



Circular

18 September 2018

Circular No. DC/CCM 24 of 2018

Refinements to the SGX-DC Clearing Fund Structure and Requirements on Clearing Members

SGX-DC is effecting revisions to the SGX-DC Clearing Fund structure to enhance its robustness as well as simplify its structure. The revisions to the SGX-DC Clearing Fund structure and the amendments to the SGX-DC Clearing Rules will come into effect on **8 October 2018**. The revised SGX-DC Clearing Rules are attached at Appendix A.

Details of Implementation

The changes from the present Clearing Fund requirements are outlined as follows:

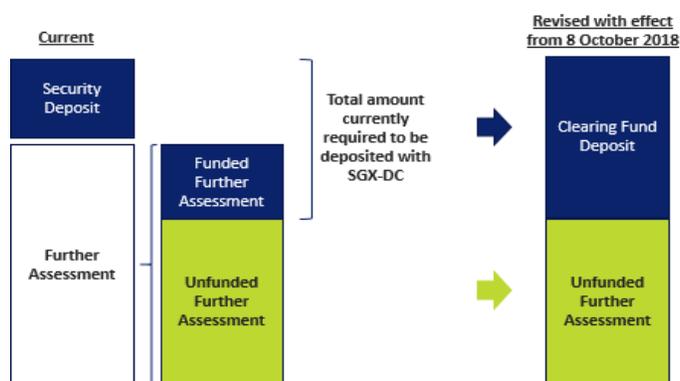
(A) Combine exchange-traded derivatives and over-the-counter (OTC) commodities into a single Contract Class

1. SGX-DC operates a single Clearing Fund structure, which covers losses in any Contract Class arising from the default of its Clearing Members after exhausting the collateral of the defaulted Clearing Member. The Clearing Fund resources are segregated by Contract Classes so as to limit risk contagion among Clearing Members who clear in different Contract Classes. For Clearing Members' contributions, the funds of those Clearing Members who participate in the same Contract Class as the defaulted Clearing Member are used before that of Clearing Members who do not participate in that Contract Class. Refer to Appendix B for the SGX-DC Clearing Fund structure.
2. With the revision, the existing three Contract Classes will be streamlined into two Contract Classes (*Clearing Rule 7A.01A.5*), namely:-
 - (a) Contracts that are listed for trading on the Exchange or Relevant Market, and Non-Relevant Market Contracts (collectively referred to as "ETD_OTCC" Contracts in this circular), and
 - (b) OTC Financial Derivatives ("OTCF") Contracts.

(B) Refinement to the Methodology for determining Clearing Member's contributions to the SGX-DC Clearing Fund

3. To simplify Clearing Member's Clearing Fund contribution requirements, the Security Deposit requirement and the prefunded Further Assessment requirement will be replaced with a single Clearing Fund Deposit requirement (*Clearing Rules 7A.06.1.2 and 7A.06.3.2*). See Figure 1 below.

Figure 1: Revision of Clearing Member's Clearing Fund Requirement



4. SGX retains the right to call for the Further Assessment, as contingent liability, in the event of a Clearing Member default. The Further Assessment Amount may be an amount up to one time of the Clearing Member's Clearing Fund Deposit (*Clearing Rule 7A.06.3.1*).
5. The quantum of the Clearing Member's Clearing Fund Deposit will be computed based on a risk-based apportionment of the total SGX-DC Clearing Fund requirement, which is derived from the maximum stress test losses of the Clearing Member with the largest exposure, including its affiliates, and the two financially weakest Clearing Members. SGX-DC continues to contribute 25% of the total SGX-DC Clearing Fund requirement.
6. The Clearing Fund contribution required of a Clearing Member in each of the two Contract Classes is determined by allocating the Clearing Fund requirement for each Contract Class in proportion to the risk that the Clearing Member active in that Contract Class brings to the clearing system (*Clearing Rule 7A.06.2.1*). SGX-DC will take into account the Clearing Member's margin requirements over the preceding 3 months to determine the proportion of allocation. Please refer to Appendix C for more details.
7. For administrative ease, SGX will determine the quantum of each Clearing Member's Clearing Fund Deposit on a monthly basis. The revised quantum of the Clearing Member's Clearing Fund Deposit will take effect on every third Wednesday of each month. A call will be issued to direct debit Clearing Member's account to top up any shortfall in its Clearing Fund Deposit. Clearing Member will be allowed to withdraw any excess, as per current practice.
8. To enable Clearing Members to anticipate their Clearing Fund Deposit prior to the monthly effective date, SGX-DC will provide Clearing Members through a new daily "Indicative Clearing Fund Deposit Report" of their indicative Clearing Fund Deposit amount. The new report will be accessible from the Clearing Member's SFG folder on T+1 morning for their T Clear Date requirement, with effect from 8 October 2018.
9. Notwithstanding the above, SGX-DC retains the right to call an individual Clearing Member for additional margin requirement, when stress test losses exceed certain thresholds¹. In addition, SGX-DC may effect the Clearing Fund Deposit before the third Wednesday of each month, where necessary.
10. Separately, prior to the implementation date, SGX-DC will provide each Clearing Member's compliance team with an indicative Clearing Fund Deposit amount through email.

