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## **NOTICE ON RISK BASED CAPITAL ADEQUACY REQUIREMENTS FOR HOLDERS OF CAPITAL MARKETS SERVICES LICENCES**

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## **PART I: INTRODUCTION**

1.1.1 This Notice is issued pursuant to regulations 2B, 5A and 6 of the Securities and Futures (Financial and Margin Requirements for Holders of Capital Markets Services Licences) Regulations and applies to all holders of a capital markets services licence, other than a holder of a capital markets services licence for only providing credit rating services.

[SFA 04-N13 (Amendment) 2014]

1.1.2 This Notice establishes the methodology which a holder of a capital markets services licence other than a holder of a capital markets services licence for only providing credit rating services shall use for calculating its financial resources or adjusted net head office funds, whichever is applicable, and its total risk requirement. While this Notice provides a range of approaches for calculating the total risk requirement, a holder of a capital markets services licence other than a holder of a capital markets services licence for only providing credit rating services should adopt the approaches that are commensurate with the complexity and sophistication of its businesses and operations.

1.1.3 This Notice shall take effect on 3 April 2013.

## **PART II: DEFINITIONS**

2.1.1 The expressions used in this Notice are defined in the Glossary at Annex 2A.

2.1.2 The expressions used in this Notice shall, except where defined in this Notice or where the context otherwise requires, have the same meanings as in section 2 of the Securities and Futures Act (Cap. 289) (the “Act”) and regulation 2 of the Securities and Futures (Financial and Margin Requirements for Holders of Capital Markets Services Licences) Regulations (the “Regulations”). In case of conflict between the Act and the Regulations, the Regulations shall prevail unless otherwise provided in the Regulations.

2.1.3 Any reference to a paragraph, Sub-division, Division, Part or Annex is a reference to a paragraph, Sub-division, Division, Part or Annex in this Notice unless otherwise specified.

## GLOSSARY

acceptable collateral	means any collateral specified in paragraph 1 of Annex 5G which meets the requirements set out in that Annex;
Accounting Standards	has the same meaning as in section 4(1) of the Companies Act (Cap. 50);
associate	has the same meaning as “associate” under the Accounting Standards;
Authority	means the Monetary Authority of Singapore;
banking institution	means – (a) any bank licensed under the Banking Act (Cap. 19); or (b) any entity which is approved, licensed, registered or otherwise regulated by a banking regulatory authority in a foreign jurisdiction to carry on banking business as defined in the Banking Act (Cap 19);
banking regulatory authority	in relation to a foreign jurisdiction, means an authority in the foreign jurisdiction exercising any function that corresponds to a regulatory function of the Authority under the Banking Act (Cap. 19);
business day	means any calendar day other than a Saturday, Sunday or a public holiday;

capital investments	in relation to a CMSL, means all exposures of a capital nature, including – (a) any ordinary share; (b) any preference share; (c) any instrument treated as regulatory capital in relation to any financial institution approved, licensed, registered or otherwise regulated by a regulatory authority; (d) any lending on non-commercial terms or which is not at arm’s length; and (e) any guarantee issued to third parties for the benefit of subsidiaries or associates on non-commercial terms or which is not at arm’s length;
CCF	means credit conversion factor as set out in Annex 5E;
<del>CFD</del>	<del>means a contract for differences;</del>

contract for differences or CFD	has the same meaning as in regulation 24A of the Regulations;
charged asset	means an asset which is subject to a charge under which a third party has a right of retention or sale of the asset upon default of the CMSL;
CMSL	means any holder of a capital markets services licence, other than a holder of a capital markets services licence for only providing credit rating services;
commodity	in relation to a derivatives contract, means – (a) a financial instrument; or (b) a physical commodity;
counterparty	in relation to a CMSL, (a) means any person who has a financial obligation to the CMSL (including a financial obligation to be performed at a specified future time), and includes any customer of the CMSL; and (b) for the purposes of Part VIII, includes – (i) where the counterparty is an individual, any other individual whom the first-mentioned individual is able to control or influence; (ii) where the counterparty is a corporation, any other corporation or group of corporations which is or are deemed to be related to the first-mentioned corporation pursuant to section 6 of the Companies Act (Cap. 50); or (iii) a corporation 50% or more of the issued share capital of which is owned by any of the individuals mentioned in sub-paragraph (i), or the composition of the board of directors of which is controlled by those individuals; and for this purpose the composition of the board of directors of the corporation shall be deemed to be controlled by those individuals if they, by the exercise of some power exercisable by them without the consent or concurrence of any other person, can appoint or remove all or a majority of the directors of that corporation;
counterparty risk weight	in relation to a counterparty, means the percentage that applies to the relevant counterparty in accordance with Annex 5B;

counterparty risk requirement	means a counterparty risk requirement calculated in accordance with Part V;
credit derivatives contract	means any contract which transfers the credit risk of a reference obligation or set of reference obligations from the protection buyer to the protection seller, such that the protection seller has an exposure to the reference obligation(s);
credit equivalent amount	in relation to an over-the-counter derivatives contract or an exchange-traded derivatives contract which is dependent on the issuer for performance, means – (a) if the current market value of the contract is positive, the sum of the current market value of the contract and the potential credit exposure of the contract; or (b) if the current market value of the contract is negative, the potential credit exposure;
derivatives contract	<del>has the same meaning as defined in section 2 of the Act includes any warrant, convertible security, forward contract, futures contract, swap, CFD and option;</del>
equity security	includes any stock, share, depository receipt, unit in a real estate investment trust, and unit in a business trust;
excluded issuer exposure	in relation to Part VIII, means any exposure to – (a) Singapore Government securities; (b) Securities issued by a PSE in Singapore; (c) a futures contract, forward contract or other derivatives contract, the value of which is based on the value of Singapore Government securities or securities issued by a PSE in Singapore; (d) a futures contract or forward contract on an interest rate that does not give rise to an exposure to an issuer; (e) a forward rate agreement; (f) an interest rate swap; (g) a currency swap; (h) an interest rate leg of an equity swap; and (i) such other exposure as the Authority may specify by notice in writing to the relevant CMSL concerned;
financial institution	means an entity or a limited liability partnership the principal activity of which is to carry on business in one or more of the



following activities<sup>1</sup>:

- (a) banking business;
- (b) insurance business;
- (c) dealing in capital markets products; ~~or trading in securities, exchange traded derivative contracts or over the counter derivative contracts, whether as an agent or on a proprietary basis;~~
- ~~(d) foreign exchange trading and leveraged foreign exchange trading, whether as an agent or on a proprietary basis;~~
- (d) advising on corporate finance;
- ~~(e) advising on corporate finance;~~
- (e) fund management;
- ~~(f) fund management;~~
- (f) real estate investment trust management;
- ~~(g) real estate investment trust management;~~
- (g) product financing;
- ~~(h) securities financing;~~
- (h) providing custodial services;
- ~~(i) providing custodial services;~~
- (i) operating an exchange, trading system or market;
- ~~(j) operating an exchange, trading system or market;~~
- (j) providing central counterparty services;
- ~~(k) providing central counterparty services;~~
- (k) operating a payment system, securities depository, securities settlement system or trade repository;
- ~~(l) operating a payment system, securities depository, securities settlement system or trade repository;~~
- (l) providing financial advisory services;
- ~~(m) providing financial advisory services;~~
- (m) insurance broking;
- ~~(n) insurance broking;~~
- (n) trust business;
- ~~(o) trust business;~~
- (o) money broking;
- ~~(p) money broking;~~
- (p) money-changing business;
- ~~(q) money-changing business;~~
- (q) remittance business;

<sup>1</sup> This includes a financial holding company which is a non-operating company holding a subsidiary that is a banking institution or a subsidiary that carries on insurance business as an insurer. For avoidance of doubt, this includes any entity that is approved, licensed, registered or otherwise regulated by the Authority, or any foreign entity that carries out activities which, if carried out in Singapore, would have to be approved, licensed, registered or otherwise regulated by the Authority.

	<p><del>(r) remittance business;</del>  (r) lending;  <del>(s) lending;</del>  (s) factoring;  <del>(t) factoring;</del>  (t) leasing;  <del>(u) leasing;</del>  (u) provision of credit enhancements; or  <del>(v) provision of credit enhancements; or</del>  (v) securitisation;  <del>(w) securitisation;</del></p>
financial instrument	includes any currency, currency index, interest rate instrument, interest rate index, share, share index, stock, stock index, debenture, bond index, a group or groups of such instruments, any right or interest in such instruments, and any derivatives contract;
forward contract	means a contract the effect of which is that one party to the contract agrees to deliver a specified commodity, or a specified quantity of a specified commodity, to another party to the contract at a specified future time and at a specified price payable at that time, and includes an option on a forward contract but does not include a futures contract;
free financial resources	means the financial resources or adjusted net head office funds, whichever is applicable, of the CMSL less the total risk requirement of the CMSL;
government debt security	means a debt security issued or proposed to be issued by any government of any country or territory;
guideline	means a guideline or other document issued by the Authority under section 321(1) of the Act;
investment grade	means – <ul style="list-style-type: none"> <li>(a) an external credit assessment set out in Table 5A-3 of Annex 5A issued by the corresponding recognised ECAI in that Table<sup>2</sup>;</li> <li>or</li> <li>(b) such external credit assessment issued by such credit rating agency as may be specified in a guideline issued by the</li> </ul>

<sup>2</sup> Where an exposure has more than one external credit assessment and these map into different credit quality grades, paragraph 2 of Annex 5A shall apply.

	Authority from time to time;
limited-activity CMSL	<p>means a CMSL which is licensed to carry out the regulated activity of dealing in <del>capital markets products securities or trading in futures contracts</del>, and, in carrying on business in dealing in <del>capital markets products securities or trading in futures contracts</del>, <del>as the case may be</del>, such CMSL –</p> <p>(a) does not carry any customer’s position, margin or account in its own books;</p> <p>(b) does not hold any customer’s moneys or assets<sup>3</sup>, and does not accept moneys or assets from any customer as settlement of, or as margin for, or to guarantee or secure, any contract for the purchase or sale of securities or futures contract by that customer; and</p> <p>(c) is not a member of an approved exchange or approved clearing house.</p> <p>[SFA 04-N13 (Amendment) 2014]</p>
maintenance margin	<p>means the amount of maintenance margin in respect of transactions in marginable products as specified by –</p> <p>(a) an approved exchange;</p> <p>(b) an approved clearing house;</p> <p>(c) an overseas exchange; or</p> <p>(d) a clearing facility appointed by the entity referred to in subparagraph (a) or (c), as the case may be;</p> <p>[SFA 04-N13 (Amendment) 2014]</p>
margin account	for the purposes of Part V, in relation to a customer, means an account of the customer through which the CMSL extends or has extended <del>product securities</del> financing to the customer;
margin deficiency	in relation to a counterparty’s account that is subject to a margin call, means the amount required to bring the ledger balance of the counterparty’s account, which shall be zero in the case of a counterparty’s account with a negative equity, to meet the relevant maintenance margin for open contracts in the counterparty’s account;
market index of a	means a broad-based index of shares listed on the recognised

<sup>3</sup> For the avoidance of doubt, a CMSL that receives moneys or assets of customers from its customers or other persons, and then forwards or delivers the moneys or assets to other persons or to its customers, would not be a limited-activity CMSL.

recognised exchange	exchange;
merchant bank	means a merchant bank approved as a financial institution under the Monetary Authority of Singapore Act (Cap. 186);
maturity mismatch	means a situation where the residual maturity of the credit risk mitigant is less than the residual maturity of the underlying credit exposure;
multilateral agency	means a multilateral development bank, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, <del>or the European Community-Union, the European Stability Mechanism or the European Financial Stability Facility;</del>
negative equity	in relation to a counterparty's account that is subject to a margin call, means the amount required to restore the ledger balance of the counterparty's account (which includes adjustments to the account arising from unrealised gains or losses on open contracts, and margins deposited by the counterparty) to zero, but does not include the amount required to meet the relevant maintenance margin for open contracts in the counterparty's account;
over-the-counter derivatives contract	means a derivatives contract which is <del>not an exchange-traded derivatives contract not traded on an approved exchange or an overseas exchange;</del>
<del>overseas exchange</del>	<del>means a person operating a market outside Singapore which is regulated by a financial services regulatory authority of a country or territory other than Singapore</del>
physical commodity	means gold or any produce, goods, article or item other than cash, including any freight or energy products and any index, right or interest in such physical commodity;
potential credit exposure	in relation to the credit equivalent amount of an over-the-counter derivatives contract or for an exchange-traded derivatives contract which is dependent on the issuer for performance, means the

	product of – (a) the nominal or notional principal underlying the contract <sup>4</sup> ; and (b) the relevant credit exposure factor set out in Annex 5D;
precious metals	means gold, silver, or platinum;
PSE or public sector entity	means – (a) a regional government or local authority that is able to exercise one of more functions of the central government at the regional or local level; (b) an administrative body or non-commercial undertaking responsible to, or owned by, a central government, regional government or local authority, which performs regulatory or non-commercial functions; (c) a statutory board in Singapore (other than the Authority); or (d) a town council in Singapore established pursuant to the Town Councils Act (Cap. 392A);
qualifying equity index	means an equity index set out in Annex 6C;
real estate investment trust	means a collective investment scheme – (a) that is a trust; (b) that invests primarily in real estate and real estate-related assets specified by the Authority in the Code on Collective Investment Schemes; and (c) all or any units of which are listed for quotation on <del>an approved exchange-a securities exchange</del> ;
recognised ECAI	means an external credit assessment institution that is specified in Annex 5A;
recognised exchange	means an overseas exchange regulated by a financial services regulatory authority of a country or territory specified under Group A in Table 4 of the Fourth Schedule to the Regulations;
reference obligation	means any obligation specified under a credit derivatives contract used for purposes of either determining cash settlement value or the deliverable obligation;

