchange Trades effected by the Clearing Participant and, in the case of a GCP, including the Exchange Trades effected by each NCP with which the GCP has entered into a Clearing Agreement, on that Business Day and the immediately preceding Business Day.

At the end of a Business Day, a Clearing Participant will have (i) pending CNS stock positions in respect of the Exchange Trades which are accepted to be cleared and settled on that Business Day (referred to here as "Current Day") for settlement under the CNS System (referred to in this Section 10.10.7 as "Current Day positions") and (ii) pending CNS stock positions in respect of the Exchange Trades which are accepted to be cleared and settled by it on the immediately preceding Business Day (referred to here as "Previous Day") for settlement under the CNS System (referred to in this Section 10.10.7 as "Previous Day positions"). Unless otherwise stated, "pending CNS stock positions" in this Section 10.10.7 covers Current Day Positions and Previous Day Positions.

In respect of the pending CNS stock positions in Eligible Securities traded in the same Eligible Currency, (i) Favourable Marks and Unfavourable Marks on Current Day Positions will be calculated and offset against each other to arrive at a Net Favourable Marks or Net Unfavourable Marks; and (ii) Favourable Marks and Unfavourable Marks on Previous Day positions will be calculated and offset against each other to arrive at a Net Favourable Marks or Net Unfavourable Marks. The Net Favourable Marks or Unfavourable Marks on Current Day positions will offset against the Net Unfavourable Marks or Net Favourable Marks on Previous Day positions to arrive at the Net Favourable Marks or Net Unfavourable Marks on pending CNS stock positions in that Eligible Currency. For the avoidance of doubt, there will be a Net Favourable Marks or Net Unfavourable Marks in each Eligible Currency.

The Net Favourable Marks or Net Unfavourable Marks in an Eligible Currency will offset against the Net Unfavourable Marks or Net Favourable Marks, as the case may be, in other Eligible Currencies to arrive at the Net Favourable Marks or Net Unfavourable Marks on pending CNS stock positions. For details of the cross-currency offset and re-conversion after the cross-currency offset, reference should be made to Section 10.10.3.

The manner in which HKSCC will collect the Net Unfavourable Marks, if any, on pending CNS stock positions of a Clearing Participant will depend on whether or not the net value (in Hong Kong dollar or Hong Kong dollar equivalent) of the CNS stock

positions of a Clearing Participant, including pending CNS stock positions and overdue CNS stock positions, of the Clearing Participant exceeds the Settlement Cap applicable to the Clearing Participant. For the purpose of calculating the net value of the CNS stock positions, if the value of any CNS stock positions is in a currency other than Hong Kong dollar, it will be converted to Hong Kong dollar equivalent subject to haircut. The conversion shall be at such exchange rate and subject to such haircut rate as determined by HKSCC from time to time.

The following principles will generally be applied by HKSCC:

- (i) if the net value (in Hong Kong dollars or Hong Kong dollar equivalent) of the CNS stock positions of a Clearing Participant exceeds or equals to its Settlement Cap, HKSCC will collect from the Clearing Participant the Net Unfavourable Marks (if any) on all pending CNS stock positions of the Clearing Participant;
- (ii) if the net value (in Hong Kong dollars or Hong Kong dollar equivalent) of the CNS stock positions of a Clearing Participant is below its Settlement Cap, HKSCC will collect from the Clearing Participant the Net Unfavourable Marks (if any) on all pending CNS stock positions of the Clearing Participant, to the extent that such Net Unfavourable Marks exceeds the internal "credit limit" determined by HKSCC for the Clearing Participant from time to time. In the case of a Clearing Participant having Net Unfavourable Marks on pending CNS stock positions, in more than one Eligible Currency, the "credit limit" will be applied against such Net Unfavourable Marks in different Eligible Currencies on a pro-rata basis with reference to the respective amounts (in Hong Kong dollars or Hong Kong dollar equivalent) of such Net Unfavourable Marks.

The Net Favourable Marks, if any, on pending CNS stock positions of a Clearing Participant will not be paid to the Clearing Participant by HKSCC. Such Net Favourable Marks will be used to offset Margin, if any, of the Clearing Participant in accordance with the provisions in Section 10.10A.2.

#### **10.10.8A Marks on Uncovered Allocated Positions**

This Section 10.10.8 applies to the calculation and collection of intra-day Marks. Currently, intra-day Marks are calculated by HKSCC at 11:00 a.m. on each Business Day in respect of overdue CNS stock positions and pending CNS stock positions of a Clearing Participant. HKSCC may be exposed to market risks in respect of Eligible Securities allocated to a Clearing Participant because payment of the relevant DDIs will not be confirmed until the end of the day on which the Eligible Securities are allocated to the Clearing Participant, unless the corresponding money obligations are covered by cash prepayment, bank guarantee or the relevant Margin amount or the relevant amount of Specific Cash Collateral referred to Section 10.12.4A. To control such risk exposure, HKSCC will collect intra-day Marks on the Uncovered Allocated Positions of a Clearing Participant in the manner set out below.

The following principles, with reference to Marks calculated and denominated in each Eligible Currency, will generally be applied by HKSCC:

- (i) Favourable Marks and Unfavourable Marks on allocated positions will be calculated and offset against one another to arrive at the Net Favourable Marks or Net Unfavourable Marks on the total allocated positions in that Eligible Currency;
- (ii) the Net Favourable Marks or Net Unfavourable Marks on Uncovered Allocated Positions will be computed according to the formula below:

Net Favourable Marks or Net Unfavourable Marks on the total allocated positions	X	Net Settlement amount due to HKSCC not covered by cash prepayment, bank guarantee or the relevant Margin amount or the relevant amount of Specific Cash Collateral referred to in Section 10.12.4A
		Total CNS money positions of all the allocated positions

; and

- (iii) the Net Unfavourable Marks on Uncovered Allocated Positions will offset against the Net Favourable Marks on overdue CNS stock positions, whereas the Net Favourable Marks on Uncovered Allocated Positions will offset against the Net Unfavourable Marks on overdue CNS stock positions. This will arrive at the Net Favourable Marks or Net Unfavourable Marks on overdue CNS stock positions and Uncovered Allocated Positions in an Eligible Currency, as referred to in Section 10.10.5.

The Net Favourable Marks or Net Unfavourable Marks on overdue CNS stock positions and Uncovered Allocated Positions in an Eligible Currency will offset against the Net Unfavourable Marks or Net Favourable Marks, as the case may be, in other Eligible Currencies. The Net Unfavourable Marks on overdue CNS stock positions and Uncovered Allocated Position, if any, arrived at after such cross-currency offset will be collected from the Clearing Participant. For details of the cross-currency offset and re-conversion after the cross-currency offset, reference should be made to Section 10.10.3.

**10.10.9 Relevant CCASS reports**

The following will assist a Clearing Participant to estimate the Marks payable by it to HKSCC at any time:

- (i) the PCS which gives information on the pending CNS stock positions of the Clearing Participant for the Current Day (as defined in Section 10.10.7);
- (ii) the FCS, which gives information on the pending CNS stock positions of the Clearing Participant for the Previous Day (as defined in Section 10.10.7); and
- (iii) the "Enquire Due and Overdue Positions" enquiry function (accessed via CCASS Terminals or Participant Gateways) which gives information on the

due and overdue CNS stock positions of the Clearing Participant.

An Intra-Day Marks and Collateral Collection Report will be made available via CCASS Terminals and Participant Gateways each time after intra-day Marks are calculated for collection by HKSCC to provide information on intra-day Marks, Concentration Collateral and details of the computation of intra-day Marks and Concentration Collateral for that day.

A Marks and Collateral Collection Report will be made available via CCASS Terminals and Participant Gateways upon completion of day-end Marks processing and at the end of each Business Day to provide information on day-end Marks and Concentration Collateral, and details of the computation for that day.

An NCP Marks Projection Report will be made available to a GCP via CCASS Terminals and Participant Gateways upon completion of intra-day Marks processing and at the end of each Business Day to provide information on estimated intra-day Marks and day-end Marks on pending CNS stock positions of NCPs of the GCP, and details of the computation for that day. For the avoidance of doubt, the Marks obligations of such GCP may not necessarily equal to the sum of the estimated Marks on CNS stock positions of its NCPs.

#### **10.10.10 Interest on Marks collected**

HKSCC may allow or charge, at its absolute discretion, to Clearing Participants interest on the Marks collected in cash calculated at a rate determined by HKSCC from time to time. HKSCC reserves the right to deduct any administrative costs from any interests to be allowed or to charge such administrative cost to the Marks collected in cash.

Unless otherwise specified by HKSCC, interest to be allowed or charged on Marks provided in cash, if any, will be accrued daily and paid (after deduction of the administrative costs, if applicable) or charged (together with the administrative costs, if applicable) monthly by HKSCC to Clearing Participants in the same currency as the cash on which the interest accrued, by crediting or debiting, as the case may be, the CCMS House Collateral Accounts of the Clearing Participants, on the first Business Day of the following month.

#### **10.10.11 Collection of Marks and Concentration Collateral**

The details of the computation of Concentration Collateral are set out in Sections 10.11.3A and 10.11.3B.

Marks and Concentration Collateral to be requested from a Clearing Participant on each Business Day will be collateralized against the value (or the Discounted Market Value, if applicable) of the General Collateral Inventory in the CCMS House Collateral Account of the Clearing Participant. For details of the collateralization process, reference should be made to Section 10.15.3.

If there is any shortfall in Marks and Concentration Collateral after the collateralization, HKSCC will collect the shortfall in the currency in which the Marks and Concentration Collateral are calculated and denominated unless the Clearing Participant has maintained a Preferred Single Settlement Currency. Where the



Clearing Participant has maintained a Preferred Single Settlement Currency, HKSCC will convert the shortfall to the Preferred Single Settlement Currency at such exchange rate and subject to such haircut rate as determined by HKSCC from time to time, and HKSCC will collect the shortfall in Marks and Concentration Collateral in the Preferred Single Settlement Currency. Unless HKSCC otherwise agrees, the Clearing Participant shall pay the shortfall to HKSCC in the Preferred Single Settlement Currency. Notwithstanding the foregoing, HKSCC reserves the right to collect the required amount of Marks and Concentration Collateral in any Eligible Currency.

Unless otherwise agreed by HKSCC, any shortfall in Marks and Concentration Collateral required, as determined by HKSCC, will be debited to the Overdue Position Marks Account or the Margin and Pending Marks Account (as the case may be) of a Clearing Participant and will be collected from the Clearing Participant on a daily basis by HKSCC via CPIs or by issuing DDIs to the Designated Bank of the Clearing Participant as part of the CCASS money settlement process, or in any other manner determined by HKSCC from time to time. Subject to the determination of HKSCC, any surplus cash collateral over Marks and Concentration Collateral in the CCMS House Collateral Account will not be automatically redelivered at the end of the day and HKSCC reserves the right to redeliver surplus cash collateral at any time it considers appropriate. HKSCC may redeliver such surplus to the Clearing Participant upon redelivery instruction from the Clearing Participant given to HKSCC using the prescribed form set out in Appendix 4.35, and the redelivery will be made in such manner and at such time as prescribed by HKSCC from time to time.

## **10.10A RISK MANAGEMENT: MARGIN**

### **10.10A.1 General**

As settlement counterparty to Clearing Participants under the CNS System, HKSCC is exposed to market risks as a result of potential unfavourable fluctuations of prices in respect of the unsettled stock positions of Clearing Participants under the CNS System. In this Section 10.10A, any unsettled stock positions in Eligible Securities under the CNS System are referred to as “CNS stock positions”.

To monitor and control such risk exposure, HKSCC will compute Margin on the CNS stock positions of Clearing Participants and collect Margin from Clearing Participants. In respect of the CNS stock positions in any Eligible Security, HKSCC will compute Margin in accordance with the provisions of this Section 10.10A in the Eligible Currency in which that Eligible Security is traded. HKSCC will collect Margin from the Clearing Participant in the same Eligible Currency unless the Clearing Participant has maintained a Preferred Single Settlement Currency.