¹ Refer to Practice Note 7.23

(C) Revision to the Security Deposit and Funded Further Assessment Report (SDFFA Report).

11. The "SDFFA Report" will be renamed to "Clearing Fund Assessment Report". Clearing Members will be able to access the Clearing Fund Assessment Report from their SFG folder on T+1 morning for their T Clear Date requirement.
12. As per current practice, Clearing Members are required to top up an Deficit amount indicated in the report through CMS deposit request before 10 a.m. the next business day.

If you have any questions, please contact Ms Elaine Tang (Tel: 6236 8142) of Risk Management.

Christer Rydberg
Senior Vice President
Risk Management

Note: Proposed amendments are made in ~~red strikethroughs~~ and underline.

Proposed amendments to the SGX-DC Clearing Rules

PROPOSED RULE AMENDMENTS
Chapter 2 Clearing Membership
2.13 Duties and Responsibilities of Clearing Members
2.13.1 A Clearing Member shall, subject to the Rules, also have the following responsibilities and duties:— ... 2.13.1.5 To provide and maintain such Security Deposit <u>Clearing Fund Deposit</u> as specified in Rule 7A.06.2 in addition to any security deposit requirement that may be required of it as a Clearing Member of the Clearing House;
2.28 Voluntary Suspension and Resignation
2.28.2A In respect of all defaults declared by the Clearing House, which occurrence takes place at or after such time that the Clearing House receives a Clearing Member's notice of resignation and before its effective date of resignation (such period being hereafter referred to as the "Notice Period"), the following shall apply: 2.28.2A.1 the Clearing House shall apply the resigning Clearing Member's Security Deposit <u>Clearing Fund Deposit</u> and Further Assessment Amount in accordance with Rule 7A.01A.2 , except that the aggregate amount applied in respect of all such defaults shall be subject always to a limit of no more than two (2) times of the resigning Clearing Member's Security Deposit <u>Clearing Fund Deposit</u> requirement and Further Assessment Amount as at the time the Clearing House receives its notice of resignation. 2.28.2A.2 [This rule has been deleted] This Rule 2.28.2A shall apply provided always that the Clearing Member complies with Rule 2.28.2B .

2.28.2C

If a resigning Clearing Member breaches [Rule 2.28.2B](#) at any time during the Notice Period, [Rule 2.28.2A.1](#) shall not apply to such Clearing Member in their entirety and instead the following shall apply:

...

2.28.2C.2 If, due to the operation of [Rule 2.28.2A.1](#), any amount of such Clearing Member's:

- a. ~~Security Deposit~~ [Clearing Fund Deposit](#) requirement; or
- b. Further Assessment Amount; or
- c. both,

has not been used and applied by the Clearing House in accordance with [Rule 7A.01A.2](#), the Clearing House shall have the authority to call for and apply such amount as if the assessment had been utilised in the first instance in accordance with [Rule 7A.01A.2](#).

Chapter 4 Enforcement of Rules

4.12 Major Offences

4.12.1

It shall be a major offence for a Clearing Member charged to:—

...

4.12.1.6 fail to maintain minimum financial requirements or fail to maintain the required ~~Security Deposit~~ [Clearing Fund Deposit](#);

Chapter 7 Clearing and Margins

7A.01A Events of Default

7A.01A.2 Clearing Fund Loss Allocation Mechanism

Subject to [Rule 7A.06.6.4](#) (Use of the Clearing Fund in Respect of Events of Default Occurring Within a Multiple Default Period) and [Rule 7A.01B](#) (Clearing Fund Loss Allocation Mechanism for Default in OTCF Contracts), and provided that the defaulted Clearing Member's Collateral deposited with or provided to SGX-DC has been fully applied in accordance with [Rule 7A.05.01](#), any loss suffered by the Clearing House arising from or in connection with an event of default shall be met and made good promptly by the use and application of funds from the following sources (collectively known as the "Clearing Fund") in the order of priority hereafter listed, with each source of funds to be completely exhausted, subject to the limitations contained therein, before the next source is applied:—

- a. Clearing House First Loss Contribution. The losses in each Contract Class in which the default has occurred will be met with that part of the Clearing House First Loss Contribution that is apportioned to that Contract Class. If the Clearing House First Loss Contribution apportioned to a particular Contract Class is not exhausted, the unexhausted funds will be used and applied to meet any losses that may remain in the other Contract Class(es), after the Clearing House First Loss Contribution apportioned to ~~those the~~ other Contract Class(es) have been applied and exhausted.
- b. ~~Security Deposits~~ Clearing Fund Deposits of those Clearing Members, excluding any Clearing Member who is insolvent or deemed to be insolvent, which have been active in any of the Contract Classes in which the default has occurred. A Clearing Member is active in a Contract Class if it has:
 - i. cleared Contracts belonging to that Contract Class during the Relevant Period; or
 - ii. had an open commitment in Contracts belonging to that Contract Class during the Relevant Period.

A Clearing Member's ~~Security Deposit~~ Clearing Fund Deposit will be used under this Rule 7A.01A.2.b in respect of a Contract Class only if the Clearing Member has been active in that Contract Class. Further, only that part of each such Clearing Member's ~~Security Deposit~~ Clearing Fund Deposit that has been apportioned to the Contract Class will be used in respect of the Contract Class.