<sup>4</sup> In the event that the stated notional amount is leveraged or enhanced by the structure of the transaction, the CMSL should use the effective notional amount when determining the potential credit exposure.

residual maturity	<p>in relation to a debt security in Part VI, means, unless otherwise stated, –</p> <p>(a) the period remaining till the maturity of the security; or</p> <p>(b) in the case of a debt security with a floating rate coupon, the period remaining till the determination of the next coupon;</p>
Singapore Government securities	<p>Means securities issued or proposed to be issued by the Singapore Government, and includes –</p> <p>(a) any debenture, stock or bond issued or proposed to be issued by the Singapore Government;</p> <p>(b) any right or option in respect of any debenture, stock or bond referred to in sub-paragraph (a);</p> <p>(c) book-entry Singapore Government securities as defined in section 2 of the Development Loan (1987) Act (Cap. 81A) or section 2 of the Government Securities Act (Cap. 121A); and</p> <p>(d) book-entry Treasury Bills as defined in section 2 of the Local Treasury Bills Act (Cap. 167);</p>
specified deposit	<p>means –</p> <p>(a) a current account deposit, savings account deposit or fixed deposit, including accrued interest, with –</p> <p>(i) a bank licensed under the Banking Act (Cap. 19);</p> <p>(ii) a merchant bank;</p> <p>(iii) a finance company licensed under the Finance Companies Act (Cap. 108); or</p> <p>(iv) a bank outside Singapore which is approved, licensed, registered or otherwise regulated by a banking regulatory authority in a foreign jurisdiction to carry on banking business as defined in the Banking Act (Cap 19), and that has an external credit assessment of investment grade; or</p> <p>(b) a deposit with any of the following:</p> <p>(i) an approved exchange;</p> <p>(ii) a recognised exchange;</p> <p>(iii) an approved clearing house;</p> <p>(iv) a clearing facility appointed by a recognised exchange;</p> <p>(v) an entity which is a member of any entity referred to in sub-paragraphs (b)(i) to (b)(iv); or</p> <p>(vi) such other entity as the Authority may specify by notice in writing to the relevant CMSL concerned;</p> <p>[SFA 04-N13 (Amendment) 2014]</p>
total risk	has the meaning as set out in Part III;

requirement	

## PART III: RISK BASED CAPITAL ADEQUACY REQUIREMENTS

### Division 1: General Requirements

- 3.1.1 Under regulations 6 and 7 of the Regulations, a CMSL shall –
- (a) not cause or permit its financial resources or adjusted net head office funds, whichever is applicable, to fall below its total risk requirement; and
  - (b) immediately notify the Authority if its financial resources or adjusted net head office funds, whichever is applicable, fall below 120% of its total risk requirement.
- 3.1.2 A CMSL shall provide a calculation of its financial resources or adjusted net head office funds, whichever is applicable, and its total risk requirement, as at any given date, to the Authority upon request and within such time as may be specified by the Authority.
- 3.1.3 A CMSL other than a CMSL that is referred to in paragraph 3.2.1, shall calculate its financial resources or adjusted net head office funds, whichever is applicable, and total risk requirement for each business day no later than the end of the following business day.

### Division 2: Financial Resources/Adjusted Net Head Office Funds

- 3.2.1 Financial resources or adjusted net head office funds, whichever is applicable, in relation to a CMSL licensed only to carry out the regulated activities of –
- (a) fund management;
  - (b) real estate investment trust management;
  - (c) advising on corporate finance;
  - (d) providing custodial services ~~for securities~~;
  - (e) dealing in ~~capital markets products~~ ~~securities~~, where the CMSL is a limited-activity CMSL;
  - ~~(f) trading in futures contracts, where the CMSL is a limited-activity CMSL; or~~
  - (f) a combination of the regulated activities set out in (a) to (e),



~~(g) a combination of the regulated activities set out in (a) to (f),~~

shall be less the sum of the items in paragraph 3.2.2 in the latest accounts of the CMSL.

3.2.2 For the purpose of paragraph 3.2.1, the items are –

- (a) intangible assets;
- (b) future income tax benefits;
- (c) pre-paid expenses;
- (d) charged assets, except to the extent that –
  - (i) the CMSL has not drawn down on the credit facility if the charge is created to secure a credit facility;
  - (ii) a liability is incurred by the CMSL in respect of the charged asset for use in the CMSL's conduct of regulated activities; or
  - (iii) the asset is provided as a collateral for a transaction for which the CMSL is required to calculate a counterparty risk requirement,as permitted by the Authority;
- (e) unsecured amounts due from directors of the CMSL and their connected persons;
- (f) unsecured amounts owed by a related corporation, other than –
  - (i) an amount arising from any specified deposit or transaction in a regulated activity for which the CMSL has calculated a counterparty risk requirement; or
  - (ii) a receivable which is due for settlement within 3 months;
- (g) unsecured loans and advances made by the CMSL, unless a deduction has already been made pursuant to sub-paragraphs (e) or (f) above; and
- (h) capital investments in every subsidiary or associate of the CMSL.

3.2.3 Financial resources or adjusted net head office funds, whichever is applicable, in relation to any CMSL other than those referred to in paragraph 3.2.1, shall be less the sum of the following items in the latest accounts of the CMSL:

- (a) intangible assets;
- (b) future income tax benefits;
- (c) pre-paid expenses;
- (d) charged assets, except to the extent that –
  - (i) the CMSL has not drawn down on the credit facility if the charge is created to secure a credit facility;
  - (ii) a liability is incurred by the CMSL in respect of the charged asset for use in the CMSL's conduct of regulated activities; or
  - (iii) the asset is provided as a collateral for a transaction for which the CMSL is required to calculate a counterparty risk requirement,as permitted by the Authority;
- (e) unsecured amounts due from directors of the CMSL and their connected persons;
- (f) unsecured amounts owed by a related corporation, other than an amount arising from any specified deposit or transaction in a regulated activity for which the CMSL has calculated a counterparty risk requirement;
- (g) unsecured loans and advances made by the CMSL, unless a deduction has already been made pursuant to sub-paragraphs (e) or (f) above;
- (h) capital investments in every subsidiary or associate of the CMSL;
- (i) non-current assets, unless a deduction has already been made pursuant to sub-paragraphs (a) to (h) above; and
- (j) assets which cannot be converted to cash within 30 days, unless a deduction has already been made pursuant to sub-paragraphs (a) to (i) above.

3.2.4 A CMSL shall include its redeemable preference share capital in its financial resources only if the redeemable preference share has a redemption period of not less than 2 years when the redeemable preference share is issued and paid up, subject to such conditions or restrictions as the Authority may specify by notice in writing to the relevant CMSL concerned, or such further restrictions that an approved exchange or approved clearing house of which the CMSL is a member may impose.

[SFA 04-N13 (Amendment) 2014]

### Division 3: TOTAL RISK REQUIREMENT

3.3.1 Subject to paragraphs 3.3.2 to 3.3.3, total risk requirement –

(a) in relation to a CMSL licensed only to carry out the regulated activities of:

- (i) fund management;
- (ii) real estate investment trust management;
- (iii) advising on corporate finance;
- (iv) providing custodial services ~~for securities~~;
- (v) dealing in ~~capital markets products – securities~~, where the CMSL is a limited-activity CMSL; ~~or~~
- ~~(vi) trading in futures contracts, where the CMSL is a limited activity CMSL; or~~
- ~~(vii) a combination of the regulated activities set out in (i) to (vi);~~
- (vi) a combination of the regulated activities set out in (i) to (v),

which meets the conditions set out in paragraph 3.3.3, shall be the sum of the –

- (A) operational risk requirement calculated in accordance with Part IV; and
- (B) any other risk requirement as the Authority may by notice in writing impose on the relevant CMSL concerned;

(b) in relation to any other CMSL, shall be the sum of the –

- (i) operational risk requirement calculated in accordance with Part IV;
- (ii) counterparty risk requirement calculated in accordance with Part V;
- (iii) position risk requirement calculated in accordance with Part VI;
- (iv) underwriting risk requirement calculated in accordance with Part VII;
- (v) large exposure risk requirement calculated in accordance with Part VIII; and
- (vi) any other risk requirement as the Authority may by notice in writing impose on the relevant CMSL concerned.

3.3.2 If a CMSL that calculates its total risk requirement in accordance with paragraph 3.3.1(a) does not meet the conditions set out in paragraph 3.3.3, the CMSL shall, within 30 calendar days from the end of the quarter that it does not meet the conditions set out in paragraph 3.3.3, calculate its total risk requirement in accordance with paragraph 3.3.1(b).

3.3.3 A CMSL licensed only to carry out the regulated activities of:

- (a) fund management;
- (b) real estate investment trust management;
- (c) advising on corporate finance;
- (d) providing custodial services ~~for securities~~;
- (e) dealing in ~~capital markets products securities~~, where the CMSL is a limited-activity CMSL; ~~or~~
- ~~(f) trading in futures contracts, where the CMSL is a limited activity CMSL; or~~
- ~~(g) a combination of the regulated activities set out in sub-paragraphs (a) to (f),~~
- (f) a combination of the regulated activities set out in sub-paragraphs (a) to (e),

shall calculate its total risk requirement in accordance with paragraph 3.3.1(a) only if its average adjusted assets, calculated at the end of each quarter and in accordance with paragraph 3.3.5, do not exceed the lower of –

- (i) \$10 million; or
- (ii) 5 times of its financial resources or adjusted net head office funds, whichever is applicable.

[SFA 04-N13 (Amendment) 2014]

3.3.4 A CMSL licensed only to carry out the regulated activities of:

- (a) fund management;
- (b) real estate investment trust management;
- (c) advising on corporate finance;
- (d) providing custodial services ~~for securities~~;
- (e) dealing in ~~capital markets products~~ ~~securities~~, where the CMSL is a limited-activity CMSL; or
- ~~(f) trading in futures contracts, where the CMSL is a limited activity CMSL; or~~
- ~~(g) a combination of the regulated activities set out in sub-paragraphs (a) to (f);~~
- (f) a combination of the regulated activities set out in sub-paragraphs (a) to (e),

that calculates its total risk requirement in accordance with paragraph 3.3.1(b), may apply in writing to the Authority for approval to calculate its total risk requirement in accordance with paragraph 3.3.1(a) only if its average adjusted assets, calculated in accordance with paragraph 3.3.5, do not exceed the lower of –

- (i) \$10 million; or
- (ii) 5 times of its financial resources or adjusted net head office funds, whichever is applicable,

[SFA 04-N13 (Amendment) 2014]

for the 4 immediately preceding quarters, or such other period that the Authority may specify by notice in writing to the relevant CMSL concerned.

3.3.5 Subject to paragraph 3.3.6, a CMSL shall calculate its average adjusted assets as follows:

$$\textit{Average Adjusted Assets} = \frac{\sum_{months_{1-3}} AM_i}{3}$$

where –

“AM<sub>i</sub>” is the asset measure as defined in paragraph 3.3.7, as at the end of each month in a given quarter.

3.3.6 A CMSL referred to in paragraph 3.3.1(a) shall calculate its average adjusted assets from the day that the CMSL is required to comply with this Notice or any earlier date that the CMSL has elected to comply with this Notice, till the last day of the quarter in which the CMSL is required or has elected to comply with this Notice, as follows:

$$\textit{Average Adjusted Assets} = \frac{AM_1 + AM_2 + AM_3}{3}$$

where –

“AM<sub>1</sub>” is the asset measure as defined in paragraph 3.3.7, as at the end of the first month of the immediately preceding quarter;

“AM<sub>2</sub>” is the asset measure as defined in paragraph 3.3.7, as at the end of the second month of the immediately preceding quarter;

“AM<sub>3</sub>” is the asset measure as defined in paragraph 3.3.7, as at the end of the third month of the immediately preceding quarter.

3.3.7 A CMSL shall calculate the asset measure as the sum of the following items –

- (a) on-balance sheet assets in its accounts<sup>5</sup>; and
- (b) off-balance sheet amounts including the following:
  - (i) all potential credit exposures arising from over-the-counter derivatives contracts; and
  - (ii) all counterparty exposures arising from off-balance sheet commitments calculated in accordance with paragraph 5.2.43,

less –

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<sup>5</sup> For the avoidance of doubt, on-balance sheet assets include, for derivatives contracts, the on-balance sheet value calculated in accordance with Accounting Standards.

- (A) cash and cash equivalents<sup>6</sup>;
- (B) deposits with any bank licensed under the Banking Act (Cap. 19) or any merchant bank, of credit quality grade 1 as set out in Annex 5B;
- (C) any item that is deducted in the computation of financial resources or adjusted net head office funds, whichever is applicable, under paragraph 3.2.2;

[SFA 04-N13 (Amendment) 2014]

- (D) receivables owed by a related corporation which is due for settlement within 3 months and not past due;
- (E) fee receivables owed by a collective investment scheme or a closed-end fund which is managed by the CMSL and due for settlement within 3 months and not past due; and
- (F) fee receivables owed by a customer account managed by the CMSL, for which the CMSL has authority and control over the settlement of the fee receivables under its investment mandate, and due for settlement within 3 months and not past due.

3.3.8 Where any asset measure value referred to in paragraph 3.3.5 or 3.3.6 is not available, the CMSL shall consult with the Authority on the appropriate values to be used for the purpose of calculating its average adjusted assets.