Where the Clearing Participant has maintained a Preferred Single Settlement Currency, HKSCC will convert Margin calculated and denominated in its original Eligible Currency to the Preferred Single Settlement Currency at such exchange rate and subject to such haircut rate as determined by HKSCC from time to time, and collect Margin from the Clearing Participant in the Preferred Single Settlement Currency. Unless HKSCC otherwise agrees, the Clearing Participant shall pay Margin to HKSCC in the Preferred Single Settlement Currency. Notwithstanding the foregoing, HKSCC reserves the right to collect the required amount of Margin in any Eligible Currency.

The computation of Margin on a CNS stock position involves the estimation of the risk exposure of a Clearing Participant to HKSCC relating to the CNS stock position by reference to the estimated future market movement against the Mark-to-market value of such CNS stock position.

Under the Rules, HKSCC has the right to collect Margin from Clearing Participants in respect of all CNS stock positions, whether or not due for settlement and whether or not such CNS stock positions may be subsequently amended or excluded or not accepted for settlement under the CNS System in accordance with the Rules.

Margin will normally be collected in the form of cash although HKSCC may accept Clearing Participants providing cover for Margin obligations by means of bank guarantees. HKSCC may in exceptional cases collect Margin in the form of Collateral Securities acceptable to it. Any bank guarantee arranged by a Clearing Participant to provide cover for the Margin obligations of such Clearing Participant must be subject to the Rules.

This Section 10.10A describes the extent to and the manner in which Margin from Clearing Participants will be collected and redelivered by HKSCC.

The provisions of this Section 10.10A shall also be applicable, in so far as they are relevant to risk management measures detailed in Section 12.2.9(i), in respect of Clearing Agency Transactions.

### 10.10A.2 Computation of Margin

(i) Margin requirement

The Margin requirement on CNS stock positions of a Clearing Participant will be computed using the formula below

$$\text{Margining Position} \times \text{Margin Rate} \times \text{Margin Multiplier} - \text{Favourable Marks Offset} = \text{Margin Credit (on pro-rata basis)}$$

Where

$$\text{Margining Position} \times \text{Margin Rate} \times \text{Margin Multiplier} - \text{Favourable Marks Offset} = \text{Margin calculated}$$

and

the Margin calculated will be compared with the Margin Credit (on a pro-rata basis as described in paragraph (vi) below) to arrive at the Margin requirement as below -

- (a) If the Margin calculated equals to the Margin Credit, there will be no Margin requirement. The Margin Credit will be treated as fully utilized by the Clearing

Participant.

- (b) If the Margin calculated is greater than the Margin Credit, the amount of the Margin calculated which exceeds the Margin Credit will be the Margin requirement. The Margin Credit will be treated as fully utilized by the Clearing Participant.
- (c) If the Margin calculated is less than the Margin Credit, there will be no Margin requirement. The Margin calculated will be the amount of Margin Credit utilized by the Clearing Participant. For the avoidance of doubt, the unused amount of the Margin Credit will not be paid to the Clearing Participant or allowed for use by the Clearing Participant for any purpose.

The amount of Margin requirement on CNS stock positions in an Eligible Security is computed and denominated in the Eligible Currency in which the Eligible Security is traded. There will be an amount of Margin requirement in each Eligible Currency.

For the avoidance of doubt, HKSCC has the right to compute Margin requirement using other methods and assumptions as HKSCC may from time to time consider appropriate.

(ii) Margining Position

Margining Position refers to the higher of the value of the total cross-day net long CNS stock positions and the total cross-day net short CNS stock positions of the Clearing Participant. The value of the total cross-day net long CNS stock positions and the value of the total cross-day net short CNS position are computed by HKSCC by reference to the Mark-to-market value of the relevant CNS stock positions, as determined by HKSCC.

For Multi-counter Eligible Securities of the same class of an Issuer, the CNS stock positions in such Multi-counter Eligible Securities, though in different stock codes, will be netted against each other prior to the determination of the Mark-to-market value of the CNS stock positions as mentioned above.

Where a Clearing Participant has provided the relevant quantity of Collateral Security to cover a part or the whole of a short CNS stock position not due for settlement to HKSCC pursuant to Rule 3601A, (a) the Mark-to-market value of the cross-day net long CNS stock positions, and hence the Margining Position for computation of Margin, will be reduced by the amount of the CNS money position corresponding to the short CNS stock position covered by the Collateral Security; and (b) the Mark-to-market value of the cross-day net short CNS stock positions, and hence the Margining Position for computation of Margin, will be reduced by the Mark-to-market value of the short CNS stock position covered by the Collateral Security, as HKSCC considers appropriate. HKSCC has absolute right to use such Collateral Security to settle the covered portion of the short CNS stock position on or before its Settlement Day.

Where a Clearing Participant has provided the relevant amount of Specific Cash Collateral to cover the corresponding money position of a part or the whole of a long CNS stock position not due for settlement to HKSCC pursuant to Rule 3601A, the

Mark-to-market value of the cross-day net long CNS stock position, and hence the Margining Position for computation of Margin, will be reduced by the Mark-to-market value of the long CNS stock position covered by the Specific Cash Collateral, as HKSCC considers appropriate. HKSCC has absolute right to use such Specific Cash Collateral to settle the money position of the covered portion of the long CNS stock position on or before its Settlement Day.

(iii) Margin Rate

The Margin Rate will be determined by HKSCC in its absolute discretion from time to time by reference to the historical volatility of the securities market operated by the Exchange and such other matters as HKSCC may consider relevant.

(iv) Margin Multiplier

The Margin Multiplier will be defined at individual Participant level. It will be determined by HKSCC in its absolute discretion from time to time by reference to the level of risk exposure of the individual Clearing Participant to HKSCC and such other matters as HKSCC may consider relevant.

(v) Favourable Marks Offset

The amount calculated by way of (Margining Position x Margin Rate x Margin Multiplier) as above mentioned (the “multiplied amount”) in an Eligible Currency will be offset by the Net Favourable Marks on pending CNS stock positions and the Net Favourable Marks on overdue CNS stock positions in the same Eligible Currency. Any Net Favourable Marks remaining after such offset will offset against the multiplied amount in other Eligible Currencies, in the sequence as HKSCC considers appropriate. For the purpose of performing such cross-currency offset, the remaining Net Favourable Marks and the multiplied amount in Eligible Currencies other than Hong Kong dollar will be converted to Hong Kong dollar equivalent at such exchange rate and subject to such haircut rate as determined by HKSCC from time to time for computation. After cross-currency offset, any remaining multiplied amount will be re-converted back to the original Eligible Currency immediately prior to the cross-currency offset at the same exchange rate and subject to the same haircut rate.

(vi) Margin Credit

The Margin Credit is the credit limit allowed to each Clearing Participant and the credit limit will be determined by HKSCC in its absolute discretion from time to time. HKSCC has the right to determine the credit limit on an individual Clearing Participant basis. In general, Margin Credit will be valued in Hong Kong dollar.

In the case where a Clearing Participant having Margining Position in more than one Eligible Currency and hence there are Margin calculated in different Eligible Currencies, the Margin Credit will be applied to the Margin calculated in different Eligible Currencies on a pro-rata basis with reference to the respective value (in Hong Kong dollar or Hong Kong dollar equivalent calculated at the exchange rate determined by HKSCC from time to time) of such Margin calculated.

For the avoidance of doubt, the Margin Credit shall only be utilized for the purpose of reducing the Margin requirement of the Clearing Participant as described in paragraph (i) above. HKSCC will not be required to make any actual payment in respect of the Margin Credit or any part thereof, irrespective of whether it has been utilized or not, to the Clearing Participant at any time, as referred to in Rule 2507A.

(vii) HKSCC’s rights

HKSCC reserves the right to use any other formula or adopt any other methodology in computing Margin, and the right to determine the Margining Position, Margin Rate, Margin Multiplier and Margin Credit in any manner. HKSCC will inform Clearing Participants of any changes to the Margin formula or methodology, the Margin Multiplier, the Margin Rate and the Margin Credit.

Notwithstanding the above, HKSCC may prescribe Margin requirement on a Clearing Participant in any amount and manner, and at any time. For the avoidance of doubt, HKSCC may at any time at its absolute discretion require or demand higher Margin from Clearing Participants or any individual Clearing Participant. The Clearing Participants or individual Clearing Participant shall pay such higher Margin to HKSCC forthwith on demand.

**10.10A.3 Example (Netting of Multi-counter Eligible Securities)**

Assumptions: stock X and stock Y are Multi-counter Eligible Securities of the same class of an Issuer, trading in Hong Kong dollar and Renminbi respectively.

In the calculation of Margining Position, the following cross-day net long CNS stock position of stock X and cross-day net short CNS stock position of stock Y will be netted against one another and only the Mark-to-market value of the netted cross-day CNS stock position of stock Y will be included as part of the Margining Position.

**Cross-day net CNS position**

<b>Stock</b>	<b>CNS Stock position</b>	<b>Money position</b>
X	-6,000(short)	+HK\$96,000
Y	+8,000(long)	-RMB120,000

**Netted cross-day CNS stock position:**

<b>Stock</b>	<b>CNS Stock position</b>	<b>Mark-to-market unit value</b>	<b>Mark-to-Market value</b>
Y	+2,000(long)	RMB17	-RMB34,000

10.10A.4 Example (Computation of Day-end Margin Requirement)

	<u>Daily net CNS position on T day</u>	<u>Daily net CNS position on T-1 day</u>	<u>Overdue CNS position</u>	<u>Cross-day net CNS position</u>
Stock traded in HK\$	CNS Stock position / Money position	CNS Stock position / Money position	CNS Stock position / Money position	CNS Stock position / Money position
A	-45,000(short)/ +HK\$9,000,000	+500(long)/ -HK\$100,000	- -	-44,500(short)/ +HK\$8,900,000
B	-23,000(short)/ +HK\$500,000	-10,000(short)/ +HK\$200,000	+5,000(long)/ -HK\$90,000	-28,000(short)/ +HK\$610,000
C	+15,000 (long)^/ -HK\$400,000	+20,000(long)/ -HK\$500,000	-50(short)/ +HK\$100,000	+34,950(long)/ -HK\$800,000
D	+15,000,000(long)/ -HK\$300,100,000	-3,000,000(short)*/ +HK\$80,000,000	- -	+12,000,000(long)/ -HK\$220,100,000
E	-100,000(short)/ +HK\$300,000	-200,000(short)/ +HK\$650,000	- -	-300,000(short)/ +HK\$950,000
Stock traded in US\$	CNS stock position / Money position	CNS stock position / Money position	CNS stock position / Money position	CNS stock position / Money position
F	+500,000(long)/ -US\$1,000,000	- -	-6,000,000(short)/ +US\$13,000,000	-5,500,000(short)/ +US\$12,000,000
G	-40,000(short)/ +US\$500,000	+90,000(long)/ -US\$1,400,000	- -	+50,000(long)/ -US\$900,000

\* Short CNS stock position covered by Collateral Security provided to HKSCC

^ Long CNS stock position with its corresponding money position covered by Specific Cash Collateral provided to HKSCC

Stock	Cross-day net CNS stock position	Mark-to-market unit value	Mark-to-market Value	
			Cross-day net long CNS position	Cross-day net short CNS position
A	-44,500(short)	HK\$210		-HK\$9,345,000
B	-28,000(short)	HK\$22		-HK\$616,000

C	+34,950(long)	HK\$21	+HK\$733,950	
D	+12,000,000(long)	HK\$20	+HK\$240,000,000	
E	-300,000(short)	HK\$3		-HK\$900,000
		<b>Total</b>	<b>+HK\$240,733,950</b>	<b>-HK\$10,861,000</b>
F	-5,500,000(short)	US\$2.8		-US\$15,400,000
G	+50,000(long)	US\$19	+US\$950,000	
		<b>Total</b>	<b>+US\$950,000</b>	<b>-US\$15,400,000</b>

Assumptions:

- Margin Rate: 7%
- Margin Multiplier: 1
- Margin credit: HK\$5,000,000
- Exchange rate USD1 = HKD7.8
- haircut rate: 0.5%

(i) Margining Position in Hong Kong dollar

The Mark-to-market value of the cross-day net long CNS stock position and the Mark-to-market value of the cross-day net short CNS stock position, as the case may be, and hence the Margining Position for computation of Margin, will be reduced, in the manner as described in Section 10.10A.2, with reference to the Collateral Security and Specific Cash Collateral that have been provided by a Clearing Participant to HKSCC pursuant to Rule 3601A.