Save as provided in Rule 7A.01B (Clearing Fund Loss Allocation Mechanism for Default in OTCF Contracts), a Clearing Member's liability for the loss remaining in a Contract Class will be on a pro-rata basis, calculated as the proportion of its ~~Security Deposit~~ Clearing Fund Deposit requirement for that Contract Class, relative to the aggregate ~~Security Deposit~~ Clearing Fund Deposit requirement for that same Contract Class of all Clearing Members that are active in that Contract Class.

In the event that ~~Security Deposits~~ Clearing Fund Deposits apportioned to a Contract Class are not exhausted pursuant to this Rule 7A.01A.2.b, the unexhausted funds will be used under Rule 7A.01A.2.d to meet any losses that may remain in any other Contract Class(es) in which the event of default occurred.

- c. Further Assessment Amounts of those Clearing Members, excluding any Clearing Member who is insolvent or deemed to be insolvent, which have been active (in the manner described in Rule 7A.01A.2.b) in any of the Contract Classes in which the default has occurred.

A Clearing Member's Further Assessment Amount will be used under this Rule 7A.01A.2.c in respect of a Contract Class only if the Clearing Member has been active in that Contract Class. Further, only that part of each such Clearing Member's Further Assessment Amount that has been apportioned to the Contract Class will be used in respect of the Contract Class.

Save as provided in Rule 7A.01B (Clearing Fund Loss Allocation Mechanism for Default in OTCF Contracts), a Clearing Member's liability for the loss remaining in a Contract Class will be on a pro-rata basis, calculated as the proportion of its Further Assessment Amount requirement for that Contract

Class, relative to the aggregate Further Assessment Amount requirement for that same Contract Class of all Clearing Members that are active in that Contract Class.

In the event that Further Assessment Amounts apportioned to a Contract Class are not exhausted pursuant to this Rule 7A.01A.2.c, the unexhausted funds will be used under Rule 7A.01A.2.e to meet any losses that may remain in any other Contract Class(es) in which the event of default occurred.

c1. Clearing House Intermediate Contribution. The losses in each Contract Class in which the default has occurred will be met with that part of the Clearing House Intermediate Contribution that is apportioned to that Contract Class. If the funds apportioned to a particular Contract Class are not exhausted, the unexhausted funds will be used and applied to meet any losses that may remain in the other Contract Class(es), after the funds apportioned to ~~these the~~ other Contract Class(es) have been applied and exhausted.

d. ~~Security Deposits~~ Clearing Fund Deposits of those Clearing Members, excluding any Clearing Member who is insolvent or deemed to be insolvent, which are not available for use, or which have not been exhausted, pursuant to Rule 7A.01A.2.b.

A Clearing Member's liability for the loss remaining in a Contract Class will be on a pro-rata basis, calculated as the proportion of its ~~Security Deposit~~ Clearing Fund Deposit requirement relative to the aggregate ~~Security Deposit~~ Clearing Fund Deposit requirement of all Clearing Members that have ~~Security Deposits~~ Clearing Fund Deposits available for use under this Rule 7A.01A.2.d.

e. Further Assessment Amounts, of Clearing Members, excluding any Clearing Member who is insolvent or deemed to be insolvent, which are not available for use, or which have not been exhausted, pursuant to Rule 7A.01A.2.c.

A Clearing Member's liability for the loss remaining in a Contract Class will be on a pro-rata basis, calculated as the proportion of its Further Assessment Amount requirement relative to the aggregate Further Assessment Amount requirement of all Clearing Members that have Further Assessment Amounts available for use under this Rule 7A.01A.2.e.

f. Any other contributions to the Clearing Fund.

7A.01A.2A Apportionment of Clearing Fund Contributions across Contract Classes and across OTCF Auctions

- a. Where an event of default is deemed to have occurred in more than one Contract Class, the Clearing House First Loss Contribution and Clearing House Intermediate Contribution will be apportioned to each Contract Class in such proportion as the Clearing House will determine. The funds so apportioned will be used in the manner set out in Rule 7A.01A.2 (Clearing Fund Loss Allocation Mechanism) and Rule 7A.01B (Clearing Fund Loss Allocation Mechanism for Default in OTCF Contracts).
- b. Where an event of default is deemed to have occurred, the ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount of each Clearing Member will be apportioned. The ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount deposited by a Clearing Member in respect of OTCF Contracts pursuant to Rules 7A.06.2 and 7A.06.3 will be apportioned to OTCF Contracts. The rest of the ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount deposited by the Clearing Member will be apportioned to the other Contract Classes (~~not including the OTCF Contract Class~~) ~~in such proportion as the Clearing House will determine~~ in such proportion as the Clearing House will determine. The funds so apportioned will be used in the manner set out in Rule 7A.01A.2 (Clearing Fund Loss Allocation Mechanism) and Rule 7A.01B (Clearing Fund Loss Allocation Mechanism for Default in OTCF Contracts).
- c. Where an event of default is deemed to have occurred in OTCF Contracts and there is more than one auction under Rule 7A.02.1.5.b, the part of the Clearing House First Loss Contribution, Clearing House Intermediate Contribution and each Clearing Member's ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount that is apportioned to OTCF Contracts will be further apportioned to each auction. The apportionment will be in such proportion as the Clearing House will determine. The funds so apportioned will be used in the manner set out in Rule 7A.01A.2 (Clearing Fund Loss Allocation Mechanism) and Rule 7A.01B (Clearing Fund Loss Allocation Mechanism for Default in OTCF Contracts).