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<sup>6</sup> Cash equivalents refer to cheques, drafts and other items drawn on banking institutions or merchant banks that are either payable immediately upon presentation or that are in the process of collection. For the avoidance of doubt, “cash and cash equivalents” excludes deposits placed with banking institutions or deposit-taking institutions.

## PART IV: OPERATIONAL RISK REQUIREMENT

### Overview

4.1.1 A CMSL shall calculate its operational risk requirement in accordance with paragraphs 4.1.2 to 4.1.5, unless otherwise specified by the Authority by notice in writing to the relevant CMSL concerned.

### Calculation of the operational risk requirement

4.1.2 A CMSL that is referred to in paragraph 3.2.1 but not being a CMSL to which paragraph 4.1.2A also applies, shall calculate its operational risk requirement as the higher of –

- (a) the sum of –
  - (i) 5% of its average annual gross income up to \$10 million of average annual gross income, calculated in accordance with paragraph 4.1.4, for the 3 immediately preceding financial years; and
  - (ii) 2% of its average annual gross income above \$10 million of average annual gross income, calculated in accordance with paragraph 4.1.4, for the 3 immediately preceding financial years; and
- (b) \$100,000.

[SFA 04-N13 (Amendment) 2016]

4.1.2A A CMSL that is referred to in paragraph 3.2.1 ~~(e) and is a limited activity CMSL that deals in securities or trades in futures contracts and deals~~ only with accredited investors or institutional investors and ~~that~~ does not enter into any transaction with any customer to deal in ~~capital markets products securities or trade in futures contracts~~ as principal, shall calculate its operational risk requirement as the higher of –

- (a) the sum of –
  - (i) 5% of its average annual gross income up to \$10 million of average annual gross income, calculated in accordance with paragraph 4.1.4, for the 3 immediately preceding financial years; and
  - (ii) 2% of its average annual gross income above \$10 million of average annual gross income, calculated in accordance with paragraph 4.1.4, for the 3 immediately preceding financial years; and
- (b) \$50,000.

[SFA 04-N13 (Amendment) 2016]



4.1.3 A CMSL other than a CMSL that is referred to in paragraph 3.2.1 shall calculate its operational risk requirement as the higher of –

- (a) 5% of its average annual gross income, calculated in accordance with paragraph 4.1.4, for the 3 immediately preceding financial years; and
- (b) \$100,000.

4.1.4 For the purposes of paragraphs 4.1.2, 4.1.2A and 4.1.3, “annual gross income” for a financial year of a CMSL means the total revenue as stated in the statement relating to the accounts of the CMSL referred to in regulation 27(9)(a) of the Regulations lodged by the CMSL for the financial year less the sum of fee expenses, commissions expenses, and interest expenses reported as expenses in that statement, and is deemed to be zero if it is a negative amount.

[SFA 04-N13 (Amendment) 2016]

4.1.5 For the purposes of paragraph 4.1.4, the total revenue of the CMSL shall be adjusted by excluding the following:

- (a) any realised profits or losses arising from the sale of **specified products securities** in that financial year that are classified as “held to maturity” or “available for sale”;
- (b) any income or expense item not derived from the ordinary activities of the CMSL in that financial year and not expected to recur frequently or regularly<sup>7</sup>; and
- (c) any income derived from any insurance recoveries in that financial year.

4.1.6 Where any statement referred to in paragraph 4.1.4 is not available, the CMSL shall consult with the Authority on the appropriate values to be used for the purpose of calculating its operational risk requirement.

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<sup>7</sup> Such items may include income or expenses arising from – (a) the sale of the CMSL’s fixed assets; (b) expropriation of assets; or (c) earthquakes or other natural disasters.

## PART V: COUNTERPARTY RISK REQUIREMENT

### Division 1: Overview of Counterparty Risk Requirement

#### Overview

5.1.1 Subject to paragraphs 5.1.2 to 5.1.11, a CMSL shall calculate its counterparty risk requirement as the sum of the individual counterparty risk requirements calculated for each counterparty exposure in accordance with Division 2 of this Part, unless otherwise specified by the Authority by notice in writing to the relevant CMSL concerned.

#### Counterparty risk weights and credit quality grade

5.1.2 Where an individual counterparty risk requirement calculated in accordance with Division 2 of this Part is calculated using a counterparty risk weight, a CMSL shall assign the counterparty exposure to a credit quality grade and the corresponding counterparty risk weight in accordance with Annexes 5A and 5B<sup>8</sup>, unless otherwise specified in Division 2 of this Part.

#### Assets deducted in the computation of financial resources or adjusted net head office funds

5.1.3 A CMSL is not required to calculate a counterparty exposure for any asset that has been deducted in the computation of financial resources or adjusted net head office funds, whichever is applicable, under Division 2 of Part III.

[SFA 04-N13 (Amendment) 2014]

#### Reduction in counterparty exposure

5.1.4 A CMSL may reduce any counterparty exposure –

- (a) by the amount of any individual impairment allowance that the CMSL has made in its accounts for that counterparty exposure;
- (b) by netting the CMSL's claims on and liabilities to a single counterparty only if the requirements set out in Annex 5F are complied with;
- (c) by the amount of any acceptable collateral in accordance with paragraph 5.1.7; or
- (d) as permitted under paragraph 5.2.10.

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<sup>8</sup> The Authority may from time to time specify, by notice in writing to the relevant CMSL concerned, a higher risk weight for a particular exposure or group of exposures, taking into account, among other things, the appropriateness of the external credit assessments for the specific exposure or group of exposures.

5.1.5 For the purposes of paragraphs 5.2.1 to 5.2.6, a CMSL shall not offset a positive counterparty exposure against any negative counterparty exposure, whether arising from an open contract or a contract that remains unsettled on or after the due date, to the same counterparty.

5.1.6 For the purposes of paragraph 5.1.4(b), single counterparty refers to –

- (a) where the counterparty is a corporation, that corporation only; or
- (b) where the counterparty is an individual, that individual only.

Acceptable collateral

5.1.7 A CMSL may reduce its counterparty exposure by the amount of any acceptable collateral held by the CMSL and valued in accordance with paragraph 5.1.8, only if the requirements set out in Annex 5G are complied with.

5.1.8 Except for paragraph 5.2.27, an acceptable collateral –

- (a) shall have a value that is reduced by applying the appropriate haircuts set out in Annex 5H to the fair value of the collateral; and
- (b) subject to paragraph 5.1.9, where the counterparty exposure and acceptable collateral are denominated in different currencies, shall have a value that is further reduced by applying a haircut of 8%.

5.1.9 A CMSL may not apply the haircut of 8% specified under paragraph 5.1.8(b) if the aggregate currency mismatch exposure for all its customers is not greater than 2% of its free financial resources.

Counterparty exposure for which no counterparty risk requirement has been prescribed

5.1.10 A CMSL shall immediately notify the Authority, and the approved exchange or approved clearing house of which the CMSL is a member (if applicable), if no method is prescribed for determining the counterparty exposure or counterparty risk requirement on a counterparty exposure, and shall calculate the counterparty risk requirement as directed by the Authority by notice in writing to the relevant CMSL concerned.

[SFA 04-N13 (Amendment) 2014]

Negative counterparty risk requirement

5.1.11 A CMSL shall not include any individual counterparty risk requirement that is a negative amount in the calculation of its counterparty risk requirement.

## Division 2: Methods for Calculating Counterparty Risk Requirement

### Delivery-versus-payment transactions

5.2.1 Subject to paragraph 5.2.2, a CMSL shall calculate an individual counterparty risk requirement on any counterparty exposure arising from a delivery-versus-payment transaction in accordance with paragraphs 5.2.3 to 5.2.6.

5.2.2 Where a contract that is settled on a delivery-versus-payment basis has been offset by a contra contract on or before the due date of settlement of the contract, or has been offset by a forced sale or buying-in transaction after the due date of the contract, a CMSL shall calculate a counterparty risk requirement in accordance with paragraphs 5.2.7 to 5.2.11.

### Contracts unsettled at end of or after due date

5.2.3 A CMSL shall calculate a counterparty exposure on any purchase or sale contract transacted by a counterparty in relation to any financial instrument or physical commodity, which is settled on a delivery-versus-payment basis and which remains unsettled at the end of or after the due date –

- (a) in the case of a purchase contract which remains fully or partially unpaid, as the excess of the amount owed by the counterparty over the current market value of the financial instrument or physical commodity purchased; or
- (b) in the case of a sale contract where the financial instrument or physical commodity is yet to be delivered by the counterparty to the CMSL, as the excess of the current market value of the financial instrument or physical commodity sold over the contract value of the sale contract.

5.2.4 A CMSL shall calculate an individual counterparty risk requirement on any positive counterparty exposure calculated in accordance with paragraph 5.2.3 as 100% of the counterparty exposure.

### Open contracts traded on an exchange other than an approved exchange or a recognised exchange

5.2.5 A CMSL shall calculate a counterparty exposure on any open purchase contract or open sale contract transacted by a counterparty in relation to a financial instrument or physical commodity traded on an exchange other than an approved exchange or a recognised exchange, and which is settled on a delivery-versus-payment basis –

- (a) in the case of a purchase contract which is fully or partially unpaid, as the excess of the amount owed by the counterparty over the current market value of the financial instrument or physical commodity purchased; or

- (b) in the case of a sale contract where the financial instrument or physical commodity is yet to be delivered by the counterparty to the CMSL, as the excess of the current market value of the financial instrument or physical commodity sold over the contract value of the sale contract.

5.2.6 A CMSL shall calculate an individual counterparty risk requirement on any positive counterparty exposure calculated in accordance with paragraph 5.2.5 as 8% of the counterparty exposure.

Contract which is offset by contra contract or forced-sale or buying-in transaction

5.2.7 Where a contract referred to in paragraph 5.2.3 or 5.2.5 has been offset by a contra transaction on or before the due date of the contract, or has been offset by a forced-sale or buying-in transaction after the due date of the contract, a CMSL shall calculate a counterparty risk requirement in accordance with paragraphs 5.2.8 to 5.2.11.

5.2.8 Subject to paragraph 5.2.10, a CMSL shall calculate a counterparty exposure to a counterparty from the day the contra transaction takes effect and as the full amount of contra loss incurred by the counterparty arising from the contra transaction.

5.2.9 Subject to paragraph 5.2.10, a CMSL shall calculate a counterparty exposure to a counterparty whose purchase or sale contract remains unsettled after the due date, from the day that a forced sale or buying-in transaction, respectively, is effected against the contract and as the full amount of loss incurred by the counterparty arising from the forced sale or buying-in transaction.

5.2.10 A CMSL may reduce any counterparty exposure calculated in accordance with paragraph 5.2.8 or 5.2.9 by the amount of moneys of the representative of the counterparty which is retained by the CMSL specifically for the purpose of securing contra losses or losses arising from forced sale or buying-in transactions of clients of the representative, provided the CMSL has a contractual agreement with the representative which is evidenced in writing, is legally binding on the parties, is irrevocable and is enforceable against the representative, and which provides the CMSL with an unconditional right to effect such an offset.

5.2.11 A CMSL shall calculate an individual counterparty risk requirement on any positive counterparty exposure calculated in accordance with paragraph 5.2.8 or 5.2.9 as 100% of the counterparty exposure.

Free deliveries

5.2.12 A CMSL shall calculate a counterparty exposure to a counterparty from the date it makes a free delivery, except where the free delivery is made to an approved clearing house or a clearing facility appointed by a recognised exchange –

[SFA 04-N13 (Amendment) 2014]

- (a) as the full contract value of the financial instruments or physical commodities, where the CMSL has sold the financial instruments or physical commodities to the counterparty under a sale contract and the delivery has been made under the contract but the CMSL has not received payment for the financial instruments or physical commodities sold; or
- (b) as the current market value of the financial instruments or physical commodities, where the CMSL has purchased the financial instruments or physical commodities from the counterparty under a purchase contract and has made payment to the counterparty under the contract but has not received the financial instruments or physical commodities.

5.2.13 A CMSL shall calculate an individual counterparty risk requirement on a counterparty exposure calculated in accordance with paragraph 5.2.12 as 100% of the counterparty exposure.

Product Securities financing

5.2.14 Subject to paragraph 5.2.17, a CMSL shall calculate a counterparty exposure to a customer to whom it has extended **product securities** financing by deducting the amount of adjusted equity in the customer's margin account from the debit balance in the customer's margin account.

5.2.15 For the purpose of paragraph 5.2.14 –

- (a) “debit balance”, in relation to a customer’s margin account, means the amount owing by the customer in the margin account and includes –
  - (i) amounts to be financed by the CMSL in respect of outstanding purchases made in the margin account of the customer, net of –
    - (A) cash collateral;
    - (B) cash dividends declared and payable into the margin account of the customer; and
    - (C) sales proceeds receivable from open sale contracts made in the margin account of the customer; and
  - (ii) all commission charges, interest expenses and other related expenses;
- (b) “adjusted equity”, in relation to a customer’s margin account, means the aggregate value of acceptable collateral (as determined in accordance with

paragraphs 5.1.8 and 5.1.9) bought and carried, or deposited as collateral, by a customer in the margin account.

5.2.16 A CMSL shall calculate an individual counterparty risk requirement on a counterparty exposure calculated in accordance with paragraph 5.2.14 as 100% of the counterparty exposure.

5.2.17 Where a CMSL causes or permits the absolute value of the net position of the same type of security issued by an issuer, bought and carried, or deposited as collateral, in the margin accounts of all customers to whom it has extended securities financing to exceed the specified value, the value of each of such type of security deposited in the margin account of every customer shall be multiplied by a scaling factor for the purpose of computing counterparty exposure to the customer.