In this example, the covered short CNS stock position on stock D on T-1 day has already been offset by the long CNS stock position of stock D on T day. Therefore, the Collateral Security provided to cover the short CNS stock position of stock D on T-1 day will have no effect on the Mark-to-market value of the cross-day net long CNS stock position and cross-day net short CNS stock position.

As the long CNS stock position of stock C on T day is covered by Specific Cash Collateral, the cross-day net long CNS position will be reduced by the Mark-to-market value of the long CNS stock position (i.e. 15,000 x HK\$21) covered by the Specific Cash Collateral. The Mark-to-market value of the cross-day net long CNS stock position after reduction is HK\$240,733,950 – 15,000 x HK\$21 = HK\$240,418,950. As the Mark-to-market value of the cross-day net long CNS stock position after reduction (HK\$240,418,950) is higher than the absolute Mark-to-market value of the cross-day net short CNS stock position (HK\$10,861,000), the Margining Position will be HK\$240,418,950, being the Mark-to-market value of the cross-day net long CNS stock position.

(ii) Margining Position in US dollar

= Higher of the Mark-to-market value of cross-day net long CNS stock position or the absolute Mark-to-market value of cross-day net short CNS stock position  
 = US\$15,400,000

(iii) Favourable Marks Offset

The long CNS stock position in stock C on T day which is covered by Specific Cash Collateral provided to HKSCC and the short CNS stock position of stock D on T-1 day which is covered by Collateral Security provided to HKSCC will be waived from the calculation of Marks.

Marks on pending CNS stock positions:

	Before cross-currency offset	After cross-currency offset
HK\$	-601,000(U)	-
US\$	+450,000(F)	+372,561.53(F)

Marks on overdue CNS stock positions:

	Before cross-currency offset	After cross-currency offset
HK\$	+118,950(F)	-
US\$	-3,800,000(U)	-3,784,825.87(U)

For details of the computation of the Net Favourable Marks on pending CNS stock positions and overdue CNS stock positions and cross-currency offset of Marks, please refer to Section 10.10.

(iv) Margin calculated (in Hong Kong dollar)

Margining Position X Margin Rate X Margin Multiplier – Favourable Marks offset  
 = HK\$240,418,950 X 7% X 1 – HK\$0  
 = HK\$16,829,326.50

(v) Margin calculated (in US dollar)

Margining Position X Margin Rate X Margin Multiplier – Favourable Marks offset  
 = US\$15,400,000 X 7% X 1 – US\$372,561.53  
 = US\$705,438.47

(vi) Application of Margin Credit



The Margin Credit will be applied on a pro-rata basis to (a) the Margin calculated (in Hong Kong dollar) and (b) the Margin calculated (in US dollar), calculated in Hong Kong dollar equivalent.

Margin calculated (in US dollar), calculated in Hong Kong dollar equivalent  
 = US\$705,438.47 X 7.8  
 = HK\$5,502,420.07

Margin Credit (on pro-rata basis) for CNS stock position in Hong Kong dollar  
 = HK\$5,000,000 x [HK\$16,829,326.50 / (HK\$16,829,326.50 + HK\$5,502,420.07)]  
 = HK\$3,768,027.38

Margin Credit (on pro-rata basis) for CNS stock position in US dollar  
 = HK\$5,000,000 x [HK\$5,502,420.07 / (HK\$16,829,326.50 + HK\$5,502,420.07)]  
 = HK\$1,231,972.62 or USD157,945.21

(vii) Margin requirement (in Hong Kong dollar)

Compare Margin calculated (in Hong Kong dollar) with Margin Credit (on pro-rata basis)  
 HK\$16,829,326.50 > HK\$3,768,027.38  
 Margin requirement (in Hong Kong dollar)  
 = HK\$16,829,326.50 – HK\$3,768,027.38  
 = HK\$13,061,299.12

(viii) Margin requirement (in US dollar)

Compare Margin calculated (in US dollar) with Margin Credit (on pro-rata basis)  
 US\$705,438.47 > US\$157,945.21  
 Margin requirement (in US dollar)  
 = US\$705,438.47 – US\$157,945.21  
 = US\$547,493.26

#### 10.10A.5 Intra-day Margin

In addition to day-end Margin which is collected from Clearing Participants on a daily basis, HKSCC has full discretion to call for intra-day Margin on CNS stock positions from all or any Clearing Participants. HKSCC may call for and collect intra-day Margin on CNS stock positions under any of the following circumstances:

- (i) if, in the opinion of HKSCC, sudden fluctuations of the securities market operated by the Exchange are apparent;
- (ii) where some of the markets, which in the opinion of HKSCC are major markets, remain open when the securities market operated by the Exchange is closed for more than one calendar day, excluding Saturday and Sunday, due to public holidays; or
- (iii) where HKSCC considers it appropriate under any other circumstances.

The computation of intra-day Margin is the same as day-end Margin except that

overdue CNS stock positions will be excluded from the computation and there will be no offset of Favourable Marks on overdue CNS stock positions and Uncovered Allocated Positions. If a Clearing Participant is unable to meet its intra-day Margin payment by the prescribed deadline for any reason, the Clearing Participant will be subject to such action which HKSCC may take under the Rules.

**10.10A.6 Relevant CCASS reports**

The following will assist a Clearing Participant to estimate the Margin payable by it to HKSCC at any time:

- (i) the PCS which gives information on the pending CNS stock positions of the Clearing Participant for the Current Day (as defined in Section 10.10.7);
- (ii) the FCS, which gives information on the pending CNS stock positions of the Clearing Participant for the Previous Day (as defined in Section 10.10.7); and
- (iii) the "Enquire Due and Overdue Positions" enquiry function (accessed via CCASS Terminals or Participant Gateways) which gives information on the due and overdue CNS stock positions of the Clearing Participant.

An Intra-Day Margin Payable Report will be made available via CCASS Terminals and Participant Gateways each time after intra-day Margin is calculated for collection by HKSCC. The Report provides information on intra-day Margin and details of the computation of intra-day Margin for that Business Day.

A Margin Payable Report will be made available via CCASS Terminals and Participant Gateways at the end of each Business Day to provide information on day-end Margin and details of the computation of day-end Margin for that Business Day.

An NCP Margin Projection Report will be made available to a GCP via CCASS Terminals and Participant Gateways at the end of each Business Day to provide information on estimated day-end Margin on pending CNS stock positions of NCPs of the GCP, and details of the computation, for that day. Where applicable, an NCP Margin Projection Report will similarly be made available upon completion of intra-day Margin processing to provide similar information on estimated intra-day Margin. For the avoidance of doubt, the Margin requirement of such GCP does not necessarily equal to the sum of the estimated Margin on CNS stock positions of its NCPs.

**10.10A.7 Interest on Margin collected**

HKSCC may allow or charge, at its absolute discretion, to Clearing Participants interest on the Margin collected in cash, calculated at a rate determined by HKSCC from time to time. HKSCC reserves the right to deduct any administrative costs from any interests to be allowed or to charge such administrative costs to the Margin collected in cash.

Unless otherwise specified by HKSCC, interest to be allowed or charged on Margin provided in cash, if any, will be accrued daily and paid (after deduction of the

administrative costs, if applicable) or charged (together with the administrative costs, if applicable) monthly by HKSCC to Clearing Participants in the same currency as the cash on which the interest accrued, by crediting or debiting, as the case may be, the CCMS House Collateral Accounts of the Clearing Participants, on the first Business Day of the following month.

#### **10.10A.8 Collection of Margin**

Margin to be requested from a Clearing Participant on each Business Day will be collateralized against the value (or Discounted Market Value, if applicable) of the General Collateral Inventory in the CCMS House Collateral Account of the Clearing Participant. For details of the collateralization process, reference should be made to Section 10.15.3.

If there is any shortfall in Margin after the collateralization process, HKSCC will collect the shortfall in the currency in which the Margin is calculated and denominated unless the Clearing Participant has maintained a Preferred Single Settlement Currency.

Where the Clearing Participant has maintained a Preferred Single Settlement Currency, HKSCC will convert the shortfall to the Preferred Single Settlement Currency at such exchange rate and subject to such haircut rate as determined by HKSCC from time to time, and HKSCC will collect the shortfall in Margin in the Preferred Single Settlement Currency. Unless HKSCC otherwise agrees, the Clearing Participant shall pay the shortfall in the Preferred Single Settlement Currency. Notwithstanding the foregoing, HKSCC reserves the right to collect the shortfall in Margin required in any Eligible Currency.

Unless otherwise agreed by HKSCC, any shortfall in Margin required, as determined by HKSCC, will be debited to the Margin and Pending Marks Account of a Clearing Participant and will be collected from the Clearing Participant. Day-end Margin will be collected from the Clearing Participant on a daily basis by HKSCC by issuing DDIs to the Designated Bank of the Clearing Participant as part of the CCASS money settlement process, or in any other manner determined by HKSCC from time to time. Intra-day Margin demanded by HKSCC pursuant to Section 10.10A.5 will be collected by HKSCC via CPIs or by issuing DDIs to the Designated Bank of the Clearing Participant as part of the CCASS money settlement process, or in any other manner determined by HKSCC from time to time. Subject to the determination of HKSCC, any surplus cash collateral over Margin in the CCMS House Collateral Account will not be automatically redelivered at the end of the day and HKSCC reserves the right to redeliver surplus cash collateral at any time it considers appropriate. HKSCC may redeliver such surplus to the Clearing Participant upon redelivery instruction from the Clearing Participant given to HKSCC using the prescribed form set out in Appendix 4.35, and the redelivery will be made in such manner and at such time as prescribed by HKSCC from time to time.

### **10.11 RISK MANAGEMENT: COLLATERAL**

#### **10.11.2 Form of Collateral**

Normally, HKSCC will require Clearing Participants to provide Collateral in the form of cash, bank guarantees or Collateral Securities, subject to the Rules.

**10.11.3A Concentration Collateral on Net Long CNS Stock Position in High Risk Security**

For an Eligible Security which HKSCC considers as a high risk security, HKSCC may require a Clearing Participant to provide from time to time on demand Concentration Collateral if (i) the Participant's concentration percentage in that Eligible Security exceeds the concentration trigger percentage as determined by HKSCC from time to time and (ii) the value of the Participant's net long CNS stock position in that Eligible Security exceeds the concentration trigger value as determined by HKSCC from time to time.

The concentration trigger percentage and concentration trigger value applicable to a Clearing Participant shall be determined by HKSCC in its absolute discretion from time to time.

The Participant's Uncovered Allocated Position in a high risk security will be included in the determination of the Participant's net long CNS stock position in a high risk security.

Where a Clearing Participant has provided the relevant quantity of Collateral Security to cover a part or the whole of a short CNS stock position in a high risk security not due for settlement to HKSCC pursuant to the Rules, the short CNS stock position covered by the Collateral Security will be excluded from the determination of the Participant's net long CNS stock position in that high risk security. HKSCC has absolute right to use such Collateral Security to settle the covered portion of the short CNS stock position.

Where a Clearing Participant has provided the relevant amount of Specific Cash Collateral to cover the corresponding money position of a part or the whole of a long CNS stock position in a high risk security not due for settlement to HKSCC, the long CNS stock position covered by the Specific Cash Collateral will be excluded from the determination of the Participant's net long CNS stock position in that high risk security. HKSCC has absolute right to use such Specific Cash Collateral to settle the money position of the covered portion of the long CNS stock position on or before its Settlement Day.