7A.01A.3

Where Clearing Members' ~~Security Deposits~~ Clearing Fund Deposits or Further Assessment Amounts are used and applied in accordance with Rules 7A.01A.2.b, c, d or e, the limits to one or more Clearing Members' liabilities in respect of such funds as set out in Rule 2.28.2A or Rule 7A.06.6.6 may be reached. As a consequence of the foregoing, the contributions of Clearing Members which remain liable in respect of the relevant source of funds may remain unexhausted, while outstanding losses remain following such use and application of the source of funds. In such instances, the following shall apply:

- a. the remaining contributions of Clearing Members in respect of the relevant source of funds shall be applied to meet the outstanding loss, subject to their limits set out in Rule 2.28.2A and Rule 7A.06.6.6; and
- b. the liability of each Clearing Member for such loss shall be determined as described in Rules 7A.01A.2.b, c, d or e, whichever is applicable, subject always to the operation of Rule 7A.06.6.5.

7A.01A.5

For the purpose of Rules 7A.01A.2.b, c, d, and e, an event of default shall fall within either of the following limbs:

- a. Contracts that are listed for trading on the Exchange or Relevant Market and Non-Relevant Market Contracts; or
 - b. Non-Relevant Market Contracts; or [Deleted]
 - c. OTCF Contracts
- (each limb a "Contract Class", and collectively, "Contract Classes")

except as provided in Rules 7A.01A.7 and 7A.01A.9, when an event of default is deemed to fall within (i) any combination of the Contract Classes, or (ii) all of the Contract Classes, as the case may be.

7A.01B Clearing Fund Loss Allocation Mechanism for Default in OTCF Contracts

7A.01B.3 Clearing Fund Loss Allocation Mechanism for Contributions of Members Active in OTCF Contracts

Subject to Rule 7A.01B.4, Clearing Members' Security-Deposits Clearing Fund Deposits and Further Assessment Amounts apportioned to an auction will be used, notwithstanding Rules 7A.01A.2.b and c., to meet the losses remaining after the auction in the following descending order of priority and manner, with each source of funds to be completely exhausted, subject to the limitations contained therein, before the next source is applied:—

- a. Security-Deposits Clearing Fund Deposits of Participating Clearing Members which are apportioned to the auction, where such Participating Clearing Members did not participate in the auction.

Each such Participating Clearing Member's liability for the loss remaining will be on a pro-rata basis, calculated as the proportion of its Security-Deposit Clearing Fund Deposit requirement for OTCF Contracts relative to the aggregate Security-Deposit Clearing Fund Deposit requirement for OTCF Contracts of all Participating Clearing Members that did not participate in the auction.

- b. Further Assessment Amounts of Participating Clearing Members which are apportioned to the auction, where such Participating Clearing Members did not participate in the auction.

Each such Participating Clearing Member's liability for the loss remaining will be on a pro-rata basis, calculated as the proportion of its Further Assessment Amount requirement for OTCF Contracts relative to the aggregate Further Assessment Amount requirement for OTCF Contracts of all Participating Clearing Members that did not participate in the auction.

- c. Security-Deposits Clearing Fund Deposits of Participating Clearing Members which are apportioned to the auction, where such Participating Clearing Members submitted bids in the auction and their bids were below the Reference Price.

Each such Participating Clearing Member's liability for the loss remaining will be on a pro-rata basis, calculated as the proportion of the product of:

- i. the distance between such Clearing Member's bid price and the Reference Price; and
- ii. its ~~Security-Deposit~~ Clearing Fund Deposit requirement for OTCF Contracts,

relative to the aggregate of the product of Rule 7A.01B.3.c.i and ii for all Participating Clearing Members that submitted bids in the auction below the Reference Price.

- d. Further Assessment Amounts of Participating Clearing Members which are apportioned to the auction, where such Participating Clearing Members submitted bids in the auction and their bids were below the Reference Price.

Each such Clearing Member's liability for the loss remaining will be on a pro-rata basis, calculated as the proportion of the product of:

- i. the distance between such Clearing Member's bid price and the Reference Price; and
- ii. its Further Assessment Amount requirement for OTCF Contracts,

relative to the aggregate of the product of Rule 7A.01B.3.d.i and ii for all Participating Clearing Members that submitted bids in the auction below the Reference Price.

- e. ~~Security-Deposits~~ Clearing Fund Deposits of Clearing Members which are apportioned to the auction and which are not available for use pursuant to Rule 7A.01B.3.a or c, or which have not been exhausted pursuant to Rule 7A.01B.3.c.

Each Clearing Member's liability for the loss remaining will be on a pro-rata basis, calculated as the proportion of its ~~Security-Deposit~~ Clearing Fund Deposit requirement for OTCF Contracts relative to the aggregate ~~Security-Deposit~~ Clearing Fund Deposit requirement for OTCF Contracts of all Clearing Members that have ~~Security-Deposits~~ Clearing Fund Deposits available for use under this Rule 7A.01B.3.e for the auction.