5.2.18 For the purposes of paragraph 5.2.17 –

(a) “specified value” –

- (i) in relation to equity securities issued by the same issuer, means 10% of the CMSL’s financial resources or adjusted net head office funds, whichever is applicable, or 5% of the issue size (being the market capitalisation of the issue); and
- (ii) in relation to debt securities, means 10% of the CMSL’s financial resources or adjusted net head office funds, whichever is applicable, in all series of debt securities issued by the same issuer, or 10% of the issue size of an individual series of debt securities issued by an issuer; and

(b) the scaling factor shall be derived from the following formula:

$$\text{Scaling Factor} = \frac{X}{T} \times [1 - 2 (\text{Haircut})] + \frac{U}{T} \times (1 - \text{Haircut})$$

where

- X is the amount of security in excess of the thresholds set out in paragraph 5.2.17;
- U is the amount of security within the thresholds set out in paragraph 5.2.17;
- T is the total amount of security (being the sum of X and U); and
- Haircut is the percentage by which the value of the security is adjusted

to have a value determined in accordance with paragraphs 5.1.8 and 5.1.9, as appropriate.

Repurchase, reverse repurchase, or ~~specified products securities~~ borrowing and lending agreements and similar agreements

5.2.19 Subject to paragraph 5.2.20, a CMSL shall calculate a counterparty exposure from the trade date –

- (a) in the case of a repurchase or ~~specified products securities~~ lending agreement or similar agreement with any counterparty other than an approved clearing house, as the excess of the current market value of the ~~specified products securities~~ sold or lent over the value of acceptable collateral received under the agreement determined in accordance with paragraphs 5.1.8 and 5.1.9, if this excess is a positive amount; or
- (b) in the case of a reverse purchase or ~~specified products securities~~ borrowing agreement or similar agreement with any counterparty other than an approved clearing house, as the excess of amount paid or 100% of the current market value of acceptable collateral given over the value of the ~~specified products securities~~ bought or borrowed under the agreement determined in accordance with paragraphs 5.1.8 and 5.1.9, if this excess is a positive amount,

[SFA 04-N13 (Amendment) 2014]

and for the purpose of this paragraph, the current market value or value of acceptable collateral and ~~specified products securities~~ includes accrued interest.

5.2.20 Where a CMSL has entered into more than one repurchase agreement, reverse repurchase agreement, ~~specified products securities~~ borrowing agreement, ~~specified products securities~~ lending agreement or a similar agreement with the same counterparty, and these agreements are subject to a netting agreement that satisfies the conditions specified in Annex 5F, the CMSL may calculate an individual counterparty exposure arising from these agreements on a portfolio basis, as the excess of –

- (a) the aggregate current market value of all ~~specified products securities~~ sold or lent and acceptable collateral given; minus
- (b) the aggregate of the value of all ~~specified products securities~~ bought or borrowed and the value of acceptable collateral received determined in accordance with paragraphs 5.1.8 and 5.1.9,

if the excess is a positive amount.



5.2.21 A CMSL shall calculate an individual counterparty risk requirement on any counterparty exposure calculated in accordance with paragraphs 5.2.19 or 5.2.20 –

- (a) in the case of any repurchase agreement, reverse repurchase agreement, **specified products securities** borrowing agreement, **specified products securities** lending agreement or a similar agreement that is due to be completed within 30 days and where the counterparty exposure is not greater than 10% of the current market value of acceptable collateral given or received, as 8% of the counterparty exposure; or
- (b) in the case of any other repurchase agreement, reverse repurchase agreement, **specified products securities** borrowing agreement, **specified products securities** lending agreement or a similar agreement, including any repurchase agreement, reverse repurchase agreement, **specified products securities** borrowing agreement, **specified products securities** lending agreement or a similar agreement that is not closed out after the due day, or which does not have a completion date, or which has a rollover option that if exercised would extend the completion period to greater than 30 days, as 100% of the counterparty exposure.

Transactions in marginable products traded on an exchange or novated to a clearing facility

5.2.22 In the case where the CMSL enters into, either on behalf of or with a counterparty –

- (a) any derivatives contract that is traded on an approved exchange or overseas exchange, and which is subject to margining requirements; or
- (b) any over-the-counter derivatives contract that is novated (however described) to a clearing facility or to any other facility for the clearing and settlement of over-the-counter derivatives contracts, and which is subject to margining requirements,

the CMSL shall calculate a counterparty exposure to the counterparty in accordance with paragraphs 5.2.23 to 5.2.25.

5.2.23 Subject to paragraph 5.2.25, where a counterparty's account –

- (a) does not have an outstanding margin call; or
- (b) has either –

- (i) a margin call outstanding not more than 3 business days from the day the margin call is made, if the margin call is to be satisfied by remittance denominated in Japanese Yen; or
- (ii) a margin call outstanding not more than 2 business days from the day the margin call is made, if the margin call is to be satisfied by remittance denominated in currencies other than Japanese Yen,

the CMSL shall calculate a counterparty exposure to the counterparty as 3% of the maintenance margins in respect of open contracts in the counterparty's account.

5.2.24 Subject to paragraph 5.2.25, where a counterparty's account –

- (a) has a margin call outstanding at the end of or after 3 business days from the day the margin call is made, where the margin call is to be satisfied by remittance denominated in Japanese Yen; or
- (b) has a margin call outstanding at the end of or after 2 business days from the day the margin call is made, where the margin call is to be satisfied by remittance denominated in a currency other than Japanese Yen,

the CMSL shall calculate a counterparty exposure to the counterparty as the sum of –

- (i) 6% of the maintenance margins in respect of open contracts in the counterparty's account; and
- (ii) 100% of the margin deficiency in the counterparty's account.

5.2.25 In the case where a counterparty's account that has a margin call outstanding has a negative equity, the CMSL shall, in addition to the counterparty exposure calculated in accordance with paragraph 5.2.23 or 5.2.24, calculate a counterparty exposure to the counterparty from the day the negative equity occurs, as 100% of the amount of negative equity.

5.2.26 The CMSL shall calculate an individual counterparty risk requirement as 100% of the counterparty exposures calculated in accordance with paragraphs 5.2.23 to 5.2.25.

5.2.27 In this paragraph, the values attributable to the assets deposited by a counterparty to satisfy maintenance margin requirements of an approved exchange, an overseas exchange, an approved clearing house, or a clearing facility appointed by an approved exchange or an overseas exchange, as the case may be, shall be determined in accordance with the relevant business rules of the approved exchange, the overseas

exchange, the approved clearing house, or the clearing facility appointed by the approved exchange or the overseas exchange, as the case may be.

[SFA 04-N13 (Amendment) 2014]

Over-the-counter derivatives contracts: option sold to or purchased on behalf of counterparty

5.2.28 When a CMSL sells or writes an option to a counterparty or buys an option on behalf of a counterparty and the counterparty has not paid the option premium on the due date of payment of the premium, the CMSL shall calculate a counterparty exposure from the due date of payment as 100% of the amount of unpaid premium.

5.2.29 A CMSL shall calculate an individual counterparty risk requirement as 100% of the counterparty exposure calculated in accordance with paragraph 5.2.28.

Over-the-counter derivatives contracts

5.2.30 A CMSL shall calculate a counterparty exposure from the trade date as 100% of the credit equivalent amount of the contract for any over-the-counter derivatives contract for which no specific treatment has been specified in this Notice or for any exchange-traded derivatives contract which is dependent on the issuer for performance.

5.2.31 A CMSL shall calculate an individual counterparty risk requirement on the counterparty exposure calculated in accordance with paragraph 5.2.30 as the product of 8% of the counterparty exposure and appropriate counterparty risk weight set out in Annex 5B<sup>9</sup>.

5.2.32 A CMSL shall calculate a counterparty exposure to a counterparty where a counterparty has not paid, whether in full or partially, an amount due to the CMSL on the closing out, or as periodic settlement, or in final settlement, of an over-the-counter derivatives contract, from the date the amount is due and as 100% of the unpaid amount due from the counterparty.

5.2.33 A CMSL shall calculate an individual counterparty risk requirement on the counterparty exposure calculated in accordance with paragraph 5.2.32 as 100% of the counterparty exposure.

Deposits with exchange, clearing house or clearing facility or member of an exchange, clearing house or clearing facility

5.2.34 A CMSL shall not be required to calculate a counterparty exposure for any deposit provided by the CMSL to –

- (a) an approved exchange;

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<sup>9</sup> For the avoidance of doubt, a CMSL shall calculate an individual counterparty risk requirement on past due amounts arising from any over-the-counter derivatives contract in accordance with paragraph 5.2.33.

- (b) a recognised exchange;
- (c) an approved clearing house; [SFA 04-N13 (Amendment) 2014]
- (d) a clearing facility appointed by a recognised exchange;
- (e) Korea Securities Finance Corporation; or
- (f) a corporation which is a member of any person mentioned in sub-paragraphs (a) to (d),

to meet margin requirements specified by any person referred to in sub-paragraphs (a) to (f) or any other requirement specified by any person referred to in sub-paragraphs (a) to (e), to secure or guarantee obligations of the CMSL in relation to its dealing in ~~capital markets products securities or trading in futures contracts~~.

5.2.35 A CMSL shall calculate a counterparty exposure from the day the CMSL provides any deposit to any person referred to in paragraph 5.2.34 in excess of the requirements specified by that person to secure or guarantee obligations of the CMSL in relation to its dealing in ~~capital markets products securities or trading in futures contracts~~.

5.2.36 A CMSL shall calculate an individual counterparty risk requirement on the counterparty exposure calculated in accordance with paragraph 5.2.35 as the product of 8% of the counterparty exposure and the counterparty risk weight of –

- (a) 0% to any counterparty exposure arising from CMSL’s deposits provided to any approved exchange or approved clearing house; [SFA 04-N13 (Amendment) 2014]
- (b) 10% to any counterparty exposure arising from CMSL’s deposits provided to any recognised exchange or clearing facility appointed by a recognised exchange;
- (c) 10% to any counterparty exposure arising from CMSL’s deposits provided to any other CMSL that is a member of an approved exchange or approved clearing house; and [SFA 04-N13 (Amendment) 2014]
- (d) 20% to any counterparty exposure arising from CMSL’s deposits provided to a member of a recognised exchange or clearing facility appointed by a recognised exchange.

5.2.37 A CMSL shall calculate an individual counterparty risk requirement on the counterparty exposure calculated in accordance with paragraph 5.2.35 as the product of 8%

of the counterparty exposure and the appropriate counterparty risk weight set out in Annex 5B for –

- (a) a counterparty exposure to the person referred to in sub-paragraph (e) of paragraph 5.2.34; and
- (b) a counterparty exposure to any person referred to in sub-paragraph (f) of paragraph 5.2.34, where the deposits held by that person is not held on a bankruptcy remote basis.

Interest charged on amounts owed by counterparty

5.2.38 A CMSL shall calculate a counterparty exposure for interest charged on an amount owed by a counterparty, to the extent that such interest is brought into the accounts of the CMSL as income, as 100% of the interest amount.

5.2.39 Subject to paragraph 5.2.40, a CMSL shall calculate an individual counterparty risk requirement for the counterparty exposure calculated in accordance with paragraph 5.2.38 as the product of 8% of the counterparty exposure and the appropriate counterparty risk weight set out in Annex 5B.

5.2.40 A CMSL may calculate an individual counterparty risk requirement for the counterparty exposure calculated in accordance with paragraph 5.2.38 as the product of 8% of the counterparty exposure and the counterparty risk weight set out in Annex 5B that is applicable to an unrated exposure of the same entity type as that counterparty.

Amount owed by counterparty in relation to subscription to **specified products securities**

5.2.41 A CMSL which has obtained a commitment from a counterparty to sub-underwrite, to accept placement of or subscribe to **specified products securities** shall, on the day after –

- (a) the date of placement;
- (b) close of applications to subscribe for those **specified products securities**; or
- (c) announcement of allotment of those **specified products securities**,

whichever is the latest, calculate a counterparty exposure to that counterparty, as 100% of the excess of any amount that remains unpaid by the counterparty over the current market value of the **specified products securities**.

5.2.42 A CMSL shall calculate an individual counterparty risk requirement on the counterparty exposure calculated in accordance with paragraph 5.2.41 as 100% of the counterparty exposure.

Off-balance sheet commitment

5.2.43 A CMSL shall calculate a counterparty exposure for any off-balance sheet commitment<sup>10</sup> specified in Annex 5E as the product of the notional amount<sup>11</sup> of the off-balance-sheet commitment and the relevant CCF set out in Annex 5E.

5.2.44 A CMSL shall calculate an individual counterparty risk requirement on the counterparty exposure calculated in accordance with paragraph 5.2.43 as the product of 8% of the counterparty exposure and the appropriate counterparty risk weight set out in Annex 5B.

Any other amount owed by counterparty

5.2.45 A CMSL shall calculate a counterparty exposure from the trade date in relation to any amount owed by a counterparty, except to the extent the amount is –

- (a) permitted to be excluded from the calculation of any counterparty exposure;
- (b) included in the calculation of any counterparty exposure in the preceding paragraphs; or
- (c) deducted in the computation of financial resources or adjusted net head office funds, whichever is applicable,

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as 100% of the amount owed by the counterparty.

5.2.46 A CMSL shall calculate an individual counterparty risk requirement on the counterparty exposure calculated in accordance with paragraph 5.2.45 as the product of 8% of the counterparty exposure and the appropriate counterparty risk weight set out in Annex 5B.

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<sup>10</sup> For the avoidance of doubt, for the purpose of calculating counterparty risk requirement, off-balance sheet commitment does not include operating leases.