The Clearing Participant's concentration percentage of a net long CNS stock position in a high risk security is calculated as follows:

Clearing Participant's net long CNS stock position in a high risk security (in Hong Kong dollars or its Hong Kong dollar equivalent converted at such exchange rate and subject to such haircut rate as determined by HKSCC)

----- X 100%

Clearing Participant's liquid capital as per the Participant's latest Financial Resources Rules (FRR) return (or where applicable, its apportioned liquid capital as notified to HKSCC under Section 19.2.5 or an amount determined

by HKSCC to be the liquid capital of a GCP which is a registered institution under section 10.10.2)

The amount of Concentration Collateral required from a Clearing Participant is:

Clearing Participant's net long CNS stock position in a high risk security (in the currency in which the high risk security is traded and settled)	X	Percentage of daily market volatility of high risk securities
--	---	---

The percentage of daily market volatility of high risk securities will be determined by HKSCC in its absolute discretion from time to time. Reference will be drawn to the daily closing prices of the respective high risk securities as far as possible.

The total amount of Marks and Collateral (including Concentration Collateral) collected on a Participant's net long CNS stock position of a security will not be greater than the CNS money position corresponding to the net long CNS stock position of that security.

**10.11.3B Example (Computation of Concentration Collateral)**

Suppose: concentration trigger percentage = 200%,  
concentration trigger value = HK\$5M,

HK\$ million

Clearing Participant's liquid capital as per its latest FRR return (or where applicable, its apportioned liquid capital as notified to HKSCC under Section 19.2.5 or an amount determined by HKSCC to be the liquid capital of a GCP which is a registered institution under section 10.10.2)	=	10
Clearing Participant's net long CNS stock position in a high risk security	=	25
Daily market volatility of high risk securities	=	12%
Net Unfavourable Marks computed in net long CNS stock position	=	1

Clearing Participant's concentration percentage:

$$\frac{\text{HK\$25 million}}{\text{HK\$10 million}} \times 100\% = 250\%$$

250% exceeds concentration trigger percentage of 200%,

Clearing Participant's net long CNS stock position in the high risk security also exceeds the concentration trigger value of HK\$5 million.

Clearing Participant is therefore required to pay Concentration Collateral of

HK\$3 million.

The amount of Concentration Collateral required from the Clearing Participant  
= HK\$25 million x 12%  
= HK\$3 million < (HK\$25M - HK\$1M).

**10.11.4 Notification by HKSCC**

Except for Concentration Collateral the collection of which is described in Section 10.10.11, HKSCC will notify a Clearing Participant in writing of the amount of other Collateral required and the Clearing Participant will have to provide the Collateral within the time period specified.

**10.11.5 Return or Redelivery of Collateral**

Collateral, other than Concentration Collateral, provided by Clearing Participants will be returned or redelivered to them by HKSCC in such manner and at such time as is considered appropriate by HKSCC. In respect of the surplus of Concentration Collateral, please refer to Section 10.10.11.

**10.11.6 Interest on Collateral**

HKSCC may allow or charge, at its absolute discretion, to Clearing Participants interest on Collateral provided by Clearing Participants in cash calculated at a rate determined by HKSCC from time to time. HKSCC reserves the right to deduct any administrative costs from any interest to be allowed or to charge such administrative cost to the Collateral provided in cash.

Unless otherwise specified by HKSCC, interest to be allowed or charged on Collateral provided in cash, if any, will be accrued daily and paid (after deduction of the administrative costs, if applicable) or charged (together with the administrative costs, if applicable) monthly, by HKSCC to Clearing Participants in the same currency as the cash on which the interest accrued, by crediting or debiting, as the case may be, the CCMS House Collateral Accounts of the Clearing Participants, on the first Business Day of the following month.

**10.12 RISK MANAGEMENT: SECURITIES-ON-HOLD**

**10.12.3 Clearing Participant may provide bank guarantee**

It should however be noted that the full extent of a bank guarantee so provided by a Clearing Participant may not always be available for use in relation to Securities-on-hold. If a Clearing Participant is required to provide additional amounts to HKSCC as its Basic Contribution or Dynamic Contribution or both, at any time before the provision of such amounts by the Clearing Participant to HKSCC, the extent of any bank guarantee provided by the Clearing Participant in relation to Securities-on-hold will be reduced by the amount due as its Basic Contribution or Dynamic Contribution or both.

**10.12.4 Clearing Participant may effect cash prepayment**

Clearing Participants that have outstanding payment obligations to HKSCC but wish to utilize any or all of the Securities-on-hold covering such outstanding

payment obligations for any purpose, including to settle ISI/SI Transactions and Isolated Trades during a Settlement Day, may pay same day available funds in the relevant Eligible Currency to HKSCC to reduce their monetary obligations and to have the equivalent discounted market value of Securities-on-hold released.

A Clearing Participant may pay same day available funds to HKSCC by inputting Cash Prepayment Instructions on each Settlement Day or by inputting a Cash Prepayment Standing Instruction via the “Cash Prepayment / TSF Payment Standing Instruction” maintenance functions to authorize HKSCC to generate recurring Cash Prepayment Instructions on behalf of the Clearing Participant on each Settlement Day. The cash prepayment amount that will be generated under a Cash Prepayment Standing Instruction will depend on the payment basis of the standing instruction given by the Clearing Participant, and will be either (a) the gross amount of the unsettled money obligations on its long CNS stock positions; or (b) the net amount of the unsettled money obligations on its long and short CNS stock positions, plus a certain percentage of the net amount input by the Clearing Participant. Where the Clearing Participant has selected “CHATS” as the payment method when creating the Cash Prepayment Standing Instruction, the cash prepayment amount generated as aforesaid on a Settlement Day will be reduced by the relevant Margin amount and the relevant amount of Specific Cash Collateral, as described in Section 10.12.4A.

Any Cash Prepayment Standing Instruction remaining in the “pending status” ten calendar days after its last updated date will be automatically purged from CCASS.

#### **10.12.4A Use of Margin and Specific Cash Collateral to reduce cash prepayment amount**

This Section 10.12.4A is applicable where a Cash Prepayment Standing Instruction to release Securities-on-hold has been created and authorized by a Clearing Participant, with “CHATS” set as the payment method.

In respect of the generation of Cash Prepayment Instruction by HKSCC under the Cash Prepayment Standing Instruction on a Settlement Day, HKSCC will reduce the cash prepayment amount by the amount of Margin on CNS stock positions due for settlement on that Settlement Day and/or the relevant amount of Specific Cash Collateral, as the case may be, under the following circumstances:

- (i) the Clearing Participant is required to make payment on that Settlement Day in respect of a DDI issued by HKSCC on the previous day to collect Marks, Margin and/or Collateral with respect to all unsettled CNS stock positions on the previous day; and/or
- (ii) the Clearing Participant has provided Specific Cash Collateral to HKSCC to cover long CNS stock positions due for settlement on that Settlement Day.

Subject to HKSCC satisfying that full payment under the DDI is good and irrevocable, HKSCC will update the Settlement Account of the Clearing Participant's Money Ledger with the relevant Margin amount around 10:00 a.m. on that Settlement Day to reduce its corresponding monetary obligations due to HKSCC. As a result, HKSCC will release equivalent discounted market value of the Securities-on-hold.

When Eligible Security is allocated to the Stock Clearing Account of the Clearing Participant in respect of the long CNS stock position covered by the Specific Cash Collateral, and in any event upon completion of the third Batch-settlement-run on that Settlement Day, HKSCC will update the Settlement Account of the Clearing Participant's Money Ledger with the amount of the Specific Cash Collateral to reduce the corresponding monetary obligations due to HKSCC. As a result, HKSCC will release equivalent discounted market value of the Securities-on-hold.

At the end of each Business Day, HKSCC will calculate the Margin amount that may be used to reduce the cash prepayment amount to be generated under the Cash Prepayment Standing Instruction in the following Settlement Day. Clearing Participant can enquire such information in the Margin Payable Report.

#### **10.12.5 Procedures**

The following is a brief description of the procedures relating to cash prepayment on each Settlement Day:

- (a) Cash Prepayment Instructions with "CHATS" set as the payment method
  - (i) Clearing Participants that wish to make prepayments by means of CPIs shall select "CHATS" as the payment method when creating a Cash Prepayment Instruction via a CCASS Terminal or a Participant Gateway from 8:00 a.m. to 2:00 p.m. or such other time specified by HKSCC from time to time or when creating a Cash Prepayment Standing Instruction via a CCASS Terminal or a Participant Gateway from 8:00 a.m. to 7:00 p.m. or such other time specified by HKSCC from time to time;
  - (ii) To avoid undue concentration of HKSCC's exposure to a bank appointed by HKSCC as receiving bank for cash payment, cash prepayment is subject to the concentration limit predetermined by HKSCC in respect of an appointed receiving bank. HKSCC will only accept or generate Cash Prepayment Instructions within the predetermined concentration limit of the receiving bank. In case a Cash Prepayment Standing Instruction is created and authorized by a Clearing Participant, Cash Prepayment Instructions will be generated by HKSCC, if applicable, at approximately 8:00 a.m. starting from the following Settlement Day. The cash prepayment amount under the Cash Prepayment Instruction generated by HKSCC may be reduced in the manner as described in Section 10.12.4A;
  - (iii) Upon the creation and authorization of Cash Prepayment Instructions by Clearing Participants or the generation of Cash Prepayment Instructions by HKSCC pursuant to Cash Prepayment Standing Instructions, CPIs will



be generated to collect the cash prepayments from their Designated Bank Accounts. The CPIs information will be included in the Electronic CHATS Payment Instruction Report (CSEPI03). Based on the report, Designated Banks will issue CPIs to the Clearing House of HKAB to make payment on their behalf. Clearing Participants must ensure that there are sufficient funds in their Designated Bank Accounts and that the CHATS payments are completed by their Designated Banks no later than 3:30 p.m. or such other time as may be prescribed by HKSCC from time to time;

- (iv) Upon being notified by the Clearing House of HKAB of the finality of such payment, HKSCC will update the Settlement Accounts of Clearing Participants' Money Ledgers to reduce their corresponding monetary obligations due to HKSCC and as a result, release equivalent discounted market value of Securities-on-hold (see Section 10.12.6). Clearing Participants' Statements of Money Ledger will show the relevant entries. Clearing Participants can check the status of a CPI via the "Enquire Payment Instruction" function of CCASS. For the status of a Cash Prepayment Instruction, Clearing Participants can make use of the "Enquire Cash Prepayment Instruction" function;
- (v) Clearing Participants can operate ATIs to check whether the Securities-on-hold have been released and rely on DIs or batch-settlement-runs to settle SI Transactions, ISI Transactions and Isolated Trades;
- (vi) Since HKSCC allocates shares according to a pre-set algorithm, Clearing Participants making prepayments may still not get all the allocated shares. Any surplus funds thus arising will be returned to the Clearing Participants not later than day end. Please refer further to Section 14.4.2;
- (vii) In case the relevant cash payment under a Cash Prepayment Instruction input or generated on a Business Day is not received by HKSCC, the Cash Prepayment Instruction will be purged from CCASS at the end of the Business Day.

#### 10.12.6 Example (Quantity of Eligible Securities which cannot be used)

On a Settlement Day, Participant A was allocated 4,000 of Stock X (denominated in HKD) and 3,000 of Stock Y (denominated in HKD) and has HK\$80,000 due to HKSCC. Participant A has provided to HKSCC a bank guarantee of HK\$20,000 and cash prepayment of HK\$30,000. The prevailing Mark-to-market price for Stock X is HK\$10 and for Stock Y is HK\$20.