- f. Further Assessment Amounts of Clearing Members which are apportioned to the auction and which are not available for use pursuant to Rule 7A.01B.3.b or d, or which have not been exhausted pursuant to Rule 7A.01B.3.d.

Each Clearing Member's liability for the loss remaining will be on a pro-rata basis, calculated as the proportion of its Further Assessment Amount requirement for OTCF Contracts relative to the aggregate Further Assessment Amount requirement for OTCF Contracts of all Clearing Members that have Further Assessment Amounts available for use under this Rule 7A.01B.3.f for the auction.

7A.01B.4

Notwithstanding the order of priority set out in Rule 7A.01B.3, the following applies where there is more than one auction under Rule 7A.02.1.5.b for an event of default in OTCF Contracts.

If funds that are apportioned to an auction ("first auction") are not exhausted after application pursuant to Rule 7A.01B.3, the unexhausted funds will be used to meet the losses that remain in the other auction(s) ("other auction(s)") in accordance with the following principles:

- a. If a Clearing Member is liable to meet losses in the same order of priority in the first auction and the other auction(s), its unexhausted funds from the first auction will be used in the corresponding source in the other auction(s), but only after the funds in that source apportioned to the other auction(s) have been exhausted.
- b. If a Clearing Member is liable to meet losses in different orders of priority in the first auction and the other auction(s), its unexhausted ~~Security Deposit~~ Clearing Fund Deposit from the first auction will be used in the source described in Rule 7A.01B.3.e in the other auction(s) and its unexhausted Further Assessment Amount from the first auction will be used in the source described in Rule 7A.01B.3.f in the other auction(s), but only after the funds in those sources apportioned to the other auction(s) have been exhausted.

7A.05 Protection of Clearing House

7A.05.1.4 Without prejudice to the rights of the Clearing House in respect of failure by the Clearing Member to promptly discharge any of its obligations to the Clearing House, the Clearing Member shall immediately make up any deficiencies in its ~~Security Deposit~~ Clearing Fund Deposit resulting from such applications.

7A.06 Clearing Fund

7A.06.1.2 The Clearing Fund shall comprise:

- a. ~~Security Deposit~~ Clearing Fund Deposits;
- b. Further Assessment Amounts; and
- c. Aggregate Clearing House Contribution.

7A.06.2 ~~Security Deposit~~ Clearing Fund Deposit

7A.06.2.1 Upon being granted eligibility by the Clearing House to clear a relevant Contract Class, each Clearing Member wishing to clear that Contract Class shall deposit with the Clearing House as security for its obligations to the Clearing House ("~~Security Deposit~~ Clearing Fund Deposit") the following amounts:

- A. for clearing Contracts which are listed for trading on the Exchange or any Relevant Market and/or Non-Relevant Market Contracts, the higher of:

- a. S\$1,000,000 or such lower amount as prescribed by the Clearing House ~~from~~ time to time in its discretion; or
- b. ~~4.5%, or such lower amount as prescribed by the Clearing House from time to time in its discretion, of the daily average of the risk margin of such Clearing Member during the preceding three month period~~ the Clearing Member's proportionate share of the total Clearing Fund Deposits required from all Clearing Members in this Contract Class, which shall be an amount determined by the Clearing House. Each Clearing Member's proportionate share of the total Clearing Fund Deposits shall be determined based on the exposure that the Clearing Member brings to the clearing system, taking into account factors including, but not limited to, the Clearing Member's average margin requirements over the preceding three month period;

B. for clearing OTCF Contracts, the higher of:

- a. US\$5 million; or
- b. ~~6.0%, or such lower amount as prescribed by the Clearing House from time to time in its discretion, the daily average of the risk margin of such Clearing Member for such OTCF Contracts during the preceding three month period~~ the Clearing Member's proportionate share of the total Clearing Fund Deposits required from all Clearing Members in this Contract Class, which shall be an amount determined by the Clearing House. Each Clearing Member's proportionate share of the total Clearing Fund Deposits shall be determined based on the exposure that the Clearing Member brings to the clearing system, taking into account factors including, but not limited to, the Clearing Member's average margin requirements over the preceding three month period; or

C. for clearing (i) Contracts which are listed for trading on the Exchange or any Relevant Market and/or Non-Relevant Market Contracts, and (ii) OTCF Contracts, the sum of the amounts set out in Rule 7A.06.2.1.A and 7A.06.2.1.B.

7A.06.2.2 The ~~Security Deposit~~ Clearing Fund Deposit shall be in cash, government securities or any other forms of Collateral acceptable to the Clearing House from time to time.

7A.06.2.3 Government securities or any other form of Collateral acceptable to the Clearing House shall not exceed a prescribed proportion of the ~~Security Deposit~~ Clearing Fund Deposit, as the Clearing House may specify from time to time in its discretion.

7A.06.3.1 The Further Assessment Amount shall be an amount up to ~~three (3)~~ one (1) times of a Clearing Member's ~~Security Deposit~~ Clearing Fund Deposit requirement, as prescribed by the Clearing House from time to time in its discretion.