<sup>11</sup> The notional amount of an off-balance sheet item refers to the amount which has been committed but is as yet not drawn upon by the counterparty.

**CREDIT QUALITY GRADE AND USE OF EXTERNAL CREDIT ASSESSMENTS**

1. A CMSL shall assign its counterparty exposure, where applicable, to a credit quality grade based on the external credit assessment<sup>12</sup> of a recognised ECAI that is applicable to the counterparty exposure in accordance with Tables 5A-1 and 5A-2, as the case may be, of this Annex, subject to conditions that the Authority may, by notice in writing, impose on a relevant CMSL.

2. A CMSL shall use the chosen recognised ECAIs and their external credit assessments consistently for each type of counterparty exposure, for both risk-weighting and risk management purposes. Where a CMSL has two external credit assessments which map into different credit quality grades, it shall assign the counterparty exposure to the credit quality grade associated with the higher counterparty risk weight. Where a CMSL has three or more external credit assessments which map into two or more different credit quality grades, it shall assign the counterparty exposure to the credit quality grade associated with the higher of the two lowest counterparty risk weights<sup>13</sup>. A CMSL shall not pick and choose the assessments provided by different recognised ECAIs nor arbitrarily change its choice of recognised ECAIs for each type of exposure after its initial selection.

3. A CMSL shall perform an appropriate level of due diligence prior to the use of any recognised ECAI for the purpose of calculating regulatory capital requirements. A CMSL shall have methodologies that enable it to assess the credit risk involved in exposures to individual counterparties as well as at a portfolio level. A CMSL shall assess exposures, regardless of whether they are rated or unrated, and determine whether the counterparty risk weights applied to such exposures are appropriate for their inherent risk. In those instances where it determines that the inherent risk of such an exposure, particularly if it is unrated, is significantly higher than that implied by the counterparty risk weight to which it is assigned, the CMSL shall evaluate whether it has adequate resources to meet the higher degree of credit risk.

4. A CMSL shall not recognise the effects of netting, collateralisation or other credit risk mitigants in reducing the counterparty exposure if such effects are already reflected in the issue-specific external credit assessment of the counterparty exposure.

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<sup>12</sup> The CMSL may only use an external credit assessment which is accessible to the public. A CMSL may not use credit assessment that is made available only to the parties to a transaction.

<sup>13</sup> For illustration, if there are three external credit assessments mapping into credit quality grades with risk weights of 0%, 20% and 50%, then the applicable risk weight is 20%. If there are three external credit assessments mapping into credit quality grades with risk weights of 20%, 50% and 50%, then the applicable risk weight is 50%.

5. Where a counterparty exposure has an issue-specific external credit assessment, a CMSL shall use such assessment. Where a counterparty exposure does not have an issue-specific external credit assessment<sup>14</sup> –

- (a) if there is an issue-specific external credit assessment for another exposure to the same counterparty which maps to a counterparty risk weight that is lower than that applicable to an unrated exposure, a CMSL may use the issue-specific assessment for the other exposure only if the exposure without an issue-specific assessment ranks *pari passu* with or is senior to the exposure with the issue-specific assessment in all respects;
- (b) if the counterparty has an issuer external credit assessment which maps to a counterparty risk weight that is lower than that applicable to an unrated exposure, a CMSL may use the issuer assessment of the counterparty only if the exposure is a senior claim;
- (c) if there is an issue-specific external credit assessment for another exposure to the same counterparty which maps to a counterparty risk weight that is higher than that applicable to an unrated exposure, a CMSL shall use the issue-specific assessment for the other exposure if the exposure without an issue-specific assessment ranks *pari passu* with or is subordinated to the exposure with the issue-specific assessment;
- (d) if the counterparty has an issuer external credit assessment which maps to a counterparty risk weight that is higher than that applicable to an unrated exposure, a CMSL shall use the issuer assessment of the counterparty if the exposure without an issue-specific assessment ranks *pari passu* with or is subordinated to the highest unsecured claim on the counterparty; or
- (e) in all other cases, a CMSL shall apply the counterparty risk weight that is applicable to an unrated exposure.

6. A CMSL shall not use external credit assessments for a counterparty within a group to risk-weight other counterparties within the same group.

7. Where a counterparty exposure is risk-weighted in accordance with paragraphs 5(a) to (d) above, a CMSL may use a domestic currency external credit assessment<sup>15</sup>, only if the counterparty exposure is denominated in that domestic currency.

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<sup>14</sup> A short-term issue-specific external credit assessment cannot be used to derive risk weights for other short-term claims to the same counterparty, except where set out in paragraphs 16, 17 and 20 of Annex 5B. In all cases, a short-term issue-specific external credit assessment cannot be used to support a risk weight for an unrated long-term claim.



8. A CMSL may use an external credit assessment to risk-weight a counterparty exposure only if the external credit assessment has taken into account and reflects the entire amount of credit risk exposure the CMSL has with regard to all payments owed to it.<sup>15</sup>

9. A CMSL shall not use unsolicited external credit assessments to assign any counterparty exposure to a credit quality grade, unless –

- (a) it has assessed the quality of the unsolicited external credit assessments that it intends to use and is satisfied that these are comparable in performance with solicited external credit assessments and maintains relevant records and documents to be made available to the Authority upon request; and
- (b) it uses unsolicited external credit assessments consistently for each type of exposures, for both risk-weighting and risk management purposes.

10. The Authority may exclude the use of unsolicited external credit assessments by a recognised ECAI for the purpose of calculating regulatory capital requirements if the Authority is not satisfied that the unsolicited assessments are not inferior in quality to the general quality of solicited assessments. In the event the Authority is of the view that a recognised ECAI uses unsolicited ratings to put pressure on entities to obtain solicited ratings, the Authority may refuse to recognise such ECAIs as eligible for capital adequacy purposes.

**Table 5A-1: Credit Quality Grades and Recognised ECAIs**

<b>Credit Quality Grade</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Fitch Ratings</b>	AAA AA+ AA AA-	A+ A A-	BBB+ BBB BBB-	BB+ BB BB-	B+ B B-	CCC+ CCC CCC- CC C D
<b>Moody's Investors</b>	Aaa Aa1	A1 A2	Baa1 Baa2	Ba1 Ba2	B1 B2	Caa1 Caa2

<sup>15</sup> For the avoidance of doubt, a CMSL shall use a foreign currency external credit assessment for a counterparty exposure denominated in foreign currency.

<sup>16</sup> For example, if a CMSL is owed both principal and interest, the assessment shall fully take into account and reflect the credit risk associated with repayment of both principal and interest.

<b>Credit Quality Grade</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Services</b>	Aa2 Aa3	A3	Baa3	Ba3	B3	Caa3 Ca C
<b>Standard &amp; Poor's Ratings Services</b>	AAA AA+ AA AA-	A+ A A-	BBB+ BBB BBB-	BB+ BB BB-	B+ B B-	CCC+ CCC CCC- CC C D

**Table 5A-2: Credit Quality Grades and Recognised ECAs for Short-Term Exposures**

<b>Short-Term Credit Quality Grade</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
<b>Fitch Ratings</b>	F-1	F-2	F-3	Others
<b>Moody's Investors Services</b>	P-1	P-2	P-3	Others
<b>Standard &amp; Poor's Ratings Services</b>	A-1	A-2	A-3	Others

**Table 5A-3: Investment Grade External Credit Assessments**

<b>Recognised ECAI</b>	<b>External Credit Assessment</b>
<b>Fitch Ratings</b>	BBB-/F-3 or better
<b>Moody's Investors Services</b>	Baa3/P-3 or better
<b>Standard &amp; Poor's Ratings Services</b>	BBB-/A-3 or better

**COUNTERPARTY RISK WEIGHTS**Cash and Cash Equivalents<sup>17</sup>

1. A CMSL shall apply a 0% risk weight to cash.
2. Subject to paragraph 3 below, a CMSL shall apply a 20% risk weight to cheques, drafts and other items drawn on banking institutions or merchant banks that are either payable immediately upon presentation or that are in the process of collection<sup>18</sup>.
3. A CMSL may apply a 0% risk weight to cheques, drafts and other items drawn on banking institutions or merchant banks that are either payable immediately upon presentation or that are in the process of collection if the aggregate exposures to a counterparty arising from cheques, drafts and other items drawn on banking institutions or merchant banks that are either payable immediately upon presentation or that are in the process of collection do not exceed \$20,000.

Central Government and Central Bank

4. Subject to paragraphs 5 and 6 below, a CMSL shall apply a risk weight to any counterparty exposure to a central government or a central bank in accordance with Table 5B-1.

**Table 5B-1: Risk Weights for Counterparty Exposures to Central Governments and Central Banks**

Credit Quality Grade	1	2	3	4	5	6	Unrated
Risk Weight	0%	20%	50%	100%	100%	150%	100%

5. A CMSL shall apply a 0% risk weight to any counterparty exposure to the Singapore Government or the Authority which is denominated in Singapore dollars and funded by liabilities denominated in Singapore dollars.
6. For any counterparty exposure to any other central government or central bank which is denominated and funded in the domestic currency of that jurisdiction, a CMSL may

<sup>17</sup> Cash equivalents refer to cheques, drafts and other items drawn on banking institutions or merchant banks that are either payable immediately upon presentation or that are in the process of collection. For the avoidance of doubt, “cash and cash equivalents” excludes deposits placed with banking institutions or deposit-taking institutions.

<sup>18</sup> Where a CMSL has systems and controls in place to ensure that cash has been received before **specified products securities** or other items are released to customers, the 20% risk weight shall not apply for such items.

apply such risk weights as may be specified by the banking regulatory authority of that jurisdiction.

PSE

7. Subject to paragraph 8, a CMSL shall apply a risk weight to any counterparty exposure to a PSE in accordance with Table 5B-2.

**Table 5B-2: Risk Weights for Counterparty Exposures to PSEs**

<b>Credit Quality Grade</b>	1	2	3	4	5	6	Unrated
<b>Risk Weight</b>	20%	50%	50%	100%	100%	150%	100%

8. A CMSL shall apply a risk weight to any counterparty exposure to a PSE in accordance with Table 5B-3 if –

- (a) the exposures to the central government of the jurisdiction of that PSE have a credit quality grade of “1” as set out in Table 5A-1 of Annex 5A; and
- (b) in the case of a PSE outside Singapore, the banking regulatory authority of the jurisdiction where the PSE is established has exercised the national discretion to treat the claim on the PSE as a claim on the central government and the exposures to the central government of the jurisdiction of that PSE have a credit quality grade of “1” as set out in Table 5A-1 of Annex 5A.

**Table 5B-3: Risk Weights for Counterparty Exposures to PSEs where the Central Government has a Credit Quality Grade of “1”**

<b>Credit Quality Grade</b>	1	2	3	4	5	6	Unrated
<b>Risk Weight</b>	0%	20%	20%	100%	100%	150%	20%

Multilateral Agency

9. Subject to paragraph 10, a CMSL shall apply a risk weight to any counterparty exposure to a multilateral agency in accordance with Table 5B-4.

**Table 5B-4: Risk Weights for Counterparty Exposures to Multilateral Agencies**

<b>Credit Quality Grade</b>	1	2	3	4	5	6	Unrated
<b>Risk Weight</b>	20%	50%	50%	100%	100%	150%	50%

10. A CMSL shall apply a 0% risk weight to any counterparty exposure to a recognised multilateral agency, as set out in Annex 5C.

Banking Institution and Merchant Bank

11. Subject to paragraphs 12 to 17, a CMSL shall apply a risk weight to any counterparty exposure to a banking institution or a merchant bank in accordance with Table 5B-5.

12. A CMSL may apply a risk weight corresponding to a risk weight for short-term exposures in Table 5B-5, to any counterparty exposure arising from the CMSL's current account deposits, savings account deposits, and fixed deposits with an original maturity of three months or less, which can be unconditionally withdrawn within 30 days, placed with a banking institution or a merchant bank.

**Table 5B-5: Risk Weights for Counterparty Exposures to Banking Institutions and Merchant Banks**

<b>Credit Quality Grade</b>	1	2	3	4	5	6	Unrated
<b>Risk Weight</b>	20%	50%	50%	100%	100%	150%	50%
<b>Risk Weight for Short-Term<sup>19</sup> Exposures</b>	20%	20%	20%	50%	50%	150%	20%

13. Notwithstanding paragraphs 11 and 12, a CMSL may apply a risk weight of –
- (a) 0% to any counterparty exposure arising from the CMSL's own moneys deposited with any bank licensed under the Banking Act (Cap. 19) of credit quality grade "1" or any merchant bank of credit quality grade "1"; and
  - (b) 10% to –
    - (i) any short-term counterparty exposure arising from the CMSL's own moneys deposited with any bank licensed under the Banking Act (Cap. 19) of credit quality grade "2" or any merchant bank of credit quality grade "2"; and
    - (ii) any counterparty exposure arising from the CMSL's current account deposits, savings account deposits, and fixed deposits with an original maturity of three months or less, which can be unconditionally withdrawn within 30 days, placed with any bank licensed under the Banking Act (Cap. 19) of credit quality grade "2" or any merchant bank of credit quality grade "2".
14. A CMSL shall apply a risk weight to any short-term counterparty exposure to a banking institution or a merchant bank with an issue-specific external credit assessment in accordance with Table 5B-6.

<sup>19</sup> For the purposes of this table and paragraphs 11 to 13 of this Annex, short-term exposures refer to exposures with an original maturity of three months or less and that are not expected to be rolled over.