Then :

- (i) Mark-to-market value of Eligible Securities allocated to Participant A
  - = HK\$10 X 4,000 (stock X) + HK\$20 X 3,000 (stock Y)
  - = HK\$100,000
- (ii) Discounted market value of such allocated Eligible Securities
  - = HK\$100,000 X (1 - 0.1)

= HK\$90,000

(iii) Discounted market value of allocated Eligible Securities which could be withdrawn

=	Discounted market value of allocated Eligible Securities	-	Amount due to HKSCC not covered By bank guarantee and cash prepayment
=	HK\$90,000	-	(HK\$80,000 - HK\$20,000 - HK\$30,000)
=	HK\$60,000		

Participant A will be allowed by HKSCC to use allocated Eligible Securities with a total discounted market value of not more than HK\$60,000.

Participant A can therefore use no more than either : -

- (i) 6,666 of Stock X (derived from  $\text{HK\$60,000} \div \text{HK\$10} \div (1-0.1)$ ); or
- (ii) 3,333 of Stock Y (derived from  $\text{HK\$60,000} \div \text{HK\$20} \div (1-0.1)$ ); or
- (iii) a combination of Stock X and Stock Y so long as their total discounted market value does not exceed HK\$60,000.

The amount of Stock X and Stock Y which must be retained in the Stock Clearing Account of Participant A will be treated by HKSCC as Securities-on-hold.

#### 10.12.8 Procedures

The following is a brief description of the procedures relating to intra-day refund of surplus cash arising from overpaid cash prepayment on a Settlement Day:

- (e) in determining the amount of surplus cash arising from cash prepayment to be refunded intra-day, HKSCC will consider:
  - (i) the total cash prepayments received, confirmed and updated to the Clearing Participant's Settlement Account of Money Ledger at or before 1:15 p.m. on the Settlement Day or such other time as specified by HKSCC from time to time;
  - (ii) the Margin amount updated to the Settlement Account of Clearing Participant's Money Ledger around 10:00 a.m. on the Settlement Day;
  - (iii) the amount of Specific Cash Collateral updated to the Settlement Account of Clearing Participant's Money Ledger on the Settlement Day upon the completion of the third Batch-settlement-run;
  - (iv) the CNS money obligations upon the completion of the third Batch-settlement-run and any immediate settlement before 2:00 p.m. by DIs; and

- (v) other types of money obligations in the Clearing Participant's Settlement Account and Miscellaneous Account of Money Ledger as HKSCC may from time to time specify;

### **10.13 RISK MANAGEMENT: EVIDENCE OF SECURITIES AVAILABLE FOR SETTLEMENT**

If at any time HKSCC is not satisfied that a delivering Participant has or will have the Eligible Securities on the due date for settlement of the Market Contract, HKSCC may direct that Participant to arrange or may on behalf of that Participant execute immediately a Buy-in on or off the Exchange to purchase the Eligible Securities required by that Participant to settle its obligations in respect of that Market Contract. If a Buy-in is unable to be effected, HKSCC may require additional cash Collateral to be provided by a Participant in such amount as HKSCC considers appropriate.

### **10.14 RISK MANAGEMENT: CLOSING-OUT**

#### **10.14.4 Default by Clearing Participants**

On the occurrence of an Event of Default against a Clearing Participant, HKSCC may declare the Clearing Participant a defaulter and if so, will effect Closing-out in respect of all the unsettled obligations of the Clearing Participant under the CNS System.

If, as a result of Closing-out, the Clearing Participant owes money to HKSCC, HKSCC will apply the Marks, Margin, Collateral and Charged Property provided by the Clearing Participant (as well as all other assets and property, including proceeds from bank guarantees, which may be applied by HKSCC for such purpose) towards such indebtedness.

### **10.15 RISK MANAGEMENT: CASH, COLLATERAL SECURITIES AND BANK GUARANTEE**

#### **10.15.1 Cash**

Cash in Hong Kong dollar and other currencies recorded as credit entries in any CCMS Collateral Account of the Participant are amounts paid by the Participant to HKSCC. The only obligation of HKSCC to the Participant in respect of such amounts shall be to pay the Participant an amount equal to the balance remaining after satisfaction of all obligations and liabilities (actual or contingent) of such Participant to HKSCC.

#### **Security**

HKSCC shall have a first fixed charge over:-

- (a) the Collateral Securities from time to time credited to any CCMS Collateral Account of the Participant; and
- (b) the Derived Assets

by way of a continuing security (i) for the discharge and satisfaction of any Marks, Margin and Collateral obligations of such Participant, (ii) for the discharge and satisfaction of all other obligations and liabilities (actual or contingent) of such Participant to HKSCC arising directly in connection with HKSCC ensuring the settlement of Market Contracts to which such Participant is a party, (iii) for the discharge and satisfaction of all liabilities (actual or contingent) of such Participant to HKSCC arising from a loss or defects affecting Eligible Securities pursuant to Rule 812, Rule 813, Rule 814 and Rule 815, and (iv) for the discharge and satisfaction of all other obligations (actual or contingent) of such Participant to HKSCC. Each of the charges created over the assets specified in (a) and (b) and in respect of the Participant's obligations in (i), (ii), (iii) and (iv) above shall form a separate security.

Such Collateral Securities and the Derived Assets shall also be a continuing security for HKSCC's waiver of computation of Marks and reduction of Margining Position for computation of Margin required from such Participant.

**Bank guarantee**

Any bank guarantee recorded in any CCMS Collateral Account of the Participant shall be a continuing guarantee in accordance with its terms and shall form a separate security.

The provisions of this Section 10.15 shall also be applicable, in so far as they are relevant, to the risk management measures in respect of Clearing Agency Transactions.

**10.15.2 Valuation of Collateral Securities, etc.**

For the purpose of the collateralization process under Section 10.15.3, the "Discounted Market Value" of a collateral, if applicable, in the CCMS House Collateral Account of a Clearing Participant, is determined as below:

Collateral Securities-

Quantity of a security x valuation price x (1 - haircut rate of the security) x exchange rate x (1- haircut rate of the relevant currency)

Cash in an Eligible Currency other than Hong Kong dollar-

Cash amount in original currency x exchange rate x (1- haircut rate of the relevant currency)

The valuation price, exchange rates and haircut rates shall be determined by HKSCC in its absolute discretion from time to time. All Eligible Securities shall have haircut ratio and valuation price which shall be determined by HKSCC in its absolute discretion from time to time. If applicable, the "Discounted Market Value" of a collateral in Eligible Currency other than Hong Kong dollar will be converted into its Hong Kong dollar equivalent at the exchange rate and haircut rate determined by

HKSCC. Clearing Participants may enquire the applicable valuation price, exchange rates and haircut rates via the CCMS.

### 10.15.3 Collateralization process

The purpose of the collateralization process is to determine the aggregate amount or value of cash and bank guarantee recorded in, and of Collateral Securities credited to, the CCMS House Collateral Account of a Clearing Participant acceptable to HKSCC from time to time for the purpose of discharging the Clearing Participant's Marks, Margin and/or Collateral obligations, and other obligations (actual or contingent).

Unless HKSCC otherwise determines, HKSCC may accept Non-cash Collaterals to secure Marks, Margin, Collateral and other obligations of a Clearing Participant up to the amount calculated by the Non-cash Collateral Cap.

The Marks, Margin, Collateral and other obligations of a Clearing Participant on a Business Day will be collateralized against the General Collateral Inventory in the CCMS House Collateral Account of the Clearing Participant in the following order, or in such order as HKSCC considers appropriate:

- (i) Non-cash Collateral up to the amount calculated by the Non-cash Collateral Cap;
- (ii) cash in the currency in which the Marks, Margin, Collateral and other obligations (actual or contingent) is calculated and denominated; and
- (iii) cash in other currencies.

The following is a brief description of the collateralization process:

- (a) The Marks, Margin, Collateral and other obligations of the Clearing Participant will first be collateralized against the value (or Discounted Market Value, if applicable) of the Non-cash Collateral, namely the value of bank guarantees and the Discounted Market Value of Collateral Securities, up to the amount calculated by the Non-cash Collateral Cap. Such collateralized value of the Non-cash Collateral, up to but not exceeding the amount calculated by the Non-cash Collateral Cap, will be shown as the non-cash Ear-marked Value in the CCMS House Collateral Account of the Clearing Participant;
- (b) Any amount of the Marks, Margin, Collateral and other obligations of the Clearing Participant in excess of such non-cash Ear-marked Value will be collateralized against cash in the same currency in which the Marks, Margin, Collateral and other obligations is calculated and denominated. Unless otherwise specified by HKSCC and subject to Sections 10.10, 10.10A and 10.11, such collateralized amount of cash shall be paid out of the General Collateral Inventory in the CCMS House Collateral Account, and will be re-categorised and treated as Contract Currency Collateral;
- (c) Any remaining amount of Marks, Margin, Collateral and other obligations will then be collateralized against the Discounted Market Value of cash in other currencies. For this purpose, if the remaining amount of Marks, Margin,

Collateral and other obligation is denominated in currencies other than Hong Kong dollar, it will be converted to Hong Kong dollar equivalent at such exchange rate and subject to such haircut rate as determined by HKSCC from time to time. The collateralized amount will be shown as cash Ear-marked Value in the CCMS House Collateral Account; and

Subject to the above and Sections 10.10, 10.10A and 10.11, any amount of Marks, Margin, Collateral and other obligations of the Clearing Participant remaining after the above collateralization process shall be paid by the Clearing Participant in cash in the currency in which the Marks, Margin, Collateral and other obligations are calculated save where otherwise specified by HKSCC.

**10.15.4 Example (Marks, Margin and Collateral covered by Non-cash Collateral)**

On a given trade day, the Marks, Concentration Collateral and Margin obligations of Participant A are HK\$10,000,000, HK\$2,000,000 and HK\$25,000,000 respectively. Prevailing Non-cash Collateral Cap is 40%.

Suppose at the time of collateralization the total Discounted Market Value of the bank guarantee and the Collateral Securities in the General Collateral Inventory of the CCMS House Collateral Account of Participant A are HK\$30,000,000 and HK\$8,000,000 respectively.

Maximum Marks, Concentration Collateral and Margin amount that can be covered by bank guarantee and Collateral Securities

$$\begin{aligned}
 &= \text{Marks, Concentration Collateral and Margin obligation} \times \text{Non-cash Collateral Cap} \\
 &= (\text{HK\$10,000,000} + \text{HK\$2,000,000} + \text{HK\$25,000,000}) \times 40\% \\
 &= \text{HK\$14,800,000}
 \end{aligned}$$

Note: The actual Marks, Concentration Collateral and Margin amount that will be covered by bank guarantee and Collateral Securities is also HK\$14,800,000 because the total Discounted Market Value of the bank guarantee and Collateral Securities available at the time of collateralization is more than this figure. The Ear-marked Value of Participant A is HK\$14,800,000.

Marks, Concentration Collateral and Margin requirement amount that must be paid in cash

$$\begin{aligned}
 &= (\text{HK\$10,000,000} + \text{HK\$2,000,000} + \text{HK\$25,000,000}) - \text{HK\$14,800,000} \\
 &= \text{HK\$22,200,000}
 \end{aligned}$$

**10.15.5 Quantity of Collateral Securities which cannot be used**

Collateral Securities credited to the CCMS House Collateral Account of a Participant may not be transferred from such account without the express consent of HKSCC, given in a manner as determined by HKSCC in its absolute discretion. Participants will not be allowed to use or withdraw Collateral Securities from the CCMS House Collateral Account except with the express consent of HKSCC, given in a manner as determined by HKSCC in its absolute discretion.

If the Participant wishes to make use of and/or withdraw from the CCMS House

Collateral Account any Collateral Securities, as long as the total value (or Discounted Market Value, if applicable) of the General Collateral Inventory is greater than the Ear-marked Value of the Participant, the Participant may be allowed by HKSCC in its sole discretion to make use of and/or withdraw the Collateral Securities with value greater than the Ear-marked Value.