7A.06.3.2 ~~[Deleted] Each Clearing Member shall be required to deposit with the Clearing House a percentage of its Further Assessment Amount as set out below:~~

~~a.—in respect of Further Assessment Amount attributable to Contracts traded on the Exchange or any Relevant Market or Non-Relevant Market Contracts, an amount up to 50% in the form of cash or government securities; or~~

~~b.—in respect of Further Assessment Amount attributable to OTCF Contracts, an amount up to 100% in the form of cash or government securities;~~

~~or any other forms of Collateral acceptable to the Clearing House from time to time.~~

7A.06.3.3 In the use and application of the Further Assessment Amounts pursuant to Rule 7A.01A.2 in an event of default, the Clearing House shall be entitled to call for payment ~~of any balance~~ of the Further Assessment Amount, ~~which has not been deposited with the Clearing House pursuant to Rule 7A.06.3.2~~, at such time as it deems appropriate. A Clearing Member shall immediately furnish such amount to the Clearing House, prior to the close of business on the Business Day immediately following such call.

7A.06.6.5 A resigning Clearing Member whose ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount have been applied fully as specified in Rule 2.28.2A shall thereafter:

a. not be taken into account for the calculation of the aggregate ~~Security Deposit~~ Clearing Fund Deposit requirement referred to in Rules 7A.01A.2.b and d.; and

b. not be taken into account for the calculation of the aggregate Further Assessment Amount referred to in Rules 7A.01A.2.c and e.

7A.06.6.6 Nothing in this Rule 7A.06.6 shall be construed as permitting the Clearing House to apply more than the Clearing Member's ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount as at the time of the event of default, to meet losses arising from or in connection with any individual event of default.

7A.06.8 ~~Security Deposits~~ Clearing Fund Deposits to be Restored

7A.06.8.1 In the event that it shall become necessary as provided in Rule 7A.06 to apply all or part of the ~~Security Deposits~~ Clearing Fund Deposits to meet obligations to the Clearing House (other than a Clearing Member's own obligation resulting from the substitution of the Clearing House on its trades), the Clearing Member shall immediately make good any such deficiency in ~~Security Deposits~~ Clearing Fund Deposits prior to the close of business on the Business Day immediately following such application.

7A.06.8.2 In the event that the limits to the application of the Clearing Member's ~~Security Deposit~~ Clearing Fund Deposit under Rule 2.28.2A.1 have been reached, the ~~Security Deposits~~ Clearing Fund Deposits restored in accordance with Rule 7A.06.8.1 shall be applied only to meet the Clearing Member's own obligations to the Clearing House, resulting from the substitution of the Clearing House on its trades.

Chapter 9 Definitions and Interpretation

9.01 Definitions

Term	Meaning
"Collateral"	means all or any of the monies and assets deposited with, or otherwise provided to, the Clearing House by or for a Clearing Member as margin, Security Deposit <u>Clearing Fund Deposit</u> , Further Assessment Amount or any other form of credit support and/or security as may be required under this Rules or as otherwise directed by the Clearing House, but shall not include Performance Deposits or other Escrow Assets.
" Security <u>Clearing Fund</u> Deposit"	means an amount required to be deposited with the Clearing House by each Clearing Member as security for its obligations to the Clearing House in accordance with <u>Rule 7A.06.2</u> .

Practice Note 7A.01A.2A — Apportionment of Clearing Fund Contributions across Contract Classes and across OTCF auctions

1. Introduction

1.1. This Practice Note describes:

- i. the apportionment of the Clearing House First Loss Contribution and the Clearing House Intermediate Contribution pursuant to Rule 7A.01A.2A.a across Contract Classes where an event of default is deemed to have occurred in more than one Contract Class;
- ii. the apportionment of the ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount of each Clearing Member pursuant to Rule 7A.01A.2A.b across Contract Classes where an event of default is deemed to have occurred; and
- iii. the further apportionment of the part of the Clearing House First Loss Contribution, Clearing House Intermediate Contribution and ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount of each Clearing Member that is apportioned to OTCF Contracts across auctions, where an event of default is deemed to have occurred in OTCF Contracts and there is more than one auction.

1.2. In this Practice Note, contracts that are listed for trading on the Exchange or Relevant Market ~~will be referred to as "ETD Contracts"~~ and Non-relevant Market Contracts will be referred to as "ETD and NMC Contracts".

2. Apportionment of Clearing House First Loss Contribution and the Clearing House Intermediate Contribution across Contract Classes

2.1. Where there is a default in more than one Contract Class, the Clearing House intends to apportion the Clearing House First Loss Contribution and the Clearing House Intermediate Contribution ~~across Contract Classes in the following manner:~~

- ~~i. first, the Clearing House First Loss Contribution or the Clearing House Intermediate Contribution will be apportioned~~ between (a) OTCF Contracts and (b) ETD and NMC Contracts ~~collectively~~, in the proportion of Clearing Members' aggregate ~~Security Deposits~~ Clearing Fund Deposits and Further Assessment Amounts for (a) OTCF Contracts, relative to those for (b) ETD and NMC Contracts ~~collectively;~~
- ~~ii. second, the part of the Clearing House First Loss Contribution or the Clearing House Intermediate Contribution that is apportioned to ETD and NMC Contracts collectively will be further apportioned between (a) ETD Contracts and (b) NMC Contracts, based on the relative risk⁴ of the defaulted Clearing Member in respect of ETD Contracts and NMC Contracts.~~