**Table 5B-6: Risk Weights for Short-Term Counterparty Exposures to Banking Institutions and Merchant Banks with Issue-Specific External Credit Assessments**

<b>Short-Term Credit Quality Grade</b>	I	II	III	IV
<b>Risk Weight</b>	20%	50%	100%	150%

15. For any counterparty exposure to a banking institution or merchant bank that does not have an external credit assessment by a recognised ECAI, a CMSL shall apply the risk weight determined in accordance with Table 5B-5 or the risk weight that is applicable to a counterparty exposure to the central government of the jurisdiction in which the banking institution or merchant bank is incorporated or established, whichever is higher.

16. If a short-term counterparty exposure to a banking institution or a merchant bank with an issue-specific external credit assessment attracts a risk weight that is higher than that applicable for a short-term exposure under Table 5B-5, the CMSL shall apply the risk weight based on the issue-specific assessment to any unrated short-term counterparty exposure and any exposure referred to in paragraph 12 to the same banking institution or merchant bank.

17. If a short-term counterparty exposure to a banking institution or merchant bank with an issue-specific external credit assessment<sup>20</sup> –

- (a) attracts a risk weight of 50% or 100%, then the CMSL shall apply a risk weight of not lower than 100% to any unrated short-term counterparty exposure and any exposure referred to in paragraph 12 to the same banking institution or merchant bank; or
- (b) attracts a risk weight of 150%, then the CMSL shall apply a risk weight of 150% to any unrated counterparty exposure (whether long-term or short-term) to the same banking institution or merchant bank.

Corporate Entity

18. A CMSL shall apply a risk weight to any counterparty exposure to a corporate entity in accordance with Table 5B-7.

**Table 5B-7: Risk Weights for Counterparty Exposures to Corporate Entities**

<b>Credit Quality Grade</b>	1	2	3	4	5	6	Unrated
<b>Risk Weight</b>	20%	50%	100%	100%	150%	150%	100%

<sup>20</sup> For the avoidance of doubt, in the case of an exposure in which this sentence and paragraph 16 of this Annex both apply, the CMSL shall apply the higher of the two risk weights.

19. Notwithstanding paragraph 18, a CMSL shall risk-weight any short-term counterparty exposure to a corporate entity with an issue-specific external credit assessment in accordance with Table 5B-8.

**Table 5B-8: Risk Weights for Counterparty Exposures to Corporate Entities with Issue-Specific External Credit Assessments**

<b>Short-Term Credit Quality Grade</b>	I	II	III	IV
<b>Risk Weight</b>	20%	50%	100%	150%

20. Notwithstanding paragraph 18, for any counterparty exposure to a corporate entity that does not have an external credit assessment by a recognised ECAI, a CMSL shall apply the risk weight determined in accordance with Table 5B-7 or the risk weight that is applicable to a counterparty exposure to the central government of the jurisdiction in which the corporate entity is incorporated or established, whichever is higher.<sup>21</sup> If a short-term counterparty exposure to a corporate entity with issue-specific external credit assessment –

- (a) attracts a risk weight of 50% or 100%, then the CMSL shall apply a risk weight of not lower than 100% to any unrated short-term counterparty exposure to the same corporate; or
- (b) attracts a risk weight of 150%, then the CMSL shall apply a risk weight of 150% to any unrated counterparty exposure (whether long-term or short-term) to the same corporate.

21. For the purpose of paragraphs 18 to 20, a counterparty exposure to a corporate entity refers to a counterparty exposure to any corporation, partnership, limited liability partnership, sole proprietorship or trustee in respect of a trust, other than a counterparty exposure to a PSE, multilateral agency, banking institution or merchant bank.

Past Due Exposures

22. A CMSL shall apply a risk weight to the unsecured portion of any counterparty exposure that is past due for more than 90 days in accordance with Table 5B-9.

**Table 5B-9: Risk Weights for Past Due Exposures**

<b>Condition</b>	<b>Risk Weight</b>
<b>Where individual impairment allowances are less than 20% of the outstanding amount of the exposure</b>	150%
<b>Where individual impairment allowances are no less than 20% of the outstanding amount of the exposure</b>	100%

<sup>21</sup> The Authority may from time to time specify, by notice in writing to the relevant CMSL concerned, a higher risk weight for a particular exposure or group of exposures.



Any Other Counterparty

23. A CMSL shall apply a risk weight of 100% to any other counterparty.

## RECOGNISED MULTILATERAL AGENCIES

Table 5C-1: Recognised Multilateral Agencies

No.	Recognised Multilateral Agency
1	The African Development Bank
2	The Asian Development Bank
3	The Bank for International Settlements
4	The Caribbean Development Bank
5	The Council of Europe Development Bank
6	The European Bank for Reconstruction and Development
7	The European Central Bank
8	The European Investment Bank
9	The European Investment Fund
<del>10</del>	<del>The European Community</del>
10	The European Union
<del>11</del>	<del>The Inter-American Development Bank</del>
11	The European Stability Mechanism
<del>12</del>	<del>The International Finance Facility for Immunisation</del>
12	The European Financial Stability Facility
<del>13</del>	<del>The International Monetary Fund</del>
13	The Inter-American Development Bank
<del>14</del>	<del>The Islamic Development Bank</del>
14	The International Finance Facility for Immunisation
<del>15</del>	<del>The Nordic Investment Bank</del>
15	The International Monetary Fund
<del>16</del>	<del>The World Bank Group, including the International Bank for Reconstruction and Development, the International Finance Corporation, and the Multilateral Investment Guarantee Agency</del>
16	The Islamic Development Bank
17	The Nordic Investment Bank
18	The World Bank Group, including the International Bank for Reconstruction and Development
19	The International Finance Corporation
20	The Multilateral Investment Guarantee Agency

## CREDIT EXPOSURE FACTORS FOR OVER-THE-COUNTER DERIVATIVES CONTRACTS

Table 5D-1: Credit Exposure Factors<sup>22</sup>

	Over-the-counter Derivatives Contract	Residual Maturity		
		One year or less	Over one year to five years	Over five years
(a)	Foreign Exchange Rate & Gold	1.0%	5.0%	7.5%
(b)	Interest Rates <sup>23</sup>	0.0%	0.5%	1.5%
(c)	Equity	6.0%	8.0%	10.0%
(d)	Precious Metals (except gold)	7.0%	7.0%	8.0%
(e)	Other Commodities - Includes any forward contract, swap, purchased option and other similar derivatives contracts which are not classified in (a) to (d)	10.0%	12.0%	15.0%
(f)	Credit Derivatives Contract	Protection buyer		Protection seller
	Total Return Swap			
	Qualifying reference obligation <sup>24</sup>	5%	5%	
	Non-qualifying reference obligation	10%	10%	
	Credit Default Swap <sup>25</sup>			
	Qualifying reference obligation	5%	5% <sup>26</sup>	
	Non-qualifying reference obligation	10%	10% <sup>27</sup>	

<sup>22</sup> (a) For a transaction with multiple exchanges of principal, the add-on factors are to be multiplied by the number of remaining payments in the contract.

(b) For a transaction that is structured to settle outstanding exposures following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates, the residual maturity shall be equal to the time until the next reset date. In the case of an interest rate contract with a remaining maturity of more than one year which meets the above criteria, the add-on factor is subject to a minimum of 0.5%.

<sup>23</sup> No potential credit exposure shall be calculated for single currency floating/floating interest rate swaps. The exposure on these contracts shall be evaluated solely on the basis of their fair values.

<sup>24</sup> Qualifying reference obligation means any security that is issued by any multilateral agency, any security (including one issued by a PSE) that has a credit quality grade of "3" or better as set out in Annex 5A of this Part based on the external credit assessment of at least one recognised ECAI, and any unrated security issued by a PSE which belongs to a country with a credit quality grade of "1" as set out in Annex 5A of this Part. Where a security has more than one external credit assessment and these map into different credit quality grades, paragraph 2 of Annex 5A shall apply.

<sup>25</sup> Where the credit derivatives contract is a first-to-default transaction, the potential credit exposure shall be determined by the lowest quality underlying reference obligation in the basket, i.e. if there is any non-qualifying reference obligation in the basket, the non-qualifying reference obligation shall be used. For a second-to-default transaction, the potential credit exposure shall be determined by the second lowest quality underlying reference obligation in the basket. For a nth-to-default transaction, the potential credit exposure shall be determined by the nth lowest quality underlying reference obligation in the basket.

<sup>26</sup> The protection seller of a credit default swap shall only be subject to the credit exposure factor where it is subject to closeout upon the insolvency of the protection buyer while the underlying reference obligation is still solvent. The potential credit exposure should be capped to the amount of unpaid premiums.

<sup>27</sup> The protection seller of a credit default swap shall only be subject to the credit exposure factor where it is subject to closeout upon the insolvency of the protection buyer while the underlying reference obligation is still solvent. The potential credit exposure should be capped to the amount of unpaid premiums.

## CREDIT CONVERSION FACTORS FOR OFF-BALANCE SHEET COMMITMENTS

Table 5E-1: Credit Conversion Factors (CCF)

Description of Off-balance Sheet Item	CCF
Guarantees and other direct credit substitutes <sup>28</sup>	100%
Commitments with certain drawdown	100%
Transactions, other than <del>product securities</del> financing transactions, involving the posting of securities held by the CMSL as collateral	100%
Transaction-related contingent items <sup>29</sup>	50%
Asset sales with recourse, where the credit risk remains with the CMSL <sup>30</sup>	100%
Other commitments -	
(i) with an original effective maturity of more than one year	50%
(ii) with an original effective maturity of one year or less	20%
(iii) which are unconditionally cancellable at any time by the CMSL	0%

<sup>28</sup> For example, general guarantees of indebtedness, and financial guarantees for loans and ~~capital markets products securities~~.

<sup>29</sup> For example, performance bonds.

<sup>30</sup> The terms of the agreement are such that there is no substantial transfer of all risks and rewards of ownership to the counterparty. The CMSL shall maintain financial resources for these items according to the type of asset, and not according to the type of counterparty with whom the transaction has been entered into.

## NETTING

### Section 1: Scope of Application

1.1 Netting shall only apply to a transaction with bilateral netting agreements that meet the requirements set out in this Annex, and shall only involve a group of transactions between a CMSL and a counterparty containing transactions in only one of the following product categories:

- (a) over-the-counter derivatives contract;
- (b) repurchase, reverse repurchase, ~~specified products securities~~ lending transaction and ~~specified products securities~~ borrowing transaction; or
- (c) ~~product securities~~ financing transaction.

1.2 On-balance sheet items shall not be netted against off-balance sheet items.

### Section 2: Requirements for Netting Agreements

2.1 Subject to this Section and Sections 3 and 4 of this Annex, a CMSL shall –

- (a) obtain a written independent legal opinion confirming that the netting agreement is valid, effective and enforceable for each of the following jurisdictions:
  - (i) the jurisdiction in which the counterparty is incorporated or established;
  - (ii) if a foreign branch of the CMSL or the counterparty has entered or will be entering into the transaction, the jurisdiction in which the branch of the CMSL or the counterparty, as the case may be, is located;
  - (iii) the jurisdiction whose law governs the netting agreement; and
  - (iv) the jurisdiction whose law governs any transaction subject to the netting agreement if different from sub-paragraph (a)(iii),

(referred to as “relevant jurisdictions” in this Annex);

- (b) in relation to a netting agreement containing transactions in paragraph 1.1(b) and (c) above, ensure that the netting agreement –
  - (i) provides the non-defaulting party the right to terminate and close-out in a timely manner all transactions upon the occurrence of a termination event as defined in the netting agreement, including the default or insolvency of the defaulting party; and
  - (ii) allows for the prompt liquidation or set-off of collateral upon the event of default; and
- (c) ensure that the transactions covered in the netting agreement are marked-to-market daily.

2.2 A CMSL shall provide to the Authority, if so requested, –

- (a) a summary listing<sup>31</sup> of the source and date of each legal opinion obtained for the purposes of paragraph 2.1(a), stating in each case, whether such legal opinion was commissioned specifically by the CMSL, by the CMSL collectively with any other party, or by some other third party; and
- (b) copies of, or access to, the netting agreement and the legal opinions obtained for the purposes of paragraph 2.1(a).

### **Section 3: Legal Opinions obtained for purposes of paragraph 2.1(a)**

3.1 A legal opinion shall –

- (a) be in the form of a memorandum of law and addressed directly to the CMSL or the sponsors of a particular netting agreement or form of netting agreement; or
- (b) be an opinion on a particular netting agreement sought collectively by a number of parties (including the CMSL).

3.2 Each legal opinion shall confirm that in an event of default as defined under the netting agreement, including liquidation, bankruptcy or other similar circumstance of either the counterparty or the CMSL, the courts and administrative authorities<sup>32</sup> of the relevant

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<sup>31</sup> This can be prepared by either the external or internal legal adviser of the CMSL.

<sup>32</sup> This includes a court-appointed administrator and an administrator appointed by a regulatory authority.

jurisdiction will find that the claims and obligations of the CMSL pursuant to the relevant transactions would be limited to a net sum calculated in accordance with the netting agreement under the law of the relevant jurisdiction.