In the event that Eligible Securities are transferred from a Participant's Stock Accounts in CCASS to a collateral account in CCMS maintained by another Recognized Clearing House for the Participant in its capacity as a participant of such Recognized Clearing House, such Eligible Securities will have to be re-transferred to the Participant's Stock Accounts in CCASS, other than the Stock Collateral Control Account, prior to any withdrawal being made. The Recognized Clearing House may withdraw such Eligible Securities from CCASS or otherwise deal with such Eligible Securities in relation to the enforcement of its rights under any charge or security interest granted in its favour by the Participant in respect of such Eligible Securities.

#### **10.15.6 Application of moneys**

Without prejudice to HKSCC's rights in Rule 3702, upon any failure by a Clearing Participant to perform its obligations to HKSCC under the CNS System or when HKSCC otherwise deems it necessary for its own protection;

- (i) HKSCC may sell or apply the Charged Property of the Clearing Participant without further reference to the Participant and the provisions of Rule 3702 shall apply equally to such sale. Following such sale or application, the only obligation of HKSCC to such Participant in respect of its Charged Property shall be to pay such Participant an amount equal to the balance and/or to return to such Participant the balance of the Charged Property remaining after satisfaction of all obligations and liabilities (actual or contingent) of such Participant to HKSCC;
- (ii) Derived Assets credited to the Entitlement Account may not be transferred from such Account without the express consent of HKSCC and may be transferred to the Clearing Participant's CCMS Collateral Account by HKSCC; and
- (iii) all dividends, interests and other distributions in respect of the Charged Property not forming part of the Derived Assets may be retained and used by HKSCC.

All moneys arising from the exercise of the powers of sale in Rule 3608 and Rule 3702 shall be held and applied in or towards the payment or discharge of the Clearing Participant's obligations and liabilities (actual or contingent) under the Rules (but without prejudice to the right of HKSCC to recover any shortfall from the Clearing Participant).

All proceeds from the exercise of the rights of HKSCC under the bank guarantees pursuant to Rule 3609 and Rule 3702 may be used by HKSCC without notice or further reference to the Clearing Participant.

## SECTION 12

**Non-Exchange Trades – SI Transactions,  
Clearing Agency Transactions,  
ISI Transactions and Transfer Instructions****12.2 CLEARING AGENCY TRANSACTIONS****12.2.9 Risk Management****(i) Marks, Margin and Concentration Collateral**

As settlement counterparty to Participants under Market Contracts due for settlement under the CNS System, HKSCC would be exposed to market risks as a result of unfavourable fluctuations or potential unfavourable fluctuations of prices in respect of the unsettled stock positions of Participants under the CNS System.

To monitor and control such risk exposure, HKSCC will Mark-to-market and compute Margin on the unsettled stock positions under the CNS System and collect Marks and Margin from Participants who are parties to Market Contracts. HKSCC will also Mark-to-market and compute Margin on the unsettled stock positions of Participants in respect of Clearing Agency Transactions to be settled under the CNS System, and collect Marks and Margin from Participants who are parties to the Clearing Agency Transactions.

From time to time, circumstances may warrant HKSCC taking additional risk management measures against a Participant. For unsettled stock positions of Participants in an Eligible Security which HKSCC considers a high risk security, HKSCC may require Participants to provide from time to time on demand Concentration Collateral. HKSCC may at any time require Participants who are parties to Clearing Agency Transactions to be settled under the CNS System to provide Concentration Collateral to HKSCC.

In respect of Clearing Agency Transactions reported to HKSCC by a Clearing Agency Participant on a Business Day, HKSCC will calculate Marks, Margin and Concentration Collateral in respect of the unsettled stock positions of the Clearing Agency Transactions to be settled under the CNS System, and collect the required Marks, Margin and Concentration Collateral from Participants which are parties to the Clearing Agency Transactions, notwithstanding that the Clearing Agency Transactions have not been accepted by HKSCC for settlement in CCASS under the CNS System. HKSCC will collect the required Marks, Margin and Concentration Collateral from the Participants by issuing DDIs to the Designated Banks of the Participants as part of the CCASS money settlement process, unless otherwise specified below.

HKSCC will not collect the required Marks, Margin and Concentration Collateral in respect of Clearing Agency Transactions to be settled under the CNS System and to which a Clearing Participant is a party from the Clearing



Participant direct if the Clearing Participant, in its capacity as a SEOCH Participant, has effected and maintained with the Clearing Agency Participant an arrangement for the Clearing Agency Participant to collect from the Clearing Participant and pay to HKSCC the required Marks, Margin and Concentration Collateral. The Clearing Participant, in its capacity as a SEOCH Participant, shall pay the amount of such required Marks, Margin and Concentration Collateral in cash to the Clearing Agency Participant. The Clearing Agency Participant shall transfer such cash amount to HKSCC on the Business Day following the day on which the Clearing Agency Transactions are reported to HKSCC, at such time and in such manner as HKSCC and the Clearing Participant may agree. HKSCC will record the cash amount received by it from the Clearing Agency Participant as credit entries in the CCMS House Collateral Account of the Clearing Participant, and the cash amount will be treated as Contract Currency Collateral of the corresponding Clearing Participant.

(For further details, reference should also be made to Sections 10.10, 10.10A and 10.11 which shall also apply to Clearing Agency Transactions for settlement under the CNS System.)

(ii) Collateral

HKSCC monitors its risk exposure to Participants on a continuous basis. From time to time, circumstances peculiar to a particular Participant may warrant HKSCC taking additional risk management measures against it.

In appropriate cases, HKSCC will require a Participant to provide it with Collateral in the form of cash or bank guarantees.

The amount of Collateral other than Concentration Collateral required to be provided by a Participant will be decided by HKSCC, taking into account HKSCC's exposure posed by that Participant.

(For further details, reference should also be made to Section 10.11 which shall also apply to Clearing Agency Transactions settled under the CNS System.)

(v) Closing-out

On the occurrence of an Event of Default against a Participant, HKSCC may declare the Participant a Defaulter and if so, will effect Closing-out in respect of all of the unsettled obligations of the Participant under the CNS System.

If as a result of Closing-out the Participant owes money to HKSCC, HKSCC will apply the Marks, Margin and Collateral, if applicable, provided by the Participant (as well as all other assets and property of such a Participant which may be permitted by law to be applied by HKSCC for such purpose) towards such indebtedness. For the avoidance of doubt, Marks, Margin and Collateral provided by the Participant include the Marks, Margin and Concentration Collateral collected from such Participant (in its capacity as a SEOCH Participant) by a Clearing Agency Participant and transferred by the Clearing

Agency Participant to HKSCC pursuant to Section 12.2.9(i).

If a Clearing Participant which is an Exchange Participant is declared a Defaulter, HKSCC will notify the Exchange forthwith and will request the Exchange to suspend the Clearing Participant from trading. HKSCC will also request the Exchange to suspend from trading any of the NCPs of the GCP which does not have in place immediately upon suspension of the GCP a binding, valid and effective Clearing Agreement with another GCP. If a Clearing Participant is not an Exchange Participant is declared a defaulter, HKSCC will request the Exchange to suspend from trading any of the NCPs of the GCP which does not have in place immediately upon suspension of the GCP a binding, valid and effective Clearing Agreement with another GCP.

A Clearing Participant or Clearing Agency Participant declared a Defaulter may also be suspended or restricted from further activities in CCASS.

(For further details reference should also be made to Section 10.14, which shall also apply to Clearing Agency Transactions settled under the CNS System.)

## **Section 12A Foreign Exchange Services**

### **12A.9 RISK MANAGEMENT: COLLATERAL**

HKSCC, as TSF operator, may collect Collateral in the form of cash as collateral for the performance of the TSF CCASS Participant's obligations and liabilities under a TSF FX Transaction or a Stock Release FX Transaction or to be applied in or towards the satisfaction of such obligations and liabilities. The amount of the Collateral required to be provided shall be as determined by HKSCC from time to time.

HKSCC will notify a TSF CCASS Participant in writing of the amount of Collateral required and the Participant should provide the Collateral within the time period specified.

Collateral provided by TSF CCASS Participants will be redelivered at such time as is considered appropriate by HKSCC.

HKSCC may at its absolute discretion allow or charge interest on cash Collateral provided by TSF CCASS Participants calculated at a rate determined by HKSCC from time to time. HKSCC reserves the right to deduct any administrative costs from any interest to be allowed or to charge such administrative cost to the Collateral collected in cash.

**SECTION 14****Money Settlement****14.4 DDIs AND DCIs****14.4.1 Usage**

DDIs/DCIs are used to effect money settlement between HKSCC and Participants arising from (i) CNS stock positions arising from Exchange Trades and Clearing Agency Transactions to be settled with Clearing Participants; (ii) Marks, Margin and Collateral provided by Clearing Participants for CNS stock positions; (iii) Basic Contributions and Dynamic Contributions by Clearing Participants to the Guarantee Fund; (iv) money transactions in relation to nominee services provided by HKSCC as set out in Section 14.3.4; (v) money transactions in relation to FX Services provided by HKSCC, as TSF operator, as set out in Section 14.3.7; (vi) fees and expenses payable by Investor Participants for provision of CCASS services (see Section 14.3.5); and (vii) other matters where HKSCC can demand payment from or is required to make payments to Participants.

**14.4.2 PROCEDURES**

The following is a brief description of the procedures relating to DDIs/DCIs issued by HKSCC:

- (i) periodically, based on the balance of the relevant sub-accounts of the Money Ledger of Participants (i.e. the Settlement Account, the Margin and Pending Marks Account, the Overdue Position Marks Account, the Entitlements Account, and the Miscellaneous Account), HKSCC will generate DDIs/DCIs to collect or pay sums from or to Participants for value on the same day. Subject to HKSCC's right to offset credit and debit balances in the sub-accounts of the Money Ledger of a Participant, relevant DDIs or DCIs will be generated by HKSCC in respect of balances in the sub-accounts of the Money Ledger of the Participant as follows :
  - in respect of the Settlement Account, on each Settlement Day; and
  - in respect of the Margin and Pending Marks Account, the Overdue Position Marks Account, the Entitlements Account and the Miscellaneous Account, on each Business Day;
- (ii) except for balances in the Entitlements Account and the Billing Account, HKSCC will normally offset the credit and debit balances in the sub-accounts of the Money Ledgers of Participants before issuing relevant DDIs or DCIs (usually, the credit balances in the sub-accounts of the Money Ledger will be applied in the following order, namely, Miscellaneous Account, Overdue Position Marks Account, Settlement Account and the Margin and Pending Marks Account);

**14.7 CHATS PAYMENT INSTRUCTIONS****14.7.3 Default of or delay in payment**

It is the responsibility of the paying Participants to ensure that their Designated Banks act according to the CPIs issued in relation to CCASS transactions and make payment by the deadline determined by HKSCC from time to time.

In case of any default or delay in intra-day Marks payment and/or intra-day Margin payment, HKSCC may take such default action or other action against the concerned Participant as it thinks fit in accordance with the Rules.