3. Apportionment of ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount of each Clearing Member across Contract Classes

3.1. Where there is a default, the Clearing House intends to apportion the ~~Security Deposit Clearing Fund Deposit~~ and Further Assessment Amount of each Clearing Member ~~across Contract Classes in the following manner:~~

~~i. first, the Security Deposit and Further Assessment Amount deposited in respect of OTCF Contracts will be apportioned to OTCF Contracts, and the Security Deposit Clearing Fund Deposit and Further Assessment Amount deposited in respect of ETD and/or NMC Contracts collectively will be apportioned to ETD and/or NMC Contracts, collectively;~~

~~ii. second, the Security Deposit and Further Assessment Amount deposited for ETD and/or NMC Contracts collectively will be further apportioned between ETD Contracts and NMC Contracts based on the relative risk² of the defaulted Clearing Member in respect of ETD Contracts and NMC Contracts. If, however, a non-defaulting Clearing Member has not been active³ in one of the ETD and NMC Contract Classes, all of that Clearing Member's Security Deposit and Further Assessment Amount deposited for ETD Contracts and/or NMC Contracts collectively will be apportioned only to the Contract Class in which it has been active.~~

~~¹ SGX intends to use relative risk margins as a measurement of relative risk, but may use any other measurement as appropriate.~~

~~² SGX intends to use relative risk margins as a measurement of relative risk, but may use any other measurement as appropriate.~~

~~³ A Clearing Member is active in a Contract Class if it has cleared Contracts belonging to that Contract Class or had an open commitment in Contracts belonging to that Contract Class during the Relevant Period.~~

~~⁴ SGX intends to use relative risk margins as a measurement of relative risk, but may use any other measurement as appropriate.~~

4. Further apportionment of Clearing House First Loss Contribution, Clearing House Intermediate Contribution, and ~~Security Deposit Clearing Fund Deposit~~ and Further Assessment Amount of each Clearing Member that is apportioned to OTCF Contracts across auctions

4.1. Where there is a default in OTCF Contracts, a separate auction will be held for each product group of OTCF Contracts. In that event, the Clearing House intends to apportion, across auctions, the part of the Clearing House First Loss Contribution, Clearing House Intermediate Contribution and ~~Security Deposit Clearing Fund Deposit~~ and Further Assessment Amount of each Clearing Member that is apportioned to OTCF Contracts. Such apportionment will be based on the relative risk⁴ of the defaulted Clearing Member in respect of each product group.

Practice Note 7A.01B — Illustrations of the Application of Clearing Member's ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amounts in respect of OTCF Contracts

1. Introduction

1.1. This Practice Note illustrates the use of Clearing Members' ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amounts for OTCF Contracts as set out in [Rule 7A.01B.3.c](#), [Rule 7A.01B.3.d](#) and [Rule 7A.01B.4](#).

2. Allocation of loss between Participating Clearing Members which are liable for loss remaining in an auction under Rule 7A.01B.3.c and Rule 7A.01B.3.d

2.1 When an event of default has occurred in OTCF Contracts and losses remain after the auction(s) referred to in [Rule 7A.02.1.5.b](#), the ~~Security Deposit~~ Clearing Fund Deposit and Further Assessment Amount that are apportioned to OTCF Contracts, of a Clearing Member that is active in OTCF Contracts (as described in [Rule 7A.01A.2.b](#)), will be used to meet those losses.¹

2.2 [Rule 7A.01B.3](#) sets out the order of priority in which such funds of such a Clearing Member will be used to meet the losses that remain after an auction. There are three general levels in that order of priority.

- i. The first level is described in [Rule 7A.01B.3.a](#) (~~Security Deposits~~ Clearing Fund Deposits) and [Rule 7A.01B.3.b](#) (Further Assessment Amounts). All Clearing Members that are obliged to participate in the auction (i.e., Participating Clearing Members) but that did not submit a bid will fall within this first level.
- ii. The second level is described in [Rule 7A.01B.3.c](#) (~~Security Deposits~~ Clearing Fund Deposits) and [Rule 7A.01B.3.d](#) (Further Assessment Amounts). All Participating Clearing Members that bid below the Reference Price² will fall within this second level.
- iii. The third level is described in [Rule 7A.01B.3.e](#) (~~Security Deposits~~ Clearing Fund Deposits) and [Rule 7A.01B.3.f](#) (Further Assessment Amounts). All Clearing Members with ~~Security Deposits~~ Clearing Fund Deposits and Further Assessment Amounts which are apportioned to the auction and which are not available for use pursuant to [Rule 7A.01B.3.a](#), b, c and d, or which have not been exhausted pursuant to [Rule 7A.01B.3.c](#) and d, will fall within this third level.

2.3 Each Clearing Member that is liable in the second level will be liable for the loss remaining on a pro-rata basis, calculated as the proportion of the product of:

- i. the distance between that Clearing Member's bid price and the Reference Price; and
- ii. that Clearing Member's ~~Security Deposit~~ Clearing Fund Deposit/Further Assessment Amount requirement apportioned to OTCF Contracts,

relative to the aggregate of the product of i and ii for all Clearing Members that is liable in the same second level.