3.3 In addition, each legal opinion should<sup>33</sup> –

- (a) highlight the material clauses in the netting agreement that provide for the netting of transactions (“material netting clauses”);
- (b) confirm that the unenforceability or illegality of any clause (other than a material netting clause) in the netting agreement is unlikely to undermine the material netting clauses referred to in sub-paragraph (a) above;
- (c) state the circumstances under which the netting agreement may be relied upon, including –
  - (i) the legal form of, or activities conducted by, the counterparty; and
  - (ii) whether certain counterparties (such as banks, insurance companies or local authorities) may be subject to special rules relating to insolvency as a result of the legal form of, or activities conducted by, the counterparties;
- (d) state whether the netting or other default provisions in the netting agreement are enforceable or enforceable differently (and if so, the extent of the difference) in a non-liquidation event, such as administration, judicial management, receivership, voluntary arrangement and a scheme of arrangement;
- (e) state to what extent, if at all, the netting needs to be reflected in the records of the counterparties in order for it to be valid, effective and enforceable;
- (f) state whether a court or administrative authority in the jurisdiction covered by the legal opinion would uphold the rate chosen for the conversion of foreign currency obligations for the purpose of calculating the close-out amount and whether there are any statutory or other applicable rules that may affect this aspect of the netting agreement;
- (g) state whether, under the law of the jurisdiction covered by the legal opinion, it is necessary for the enforceability of the netting that all transactions be

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<sup>33</sup> This is not intended to be an exhaustive list of all the matters that should be covered in a legal opinion obtained for the purpose of paragraph 2.1(a).

regarded as part of a single agreement, and if so, whether there is anything in the close-out methodology which may be held to be inconsistent with the treatment of all transactions as part of a single agreement and the effect it may have on the netting;

- (h) state whether there is any reason to believe that the netting agreement would be unenforceable because of the law of another jurisdiction;
- (i) state whether there is any preference specified in the netting agreement for automatic rather than optional close-out, and if so, whether such preference would affect the enforceability of the netting agreement;
- (j) state whether there are legal problems in exercising any discretion or flexibility provided for in the netting agreement, and if so, whether such problems affect the enforceability of the netting agreement; and
- (k) if other clauses are added to a standard form agreement, confirm that such additional clauses do not throw any reasonable doubt or affect the overall validity, effectiveness or enforceability of the netting agreement.

3.4 The Authority is aware that it may not be possible for a CMSL to obtain a legal opinion that provides a definitive view on the validity, effectiveness and enforceability of the netting agreement without certain assumptions or qualifications. The presence *per se* of assumptions and qualifications within the legal opinion will not render the legal opinion unsatisfactory. However, the assumptions underlying the legal opinion shall not be unduly restrictive. They shall be specific, of a factual nature and adequately explained within the legal opinion. Where qualifications are made, these shall be specific and their effect shall be adequately explained within the legal opinion. A CMSL shall examine and assess the assumptions and qualifications in the legal opinion.

3.5 If the CMSL determines that –

- (a) the absence of any of the information listed in paragraph 3.3; or
- (b) any of the assumptions or qualifications in the legal opinion,

gives rise to reasonable doubt as to the validity, effectiveness or enforceability of the netting agreement, the CMSL shall not recognise the netting agreement.

3.6 In this regard, where there is more than one relevant jurisdiction in relation to a netting agreement, the CMSL shall not recognise the netting agreement, if the CMSL has any reasonable doubt, based on its own evaluation of the legal opinions, as to whether the netting agreement is valid, effective and enforceable in any relevant jurisdiction considering



the potential for conflicts of laws and whether action may be taken by insolvency officials in other jurisdictions.

3.7 The CMSL shall review each legal opinion and obtain updates thereto, either in the form of a fresh legal opinion or a letter from an external firm of lawyers confirming that the opinion on the validity, effectiveness and enforceability of the netting agreement remains unchanged. Each legal opinion should be reviewed at least once every 12 months, but in any case shall be reviewed no later than 15 months from the previous review<sup>34</sup>. The CMSL shall also document the sources of the legal opinions, and the expertise of the persons giving the legal opinions.

3.8 Notwithstanding paragraph 2.1(a), where any relevant jurisdiction does not recognise netting or recognises netting only in a limited form, the CMSL shall report transactions for which that jurisdiction is a relevant jurisdiction on a gross basis. All other transactions under the same netting agreement may be reported on a net basis.

3.9 The CMSL shall inform the Authority immediately when it becomes aware of any relevant jurisdiction that does not recognise netting or recognises netting only in a limited form (whether as to certain products, or with counterparties of certain legal forms or counterparties performing certain activities).

3.10 Where a CMSL is aware that a supervisory authority of the counterparty of the CMSL (whether the supervisory authority is the home or host supervisor) is not satisfied that a netting agreement is legally valid, effective or enforceable under the law of the jurisdiction of that supervisory authority, the CMSL shall not recognise the netting agreement, notwithstanding any legal opinion obtained by the CMSL.

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<sup>34</sup> A CMSL is exempt from the requirement to review each legal opinion no later than 15 months from the previous review, in the case of independent legal opinions commissioned and collated by the International Swaps and Derivatives Association, the Securities Industry and Financial Markets Association, the International Capital Market Association and the International Securities Lending Association, which are updated by the associations on an annual basis. The CMSL shall assess whether such legal opinions meet the conditions and requirements set out in this Annex.

## Section 4: Policies, Systems and Controls

4.1 A CMSL shall have in place a netting policy that sets out, as a minimum, the following:

- (a) the person responsible for setting and reviewing the policy on netting;
- (b) the frequency of review of the netting policy;
- (c) the person responsible for approving the application of a netting agreement to any transaction (including determining whether the netting agreement is covered by an existing legal opinion or whether separate legal opinions are required);
- (d) how the CMSL monitors legal developments affecting its netting agreements and the need to obtain additional legal opinions;
- (e) what the CMSL is to include in its netting agreements to ensure that its interests, rights and obligations are duly reflected; and
- (f) the processes for determining and reporting net exposures to individual counterparties.

4.2 The CMSL shall also have in place adequate systems and controls to monitor the transactions, including systems and controls to ensure that -

- (a) only transactions entered into by the CMSL with a counterparty that are covered by a netting agreement that meet the conditions and requirements set out within this Annex are netted;
- (b) net exposures to individual counterparties are accurately determined and reported;
- (c) documentary evidence of the transactions subject to netting are maintained and appropriately safeguarded and the CMSL is able to produce such documentary evidence, if required by the Authority;
- (d) the legal opinions are not superseded by subsequent changes in the laws of the relevant jurisdictions. The following shall be duly documented and should be updated at least once every 12 months, but in any case, shall be updated no later than 15 months from the previous update:

- (i) the types of counterparties and transactions covered by each netting agreement; and
  - (ii) the relevant jurisdictions for each netting agreement to which the CMSL is a party. The CMSL shall note any jurisdiction for which any doubt may exist as to the legal validity, effectiveness or enforceability of netting and what action the CMSL has taken as a result;
- (e) counterparty limits are monitored in terms of such net exposures; and
- (f) potential roll-off exposures, which occur upon maturity of short-dated obligations that are netted against longer dated claims, are monitored.

4.3 A CMSL shall maintain all documentation referred to in Sections 2 and 3 of this Annex for a period of 5 years.

**REQUIREMENTS FOR RECOGNITION OF ACCEPTABLE COLLATERAL**

1. A CMSL shall ensure that the requirements in paragraph 3 are complied with before the CMSL recognises the effects of the following collateral in reducing its counterparty exposure to the counterparty –

- (a) cash;
- (b) gold;
- (c) a share or convertible bond listed on the Singapore Exchange Securities Trading Limited;
- (d) a share or convertible bond listed on a recognised exchange and that is –
  - (i) in the case of a share, included in a market index of that recognised exchange; or
  - (ii) issued by a corporation with shareholders' funds of not less than \$200 million or its equivalent in any foreign currency;
- (e) a debt security –
  - (i) issued by a central government or central bank, PSE, or recognised multilateral agency as set out in Annex 5C, where the debt security has a long-term rating of –
    - (A) not less than BB- by Fitch Ratings;
    - (B) not less than Ba3 by Moody's Investor Services; or
    - (C) not less than BB- by Standard & Poor's;
  - (ii) issued by any other entity, where the debt security has a long-term rating of –
    - (A) not less than BBB- by Fitch Ratings;
    - (B) not less than Baa3 by Moody's Investor Services; or

- (C) not less than BBB- by Standard & Poor's;
- (iii) being a short-term debt instrument with a rating of –
  - (A) not less than F-3 by Fitch Ratings;
  - (B) not less than P-3 by Moody's Investor Services; or
  - (C) not less than A-3 by Standard & Poor's; or
- (iv) listed on the Singapore Exchange Securities Trading Limited or a recognised exchange if, and only if, the issuer's shares are listed on that exchange and qualify as a share referred to in sub-paragraph (c) or (d);
- (f) a collective investment scheme –
  - (i) authorised by the Authority under section 286 of the Act (other than exchange traded funds and property funds); or
  - (ii) recognised by the Authority under section 287 of the Act (other than exchange traded funds and property funds) –
    - (A) for which prices are published daily; and
    - (B) which invests at least 90% of the deposited property of the collective investment scheme in instruments being any or all of the instruments specified in paragraphs (a) to (k) (including this paragraph);
- (g) an exchange traded fund quoted on the Singapore Exchange Securities Trading Limited or a recognised exchange, which tracks an index of, or basket of, stocks quoted on –
  - (i) the Singapore Exchange Securities Trading Limited; or
  - (ii) a recognised exchange;
- (h) a property fund listed on the Singapore Exchange Securities Trading Limited or a recognised exchange;
- (i) any contract traded on –

- (i) the Singapore Exchange Securities Trading Limited; or
  - (ii) a recognised exchange, where the shares of the issuer of the contract, and the shares of the issuer of the underlying security, qualify as a share referred to in sub-paragraph (c) or (d);
- (j) in the case of an initial public offer, **specified products securities** to be listed for quotation or quoted on the Singapore Exchange Securities Trading Limited which have been fully paid for by a customer of the CMSL; or
- (k) **specified products securities** quoted on the Central Limit Order Book (CLOB) International.
2. For the purposes of paragraph 1 –
- (a) “exchange traded fund”, means a collective investment scheme concerned with the acquisition, holding, management or disposal of a portfolio of predetermined constituent assets in predetermined proportions, which constituent assets principally comprise securities listed for quotation on any **approved securities** exchange or overseas **securities** exchange;
  - (b) “property fund”, has the same meaning in the Code on Collective Investment Schemes.
3. A CMSL shall ensure that the following requirements are complied with before it recognises the effect of any collateral:
- (a) the collateral is liquid and readily convertible into cash;
  - (b) the collateral is in the possession or control of the CMSL;
  - (c) the collateral is subject to a collateral agreement between the counterparty and the CMSL which is evidenced in writing, legally binding on them, irrevocable and enforceable against the counterparty, and which provides the CMSL with an unconditional right to apply the collateral, or to sell the collateral or otherwise convert the collateral into cash;
  - (d) the credit quality of the counterparty and the value of the collateral do not have a material positive correlation<sup>35</sup>; and

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<sup>35</sup> For example, the collateral shall not be a security issued by the counterparty that gives rise to the counterparty exposure or by a related corporation of that counterparty.

- (e) the collateral is not a security that is prohibited from serving as collateral by an approved exchange or approved clearing house (as the case may be);  
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- (f) the legal mechanism by which collateral is pledged, assigned or transferred shall confer on the CMSL the right to liquidate or take legal possession of the collateral, in a timely manner, in the event of the default, insolvency or bankruptcy (or one or more otherwise-defined credit events set out in the transaction documentation) of the counterparty (and, where applicable, of the custodian holding the collateral);
- (g) the CMSL has taken all steps necessary to fulfil those requirements under the law applicable to the CMSL's interest in the collateral for obtaining and maintaining an enforceable security interest<sup>36</sup> or for exercising a right to net or set off in relation to title transfer collateral;
- (h) the CMSL has implemented clear and robust procedures for the timely liquidation of collateral to ensure that any legal conditions required for declaring default of counterparty and liquidating the collateral are observed, and that the collateral can be liquidated promptly; and
- (i) where the collateral is held by a custodian, the CMSL has taken reasonable steps to ensure that the custodian segregates the collateral from the custodian's own assets.

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<sup>36</sup> For example, by registering it with a registrar.

## APPLICABLE HAIRCUTS FOR COLLATERAL

Table 5H-1: Collateral (Excluding Debt Securities)

Collateral	Haircut (%)
Cash	0
Gold	15
Shares and convertible bonds that are listed on Singapore Exchange Securities Trading Limited or a recognised exchange, and that is included in the FTSE Straits Times Index, MSCI Singapore Free Index or a market index of a recognised exchange	15
Shares and convertible bonds that are listed on Singapore Exchange Securities Trading Limited	25
Shares and convertible bonds that are listed on a recognised exchange and issued by a corporation with shareholders' funds of not less than \$200 million or its equivalent in any foreign currency	25
Collective investment schemes (other than exchange traded funds and property funds)	25 or highest haircut applicable to the deposited property of the collective investment scheme, whichever is lower
Exchange traded funds quoted on Singapore Exchange Securities Trading Limited or a recognised exchange	25
Property funds listed on Singapore Exchange Securities Trading Limited or a recognised exchange	25
Any other contract traded on Singapore Exchange Securities Trading Limited or a recognised exchange	40
Initial public offerings to be listed for quotation or quoted on the Singapore Exchange Securities Trading Limited, which has been fully paid for by a customer	25
Specified products Securities quoted on Central Limit Order Book (CLOB) International	25
Any other collateral	100



**Table 5H-2: Collateral (Debt Securities)**

Collateral		Haircut (%)	
Debt Securities with issue rating of (Long-term/Short-term) –	Residual Maturity	Issued by a central government or central bank	Other Issuers
<ul style="list-style-type: none"> <li>Fitch Ratings: AAA to AA-/ F-1</li> <li>Moody's Investors Services: Aaa to Aa3/ P-1</li> <li>Standard &amp; Poor's Ratings Services: AAA to AA-/A-1</li> </ul>	≤1 year	0.5	1
	>1 year, ≤5 years	2	4
	>5 years	4	8
<ul style="list-style-type: none"> <li>Fitch Ratings: A+ to BBB-/ F-2 to F-3</li> <li>Moody's Investors Services: A1 to Baa3/P-2 to P-3</li> <li>Standard &amp; Poor's Ratings Services: A+ to BBB-/A-2 to A-3</li> </ul>	≤1 year	1	2
	>1 year, ≤5 years	3	6
	>5 years	6	12
<ul style="list-style-type: none"> <li>Fitch Ratings: BB+ to BB-</li> <li>Moody's Investors Services: Ba1 to Ba3</li> <li>Standard &amp; Poor's Ratings Services: BB+ to BB-</li> </ul>	All	15	<ul style="list-style-type: none"> <li>PSE or recognised multilateral agency: 25</li> <li>Any other entity: 100</li> </ul>
Debt securities that are listed on Singapore Exchange Securities Trading Limited or a recognised exchange, where the issuer's shares – (a) are listed on the same exchange; and (b) included in the Straits Times Index, MSCI Singapore Free Index or a market index of a recognised exchange	All	NA	15
Debt securities that are listed on Singapore Exchange Securities Trading Limited or a recognised exchange, where the issuer's shares are listed on the same exchange	All	NA	25
Any other debt securities	All	100	100

In Table 5H-2, where more than one haircut is applicable to the collateral, the CMSL may apply the lowest applicable haircut to the collateral.