## **14.8 INTRA-DAY PAYMENT INSTRUCTIONS**

### **14.8.2 Procedures**

The following is a brief description of the procedures relating to Intra-day Payment Instructions issued by HKSCC on a Business Day and/or a Settlement Day:

- (i) shortly after 2:00 p.m. on each Business Day and after completion of the third Batch-settlement-run if the Business Day is also a Settlement Day, HKSCC will, based on an Intra-day Payment Standing Instruction accepted by HKSCC at or before 1:15 p.m. on the Business Day, take into account any or all of the following items (as the case may be) in determining the amount of Intra-day Payment to be paid to a Participant other than Investor Participant via IPI:
  - (a) (where the Intra-day Payment Standing Instruction covers intra-day refund of surplus cash arising from overpaid cash prepayment on a Settlement Day) (i) the total cash prepayments received, confirmed and updated to the Clearing Participant's Settlement Account of Money Ledger at or before 1:15 p.m. or such other time as specified by HKSCC from time to time, (ii) the Margin amount updated to the Settlement Account of Clearing Participant's Money Ledger around 10:00 a.m., (iii) the amount of Specific Cash Collateral updated to the Settlement Account of Clearing Participant's Money Ledger upon the completion of the third Batch-settlement-run, (iv) the CNS money obligation upon the completion of the third Batch-settlement-run and any immediate settlement before 2:00 p.m. by DIs, and (v) other types of money obligations in the Clearing Participant's Settlement Account and Miscellaneous Account of Money Ledger as HKSCC may from time to time specify;

## **SECTION 15**

### **Enquiry Services**

#### **15.2 USE OF VARIOUS ENQUIRY FUNCTIONS AVAILABLE**

The various enquiry functions that are available for access and the purpose of accessing each such function are set out below:

**(i) Available to Participants other than Investor Participants:**

- (re) "Enquire Interest Calculation Result/Accommodation Fee" function: to enquire about daily accrued interest amount posted to each CCMS Collateral Account on the current day and the past 30 days;

- (rf) “Enquire Preferred Single Settlement Currency” function: to enquire about the Eligible Currency selected by a Participant for the settlement of Marks, Margin and Collateral;
- (rg) “Enquire Specific Cash Collateral” function: to enquire about the details of the Specific Cash Collateral instruction input by a Participant;
- (rh) “Enquire Specific Cash Collateral Movement” function: to enquire about the movement of the Specific Cash Collateral;

## SECTION 16

### Statements and Reports

#### 16.6 REPORTS AND STATEMENTS FOR PARTICIPANTS

##### 16.6.1 Reports and Statements for Participants other than Investor Participants

<b>Report ID</b>	<b>Report name</b>	<b>Frequency</b>	<b>Time available</b>
CRMIM01	Intra-day Marks and Collateral Collection Report	Daily/Ad hoc	upon completion of intra-day Marks processing
CRMMG01	Intra-day Margin Payable Report	Ad hoc	upon completion of intra-day Margin processing
CRMMG02	Margin Payable Report	Daily	after day-end Margin processing for current day's Margin requirement
CRMNP01	NCP Marks Projection Report	Daily/Ad hoc	upon completion of intra-day Marks processing
CRMNP02	NCP Marks Projection Report	Daily	upon completion of day-end Marks processing
CRMNP03	NCP Margin Projection Report	Ad hoc	upon completion of intra-day Margin processing
CRMNP04	NCP Margin Projection Report	Daily	after day-end Margin processing for current day's Margin requirement
CCMDS01	Statement of Collateral Account	Daily (including Saturday)	from the time when the report retrieval function is available on each Business Day and Saturday (for

			previous day's collateral account activities)
CCMSC01	Specific Cash Collateral Instruction Activity Report	Daily (including Saturday)	from the time when the report retrieval function is available on each Business Day and Saturday (for previous day's Specific Cash Collateral instruction activities)
CCMPS01	Maintain Preferred Single Settlement Currency Activity Report	Daily (including Saturday)	from the time when the report retrieval function is available on each Business Day and Saturday (for previous day's activities in relation to Preferred Single Settlement Currency)
GFR608	Statement of Guarantee Fund Contributions	Monthly/Ad hoc	shortly after 8:00 a.m.
GFR616	NCP(s) Guarantee Fund Contributions Projection By Position	Monthly/Ad hoc	shortly after 8:00 a.m.

## SECTION 17

### Suspension of Services

#### 17.2 TYPHOONS

##### 17.2.6 Clearing and settlement of Exchange Trades

However, the adoption of risk management measures by HKSCC will not normally be affected by a typhoon except where it will not be possible to implement such measures in the usual way. For instance, Marks, Margin and Collateral on pending and overdue stock positions of a Clearing Participant under the CNS System will be determined in the normal way and will be collected unless CCASS money settlement is affected by a typhoon.

##### 17.2.10 Money settlement services

If the services of the Clearing House of HKAB for the relevant Eligible Currency are available where a Typhoon Signal No. 8 or above is hoisted, HKSCC will generate DDIs, DCIs, EPIs and autopay instructions in the usual way. If not, then the day will

in effect not be treated as a “Settlement Day” for CCASS money settlement purposes in relation to DDIs, DCIs, EPIs and autopay instructions and the following points should be noted:

- (iii) where CCASS money settlement in relation to DDIs, DCIs, EPIs or autopay instructions cannot be effected as scheduled, Participants other than Investor Participants will be informed by HKSCC through the issue of Settlement Reports and Statements of Money Ledger; and

## **Section 18**

### **Guarantee Fund**

#### **18.1 GENERAL**

The Guarantee Fund is administered by HKSCC, subject to the supervision of the Risk Management Committee.

The failure of a Clearing Participant to provide its Basic Contribution or Dynamic Contribution to HKSCC will be treated by HKSCC as a default.

#### **18.2 CALCULATION OF CONTRIBUTIONS**

##### **18.2.1 Determination of amount**

For the purpose of this Section, “daily CNS position”, in relation to a Clearing Participant, refers to the higher of (i) the aggregate of the value of the total cross-day net long CNS stock positions of the Clearing Participant and the money settlement obligations of the Clearing Participant on that day and (ii) the value of the total cross-day net short CNS stock positions of such Clearing Participant on that day, each subject to adjustments which HKSCC may from time to time consider appropriate. The adjustments may include (but will not be limited to) adjustments for Multi-counter Eligible Securities of the same class of an Issuer, Collateral Security and Specific Cash Collateral provided by the Clearing Participant. The values of the CNS stock positions are computed with reference to the Mark-to-market value of the relevant CNS stock positions determined by HKSCC. “Money settlement obligations” of a Clearing Participant refers to the amount payable by the Clearing Participant on that day in the Clearing Participant’s Money Ledger Settlement Account.

Each Clearing Participant shall pay to HKSCC both the Basic Contribution and the Dynamic Contribution to the Guarantee Fund.

The amount of the Basic Contribution required from a Clearing Participant will be determined by reference to the Clearing Participant’s share of the average daily CNS positions of all Clearing Participants for the previous month, subject to a minimum cash Basic Contribution. The minimum cash Basic Contribution by each DCP shall be HK\$50,000 or HK\$50,000 in respect of each Stock Exchange Trading Right held by such DCP, whichever is the higher. The minimum cash Basic Contribution by each GCP shall be HK\$150,000 or the aggregate of HK\$50,000 in respect of each Stock Exchange Trading Right held by it and HK\$50,000 in respect of each NCP with whom

such GCP has entered into a Clearing Agreement, whichever is the higher. The size of the aggregate Basic Contributions required from all Clearing Participants shall generally be not less than HK\$100,000,000 provided that HKSCC reserves the right to determine from time to time the required size of the aggregate Basic Contributions.

A Clearing Participant's share of the average daily CNS positions of all Clearing Participants for the previous month as mentioned above will also be used by HKSCC as the basis for calculating the Clearing Participant's share of the Dynamic Contribution calculated in respect of all Clearing Participants. The "Dynamic Contribution calculated" in respect of all Clearing Participants means the required size of the Guarantee Fund determined by HKSCC following a review of the size of the Guarantee Fund by HKSCC, less the aggregate Basic Contributions required from all Clearing Participants and any amounts which HKSCC, in its absolute discretion, considers as appropriate to reduce the Dynamic Contribution calculated in respect of all Clearing Participants. Such Clearing Participant's share of the Dynamic Contribution calculated in respect of all Clearing Participants, in money terms, will be the Dynamic Contribution calculated in respect of the Clearing Participant.

The Dynamic Contribution calculated in respect of the Clearing Participant, determined as above, will be compared with the Dynamic Contribution Credit allowed to the Clearing Participant to determine the Dynamic Contribution required from the Clearing Participant in the following manner: –

- (i) If the Dynamic Contribution calculated equals to the Dynamic Contribution Credit, no Dynamic Contribution will be required and the Dynamic Contribution Credit will be treated as fully utilized by the Clearing Participant.
- (ii) If the Dynamic Contribution calculated exceeds the Dynamic Contribution Credit, the excess amount will be the Dynamic Contribution required and the Dynamic Contribution Credit will be treated as fully utilized by the Clearing Participant.
- (iii) If the Dynamic Contribution calculated is less than the Dynamic Contribution Credit, no Dynamic Contribution will be required. The amount of Dynamic Contribution calculated will be the amount of Dynamic Contribution Credit utilized by the Clearing Participant.

In the case of CNS stock positions in Eligible Securities denominated in an Eligible Currency other than Hong Kong dollars, the value of the CNS stock positions will be converted into Hong Kong dollar equivalent at such exchange rates as determined by HKSCC for the purpose of computing the amounts of Basic Contributions and Dynamic Contributions required from Clearing Participants. HKSCC reserves the right to collect the required amounts of Basic Contributions and Dynamic Contributions in an Eligible Currency other than Hong Kong dollars.

### **18.2.3 Acquisition of additional Stock Exchange Trading Rights and/or increase in number of NCPs**



A Clearing Participant acquiring additional Stock Exchange Trading Rights and/or entering into Clearing Agreements with additional NCPs, where applicable, may need to pay to HKSCC an additional amount in respect of its required Basic Contribution.

This will be the case if the minimum cash Basic Contribution required of the Clearing Participant as a result of its acquisition of additional Stock Exchange Trading Rights and/or entering into Clearing Agreements with additional NCPs, where applicable, will exceed the amount of the existing Basic Contribution made in cash of such Clearing Participant.

Any additional amount so required from a Clearing Participant as Basic Contribution (as a result of its acquisition of additional Stock Exchange Trading Rights and/or entering into Clearing Agreements with additional NCPs) must be made in cash within seven Business Days from the date on which notice of approval of the Exchange (in respect of the issue of such Stock Exchange Trading Right to that Exchange Participant) is given and in relation to entering into Clearing Agreements with additional NCPs, no later than seven Business Days from the date on which notice of the execution of each Clearing Agreements is given to HKSCC.

### **18.3 FORM OF CONTRIBUTIONS**

The minimum cash Basic Contribution of a Clearing Participant will be collected by way of a DDI as part of the CCASS money settlement process.

Any further amount required of a Clearing Participant as its Basic Contribution (i.e. in excess of the minimum cash Basic Contribution required) and any amount required of a Clearing Participant as its Dynamic Contribution may be provided in cash in Hong Kong dollars or in any other currency prescribed by HKSCC from time to time or, by way of a bank guarantee in the form prescribed by HKSCC and issued by a licensed bank under the Banking Ordinance which is acceptable to HKSCC from time to time. Notwithstanding the aforesaid, any required replenishment of the Basic Contribution and Dynamic Contribution of a Clearing Participant must be made in cash.

Interest on or other sums accruing to the minimum cash Basic Contribution will be appropriated by HKSCC to the Guarantee Fund. Interest at negative rates on such cash Basic Contribution will also be charged to and paid out of the Guarantee Fund.

Interest on or other sums accruing to Contributions which are made in cash and are in excess of the minimum cash Basic Contribution may be paid to the appropriate Clearing Participant as determined by HKSCC. Interest at negative rates on such cash Contributions in excess of the minimum cash Basic Contribution may be charged to the appropriate Clearing Participant as determined by HKSCC.

Clearly, no interest will be allowed or charged on the amount of Contributions provided by a Clearing Participant by way of a bank guarantee.

## 18.4 REVIEW OF CONTRIBUTIONS

### 18.4.1 Monthly reviews

The Basic Contribution and Dynamic Contribution required from each Clearing Participant will be reviewed on a monthly basis.

At the beginning of each month, each Clearing Participant will be advised of each of the Basic Contribution and the Dynamic Contribution required from that Clearing Participant, for that month.

### 18.4.2 Ad hoc reviews

If the daily risk exposure of the Guarantee Fund as calculated by HKSCC exceeds 95% of the existing Guarantee Fund size plus the aggregate Dynamic Contribution Credit utilized by all Clearing Participants in three consecutive Business Days or if HKSCC considers it appropriate to do so in any other circumstances, HKSCC may, from time to time and in its absolute discretion, review the size of the Guarantee Fund and the Basic Contribution and Dynamic Contribution required from each Clearing Participant. Such review by HKSCC may be undertaken at any time, regardless of whether or not a monthly review of Contributions has recently been, or is soon due to be, completed. At a minimum, HKSCC will review the size of Guarantee Fund monthly and HKSCC may, as a result of the ad hoc review or monthly review, require additional amounts as Basic Contributions and/or Dynamic Contributions from Clearing Participants.