2.4 By way of illustration, the liability of Participating Clearing Members, A and B, for the loss remaining in an auction will be in the following proportions, assuming the following bidding behaviour:

	Distance of bid from Reference Price (A)	Security Deposits <u>Clearing Fund Deposits</u> /Further Assessment Amount requirement apportioned to OTCF Contacts (B)	A x B	Proportion
Participating Clearing Member A	S\$48 million	S\$10 million	$48 \times 10 = 480$	$480 / (480 + 240) = 2/3$
Participating Clearing Member B	S\$12 million	S\$20 million	$12 \times 20 = 240$	$240 / (480 + 240) = 1/3$

3. Use of unexhausted ~~Security Deposit~~ Clearing Fund Deposit or Further Assessment Amount in another Auction

Schedule A

Chapter 7A — Suspension and Default

Rule Chapter/Number	Rule Violation Brief Description of Rule	Whether composition may be offered	Composition Amount which may be Offered by the Clearing House, where the Clearing House has Determined the Clearing Member to be Liable			Mandatory minimum penalty imposable by the DC
			1st Violation	2nd Violation	3rd Violation	
Chapter 2 — Clearing Membership						
2.13.1.5	Clearing Member to provide and maintain Security Deposit Clearing Fund Deposit in addition to any security deposit requirement that may be required	Compoundable	\$2,000 – \$4,000	\$4,000 – \$7,000	\$7,000 – \$10,000	N.A.
Chapter 4 — Enforcement of Rules						
4.12.1.6	Clearing Member to maintain minimum financial requirements and the required Security Deposit Clearing Fund Deposit	Not Compoundable	Not Compoundable			\$10,000
Chapter 7A — Suspension and Default						
7A.05.1.4	Clearing Member to make up deficiencies in Security Deposit Clearing Fund Deposit resulting from applications by Clearing House on default by Clearing Member	Not Compoundable	Not Compoundable			\$10,000
7A.05.1.5	Clearing Member not to take any action to interfere with ability of Clearing House to apply the Security Deposit Clearing Fund Deposit	Not Compoundable	Not Compoundable			\$30,000

Appendix A

<p>7A.06.2.1</p>	<p>Clearing Member to place required Security Deposit <u>Clearing Fund Deposit</u> with the Clearing House</p>	<p>Not Compoundable</p>	<p>Not Compoundable</p>	<p>\$10,000</p>	
<p>7A.06.3.2</p>	<p>Clearing Member to deposit Further Assessment Amount with the Clearing House</p>	<p>Not Compoundable</p>	<p>Not Compoundable</p>	<p>\$10,000</p>	
<p>7A.06.3.3</p>	<p>Clearing Member to immediately furnish Further Assessment Amount not deposited with the Clearing House, prior to the close of business on the Business Day immediately following the call</p>	<p>Not Compoundable</p>	<p>Not Compoundable</p>	<p>\$10,000</p>	
<p>7A.06.8.1</p>	<p>Clearing Member to make good any deficiency in Security Deposits <u>Clearing Fund Deposits</u> prior to close of business on Business Day immediately following such application</p>	<p>Not Compoundable</p>	<p>Not Compoundable</p>	<p>\$10,000</p>	

Appendix B

SGX-DC Clearing Fund Structure²
SGX's contribution in the first layer <i>An amount equivalent to 15% of the total clearing fund size</i>
Non-defaulting clearing member's clearing fund deposits³ (same contract class)
Non-defaulting clearing member's further assessment (same contract class)
SGX's contribution in the intermediate layer <i>An amount equivalent to 10% of the total clearing fund size</i>
Non-defaulting clearing member's clearing fund deposits (different contract class)
Non-defaulting clearing member's further assessment (different contract class)

² With effect from 8 October 2018.

³ Previously known as security deposits.

Appendix C

Determination of Clearing Member's Clearing Fund Deposit

The quantum of the Clearing Member's Clearing Fund Deposit will be computed by a risk-based apportionment of the total SGX-DC Clearing Fund requirement, taking into account the following consideration, summarised in Figure 2 below.

- (1) The total SGX-DC Clearing Fund requirement is determined to cover the maximum stress test losses of the Member with the largest exposure, including its affiliates, and the two financially weakest Members, over a look-back period of 3 months.
- (2) The review of the Clearing Member's Clearing Fund Deposit will be performed on a monthly basis ("review period").
- (3) SGX-DC continues to contribute 25% of the total SGX-DC Clearing Fund requirement.
- (4) The month-on-month reduction to the SGX-DC Clearing Fund will be limited to 10%, to reduce variability in the total SGX-DC Clearing Fund resources as an anti-procyclical measure.
- (5) The Clearing Fund Deposit requirement of each individual Clearing Member in each Contract Class will be allocated based on margin requirements. The allocation will be determined based on both intraday and end-of-day margin requirements to appropriately apportion requirements to Clearing Members that bring in significant intraday exposures.
- (6) Notwithstanding the above, SGX-DC retains the power to call an individual Clearing Member for additional margin requirement, when stress test losses exceed certain thresholds⁴. In addition, SGX-DC may effect the Clearing Fund Deposit before the third Wednesday of each month, where necessary.

⁴ Refer to Practice Note 7.23