### 18.4.3 Collection and redelivery of Contributions following reviews

HKSCC will notify Clearing Participants of any additional amounts required from Clearing Participants as Basic Contributions and Dynamic Contributions as a result of a review described in Section 18.4.1 and Section 18.4.2.

Similarly, following such a review, should a Clearing Participant's required Basic Contribution be less than its existing Basic Contribution, HKSCC may (but it is not obliged to) redeliver to the Clearing Participant, by means of DCIs (see Section 14), an amount that is the lesser of :

- (i) the surplus of the Clearing Participant's existing Basic Contribution over its required Basic Contribution; and
- (ii) the surplus of the Clearing Participant's Basic Contribution in cash over its minimum cash Basic Contribution.

In addition, should a Clearing Participant's required Dynamic Contribution be less than its existing Dynamic Contribution and the surplus of the existing Dynamic Contribution over its required Dynamic Contribution is in the form of cash, HKSCC may (but is not obliged to) redeliver to the Clearing Participant, by means of DCIs, an amount that is the cash surplus.

Any guarantee provided to HKSCC in satisfaction of a Clearing Participant's obligations to provide Basic Contribution and/or Dynamic Contribution may, upon application by the Clearing Participant, be released by HKSCC in its absolute discretion.

For the avoidance of doubt, HKSCC shall have the absolute right to withhold the redelivery of any surplus Basic Contribution and/or surplus Dynamic Contribution to a Clearing Participant, and the release of any guarantee provided to HKSCC, for such period as HKSCC may from time to time consider appropriate.

## **18.6 REPLENISHMENT OF GUARANTEE FUND**

### **18.6.1 Clearing Participants to replenish Contributions**

Whenever the whole or any part of the Basic Contribution and/or Dynamic Contribution of a Relevant Clearing Participant is applied in accordance with Rules 2507 and 2507A, HKSCC shall require the Relevant Clearing Participant to replenish the deficiency of its Basic Contribution and Dynamic Contribution as a result of such application. HKSCC will notify the Relevant Clearing Participant and demand for replenishment of such deficiency of Contributions in the notice of application to the Relevant Clearing Participant. The Relevant Clearing Participant shall replenish the deficiency of Contributions no later than the third Business Day after the date of the notice of application, or within such other time period as may be specified by HKSCC.

For the avoidance of doubt, HKSCC may at any time require a Relevant Clearing Participant to provide additional amounts as its Basic Contribution and/or Dynamic Contribution in respect of any pending applications thereof pursuant to Rules 2507 and 2507A. HKSCC will notify the Relevant Clearing Participant and demand for payment of such additional amounts in a notice to the Relevant Clearing Participant and such notice may be included in the notice of application to the Relevant Clearing Participant. The Relevant Clearing Participant shall provide to HKSCC such additional amounts within the time specified by HKSCC.

Any amounts required from the Relevant Clearing Participant for replenishment of its Basic Contribution and/or Dynamic Contribution and provision of additional amounts as Contributions in respect of pending applications thereof must be paid in full by the Relevant Clearing Participant in cash in Hong Kong dollars or in any other currency prescribed by HKSCC from time to time. HKSCC may require the amounts to be satisfied in full before any application is made.

### **18.6.2 Cessation of participation in CCASS**

A Relevant Clearing Participant's liability to replenish the deficiency of its Basic Contribution and/or Dynamic Contribution will not be affected by its subsequent cessation of participation in CCASS, whether voluntary or involuntary.

Upon ceasing to be a Clearing Participant, a refund to the Clearing Participant may be made by HKSCC in respect of its existing Contributions (less any pro-rata charges or provision for such charges based on claims which may be paid out of the Guarantee Fund, up to the time when the Clearing Participant ceased to be a Participant and, if applicable, after taking into account the extent of liability or remaining limit of liability to replenish and provide additional amounts under Rule 2509). Any such refund will normally be made by HKSCC six months after termination of a Clearing Participant's participation in CCASS. In the case of a Relevant Clearing Participant, HKSCC shall have the right (without prejudice to any other rights it may have) to retain, and not to

return, such Contributions or any part thereof as cover for any contingent liability of the Relevant Clearing Participant under Rules 2507, 2507A, 2508 and 2509.

### **18.6.3 Limit on Relevant Clearing Participant's liability to replenish Contributions**

There shall be no limit on the liability of a Relevant Clearing Participant to replenish its Contributions and to provide additional amounts as its Contributions in respect of pending applications under Rule 2508 unless Rule 2509 applies.

Where Rule 2509(i) applies, the aggregate liability of the Relevant Clearing Participant to replenish the deficiency of its Contributions and to provide additional amounts as its Contributions in respect of pending applications pursuant to Rule 2508 shall be limited to an amount which equals to the Relevant Clearing Participant's required Basic Contribution and Dynamic Contribution on the Business Day HKSCC actually receives the notice of termination by the Relevant Clearing Participant, plus two times such amount, as prescribed in Rule 2509(i). For example, assume that (i) HKSCC gives a notice of application to a Relevant Clearing Participant on a particular Business Day requiring the Relevant Clearing Participant to replenish the deficiency of its Contributions in the sum of HK\$10,000,000, (ii) HKSCC actually receives a notice of termination from the Relevant Clearing Participant the following Business Day, (iii) the Relevant Clearing Participant's required Basic Contribution and Dynamic Contribution on the Business Day HKSCC actually receives the notice of termination by the Relevant Clearing Participant is HK\$2,000,000, (iv) no notice of application is outstanding and no other notice of application has been given to the Relevant Clearing Participant by HKSCC and (v) the Relevant Clearing Participant is not in default.. In this case, the maximum liability of the terminating Relevant Clearing Participant to replenish the deficiency of its Contributions would be HK\$6,000,000 (i.e. the Relevant Clearing Participant would only be obliged to pay a further sum of HK\$4,000,000 in addition to full payment of its existing required Contributions of HK\$2,000,000).

Where Rule 2509(ii) applies, the aggregate liability of the Relevant Clearing Participant to replenish the deficiency of its Contributions and to provide additional amounts as its Contributions in respect of pending applications pursuant to Rule 2508 shall be limited to an amount which equals the Relevant Clearing Participant's required Basic Contribution and Dynamic Contribution on the Business Day HKSCC received the notice of termination by the Relevant Clearing Participant, plus two times such amount, as prescribed in Rule 2509(ii). For example, assume that (i) HKSCC gives a notice of application to a Relevant Clearing Participant on a particular Business Day requiring the Relevant Clearing Participant to replenish the deficiency of its Contributions in the sum of HK\$12,000,000, (ii) HKSCC received a notice of termination from the Relevant Clearing Participant on a Business Day which was one month before the notice of application is given by HKSCC to the Relevant Clearing Participant, (iii) the Relevant Clearing Participant's required Basic Contribution and Dynamic Contribution on the Business Day HKSCC received the notice of termination by the Relevant Clearing Participant was HK\$3,000,000, (iv) no notice of application is outstanding and no other notice of application has been given to the Relevant Clearing Participant by HKSCC and (v) the Relevant Clearing Participant is not in default and its existing required Contributions remains HK\$3,000,000. In this case, the maximum liability of the

terminating Relevant Clearing Participant to replenish the deficiency of its Contributions would be HK\$9,000,000 (i.e. the Relevant Clearing Participant would only be obliged to pay a further sum of HK\$6,000,000 in addition to full payment of the required Contributions of HK\$3,000,000).

Clearing Participants should refer to Rule 2509 of the Rules for further details.

## SECTION 19

### Financial and Accounting Requirements

#### 19.1 FINANCIAL REQUIREMENTS

##### 19.1.3 Additional financial commitments of Clearing Participants in CCASS

In addition to the financial commitments referred to in Section 19.1.2, a Clearing Participant will, in summary, also have the following financial commitments as a result of its participation in CCASS:

- (i) the provision of its Basic Contribution and Dynamic Contribution to HKSCC for the account of the Guarantee Fund;
- (ii) the replenishment of its Basic Contribution and Dynamic Contribution as a result of any application of the Guarantee Fund, and the provision of additional amounts as Contributions in respect of pending applications thereof;
- (v) compliance with the risk management measures of HKSCC under the CNS System such as the provision of Marks, Margin and Collateral, as may be required by HKSCC from time to time; and

## Section 21

### Costs and Expenses

#### 21.7 OTHER MONEY SETTLEMENT FEES

- Money settlement fees for other miscellaneous amounts to be paid to or collected from Participants (eg. Marks, Margin, Basic Contributions, Dynamic Contributions, application and refund monies under Electronic Application Instructions for New Issue Shares and Tender Instructions).
- HK\$0.50 for HKD items, CNY items and USD items for each DDI/DCI/EPI issued or each CPI settled by HKSCC.

*Note:*

Fee debited on the day of

money settlement.

## 21.10 APPLICABLE INTEREST RATES

- Rate of interest chargeable on overdue money balances in HKD or CNY or USD owed to HKSCC.

*Notes:*

Interest will be debited to the Money Ledger of Participants and collected on a daily basis (except the Billing Account, to which interest will be debited and collected on a weekly basis).

HKSCC shall pay interest at HKD saving account deposit rate or where applicable, CNY or USD savings account deposit rate (or CNY or USD investment rate, if lower) of HKSCC's banker to Participants only if such payment is expressly provided for under the Rules. (other than interest on Marks, Margin and Collateral collected in cash from Participants, which will be at the rate specified below).

- Rate of interest allowed or charged on Marks, Margin or Collateral collected in cash in HKD or CNY or USD from the Participant

*Notes:*

Interest that may be allowed or charged will be accrued daily and paid or charged monthly to Participants by crediting or debiting, as the case may be, the CCMS House Collateral Accounts of the Participants, on the first Business Day of the following month.

The rate of interest may be varied from time to time by HKSCC without prior notice.

HKD or where applicable, CNY or USD best lending rate of HKSCC's banker plus 2% per annum or the relevant Interbank Offered Rate for HKD, CNY or USD plus 2% per annum, whichever is higher and is incurred by HKSCC.

To be determined by HKSCC from time to time in accordance with HKD or CNY or USD prevailing bank savings rates

**Request For Maintenance Of Day-End Standing Instruction on Redelivery of Surplus Cash**

To : Cash Clearing Risk Management Department  
 Hong Kong Securities Clearing Company Limited  
 8/F Infinitus Plaza  
 199 Des Voeux Road Central, Hong Kong

Date : \_\_\_\_\_ (DD/MM/YY)

**1. Particulars of Participant**

Participant ID : \_\_\_\_\_ Participant Full name: \_\_\_\_\_

Contact Person : \_\_\_\_\_

Contact Telephone Number : \_\_\_\_\_

Fax Number : \_\_\_\_\_

**2. Day-End Standing Instruction on Redelivery of Surplus Cash**

2.1 Nature of Request

Add                       Change                       Delete

2.2 Latest Instruction Details (For “Add” and “Change” only)

Applicable CCMS Collateral Account : House Collateral Account #0001

Minimum Free Balance : HKD \_\_\_\_\_ RMB \_\_\_\_\_  
 USD \_\_\_\_\_ Others (please specify) \_\_\_\_\_

Effective Date\* : \_\_\_\_\_ (DD/MM/YY)

\* HKSCC has the right to override the Effective Date by specifying a revised Effective Date, if applicable, in section 3 below.

\_\_\_\_\_  
 Authorised Signature of CCASS Participant  
 (with company chop)

**3. For Use By HKSCC**

Accept (revised Effective Date, if applicable : \_\_\_\_\_ (DD/MM/YY) )

Reject

Remarks : \_\_\_\_\_  
 Checked by : \_\_\_\_\_  
 Approved by : \_\_\_\_\_