## PART VI: POSITION RISK REQUIREMENT

### Division 1: Overview of Position Risk Requirement

#### Overview

6.1.1 Except as provided in paragraph 6.1.2, a CMSL shall calculate a position risk requirement for any position in a security, futures contract, forward contract, physical commodity, derivatives contract on a physical commodity, foreign exchange contract or any other instrument that the CMSL holds as a principal, unless such item has been deducted in the computation of financial resources or adjusted net head office funds, whichever is applicable, under Division 2 of Part III.

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6.1.2 Where the CMSL holds such a position as a result of a net underwriting commitment, the CMSL shall calculate an underwriting risk requirement for that position in accordance with Part VII, and not a position risk requirement.

6.1.3 Subject to paragraphs 6.1.4 to 6.1.8, a CMSL shall calculate its position risk requirement –

- (a) in accordance with Division 2 of this Part;
- (b) where the CMSL has prior written approval from the Authority, in accordance with a risk measurement model and subject to such conditions and restrictions as the Authority may impose; or
- (c) in such other manner as the Authority may specify by notice in writing to the relevant CMSL concerned.

6.1.4 A CMSL shall calculate a position risk requirement as the sum of the following:

- (a) equity position risk requirement calculated in accordance with Sub-division 1 of Division 2 of this Part;
- (b) equity derivatives position risk requirement calculated in accordance with Sub-division 2 of Division 2 of this Part;
- (c) debt position risk requirement calculated in accordance with Sub-division 3 of Division 2 of this Part;
- (d) debt derivatives position risk requirement calculated in accordance with Sub-division 4 of Division 2 of this Part;

- (e) commodity position risk requirement calculated in accordance with Sub-division 5 of Division 2 of this Part;
- (f) commodity derivatives position risk requirement calculated in accordance with Sub-division 6 of Division 2 of this Part;
- (g) foreign exchange risk requirement calculated in accordance with Sub-division 7 of Division 2 of this Part; and
- (h) any other position risk requirement calculated in accordance with Sub-division 8 of Division 2 of this Part.

#### Valuation

6.1.5 A CMSL shall value, on a daily basis, any position at the current market value of the position.

6.1.6 Where a CMSL is required to convert positions in derivatives contracts into notional positions under this Part, a CMSL shall convert its positions in equity, debt, physical commodity and foreign exchange derivatives contracts into notional positions in the relevant underlying instruments and value the notional positions at the current market value of the relevant underlying instruments. Annex 6A illustrates how a CMSL should convert positions in derivatives contracts into notional positions in the relevant underlying instruments.

#### Netting

6.1.7 For the purpose of determining its position in any equity security, equity derivatives contract, debt security, debt derivatives contract, physical commodity, or physical commodity derivatives contract, a CMSL may derive its net position, before the calculation of each position risk requirement specified in paragraph 6.1.4, in accordance with Annex 6B.

#### Holdings in funds

6.1.8 A CMSL shall use either of the following methods to calculate the position risk requirement for a position in any fund, other than a position in a collective investment scheme referred to in paragraph 6.2.1(d) where the position risk requirement is calculated in accordance with Sub-division 1 of Division 2 of this Part<sup>37</sup>:

- (a) calculate the position risk requirement for each of the individual underlying positions in the constituents of the fund in accordance with paragraph 6.1.4;

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<sup>37</sup> The position risk requirement should be reported under paragraph 6.1.4 based on the risk factor that is applied, for example, if the risk factor applied corresponds to a risk factor under the debt position risk requirement, then the position risk requirement should be reported as a debt position risk requirement.

- (b) calculate the position risk requirement by assuming that the fund first invests, to the maximum extent allowed under its investment mandate, in the instruments attracting the highest position risk requirement, and then continues making investments in descending order until the maximum total investment level is reached; or
- (c) calculate the position risk requirement by applying the highest of the risk factors applicable to each of the individual underlying positions in the constituents of the fund, to the net position in the fund.

## Division 2: Methods for Calculating Position Risk Requirements

### Subdivision 1: Equity Position Risk Requirement

6.2.1 A CMSL shall calculate its equity position risk requirement in accordance with paragraphs 6.2.2. to 6.2.12 and 6.2.24 to 6.2.26, for any position it holds as a principal in the following equity instruments:

- (a) an equity security, except an equity position hedging an option, to the extent to which the nominal amount of the equity position is matched by the nominal amount of the equity security underlying the option, which the CMSL has included in the calculation of its equity derivatives position risk requirement;
- (b) a depository receipt;
- (c) a convertible security if –
  - (i) less than 30 days remain to the first date on which conversion may take place; and
  - (ii) the convertible security is trading at a premium of less than 10%;
- (d) a collective investment scheme where the underlying instruments have equity position risk or equity derivatives position risk; and
- (e) any other instrument that has equity position risk.

6.2.2 For the purposes of 6.2.1, a CMSL applying the equity building block method as set out in paragraphs 6.2.10 to 6.2.12 shall –

- (a) allocate each equity position to the country or territory where the instrument is listed or, if the instrument is not listed, where the issuer is incorporated, and shall include any depository receipt on a stock or share in the country or territory where the underlying stock or share is listed; and
- (b) in the case of a position in an index or basket of equity securities, allocate the position to –
  - (i) one or more countries or territories based on the countries or territories to which the underlying equity securities belong under subparagraph (a) above, with the value allocated to each country or

territory reflecting that country's or territory's contribution to the total market value of the equity securities in the index or basket; or

- (ii) a hypothetical country or territory, with the value allocated to that hypothetical country or territory equal to the total market value of the equity securities in the index or basket.

6.2.3 For the purposes of paragraph 6.2.1, the premium of a convertible security shall be calculated as the excess of the current market value of the convertible security over the current market value of the underlying equity security, expressed as a percentage of the current market value of the underlying equity security.

6.2.4 Where a convertible security does not meet the conditions in paragraph 6.2.1(c), a CMSL may include any position in such convertible security in the calculation of the equity position risk requirement of the CMSL, provided that the convertible security is in the money by at least the appropriate equity standard method position risk factor.

Inclusion of equity derivatives contracts

6.2.5 For the purposes of paragraph 6.2.1, a CMSL may include any position it holds as a principal in the following equity derivatives contracts:

- (a) a futures contract, forward contract or CFD on an equity security, an index of equity securities or a basket of equity securities;
- (b) a warrant or an option on an equity security, an index of equity securities or a basket of equity securities provided that the warrant or option is in the money by at least the appropriate equity standard method position risk factor for the underlying equity position;
- (c) a synthetic long or short position in an equity security, an index of equity securities or a basket of equity securities; and
- (d) an equity swap.

6.2.6 For the purpose of including a position in a depository receipt, a warrant, a convertible security or any other equity derivatives contract in the calculation of its equity position risk requirement, a CMSL shall derive the notional position of the depository receipt, warrant, convertible security or any other equity derivatives contract in accordance with paragraph 6.1.6.

Methods to calculate equity position risk requirement

6.2.7 A CMSL shall use either of the following methods to calculate the equity position risk requirement and apply the chosen method consistently for all positions included in the calculation:

- (a) equity standard method as set out in paragraph 6.2.9; or
- (b) equity building block method as set out in paragraphs 6.2.10 to 6.2.12.

6.2.8 The equity position risk requirement of a CMSL shall be the aggregate of the equity position risk requirements calculated in accordance with paragraph 6.2.7.

Equity standard method

6.2.9 A CMSL applying the equity standard method shall calculate its equity position risk requirement by carrying out the following steps:

- (a) determine the net position in each equity security by netting gross positions in the equity security;
- (b) calculate an equity position risk requirement for each net position in an equity security, as the product of the absolute value of the current market value of the equity security and the appropriate equity standard method position risk factor set out in Table 6-1; and
- (c) aggregate the equity position risk requirements for all net positions in equity securities calculated in accordance with sub-paragraph (b).

TABLE 6-1: Equity Standard Method Position Risk Factors

Type of Equity Security	Equity Position Risk Factor
Qualifying equity indices	10%
Other equity indices	16%
Collective investment schemes (including exchange-traded funds), where investments are restricted to qualifying equity indices	10%
Other collective investment schemes	16%
Any single equities	16%

Equity building block method

6.2.10 A CMSL applying the equity building block method shall calculate its equity position risk requirement by carrying out the following steps:

- (a) calculate the equity position risk requirement for each country or territory as the sum of –

- (i) the equity specific risk requirement for that country or territory calculated in accordance with paragraph 6.2.11; and
  - (ii) the equity general risk requirement for that country or territory calculated in accordance with paragraph 6.2.12; and
- (b) calculate the equity position risk requirement as the aggregate of equity position risk requirements for all countries and territories.

Equity specific risk requirement

6.2.11 To calculate the equity specific risk requirement for a country or territory, a CMSL shall –

- (a) allocate each gross position in an equity security to an appropriate country or territory in accordance with paragraph 6.2.2;
- (b) net positions in an equity security for each equity security allocated to that country or territory;
- (c) for each net position in an equity security allocated to that country or territory, calculate the product of the –
  - (i) absolute value of the current market value of the net position; and
  - (ii) appropriate equity specific position risk factor set out in Table 6-2; and
- (d) calculate the equity specific risk requirement of that country or territory as the sum of the product calculated in sub-paragraph (c) for all net positions in equity securities allocated to that country or territory.

TABLE 6-2: Equity Building Block Method - Equity Specific Position Risk Factors

Type of Equity Security	Equity Position Risk Factor
<ul style="list-style-type: none"> <li>• Qualifying equity indices; or</li> <li>• Collective investment schemes (including exchange-traded funds), where investments are restricted to qualifying equity indices</li> </ul>	0%
Other equity securities, indices of equity securities or baskets of equity securities	8%



#### Equity general risk requirement

6.2.12 To calculate the equity general risk requirement for a country or territory, a CMSL shall –

- (a) allocate each gross position in an equity security to an appropriate country or territory in accordance with paragraph 6.2.2;
- (b) net positions in all equity securities allocated to that country or territory, including net positions in different equity securities; and
- (c) calculate the equity general risk requirement for that country or territory as the sum of –
  - (i) the product of the absolute value of the current market value of the net long or short position calculated in accordance with subparagraph (b), and the equity general position risk factor of 8%; and
  - (ii) where applicable, the product of the net long or short position in a qualifying equity index or collective investment scheme (including exchange-traded funds) where investments are restricted to qualifying equity indices, and a position risk factor of 2%.

#### **Subdivision 2: Equity Derivatives Position Risk Requirement**

6.2.13 A CMSL shall calculate an equity derivatives position risk requirement in accordance with paragraphs 6.2.14 to 6.2.26 for any position in an equity derivatives contract, except to the extent that the CMSL is permitted under paragraph 6.2.5 to elect and has elected to calculate an equity position risk requirement for the equity derivatives contract.

6.2.14 A CMSL shall use any of the following methods, as applicable, to calculate the equity derivatives position risk requirement:

- (a) equity hedging method as set out in paragraph 6.2.16;
- (b) equity margin method as set out in paragraphs 6.2.17 to 6.2.19; or
- (c) equity basic method as set out in paragraphs 6.2.20 to 6.2.23.

6.2.15 The equity derivatives position risk requirement of a CMSL shall be the aggregate of the equity derivatives position risk requirements calculated in accordance with paragraph 6.2.14.<sup>38</sup>

Equity hedging method

6.2.16 A CMSL may use the equity hedging method, as specified in Table 6F-1 of Annex 6F to calculate an equity derivatives position risk requirement in relation to a position in an equity security hedging a position in an option on that equity security, to the extent that the position in the equity security matches the notional position of the equity security underlying the option.

Equity margin method

6.2.17 A CMSL may use the equity margin method to calculate an equity derivatives position risk requirement for a position in an equity derivatives contract traded on any approved exchange or overseas exchange, and that is subject to a positive margin requirement specified by that approved exchange, overseas exchange, or a clearing facility appointed by that approved exchange or overseas exchange.

6.2.18 A CMSL applying the equity margin method shall calculate the equity derivatives position risk requirement –

(a) in the case of an equity derivatives contract traded on an approved exchange or a recognised exchange, as 2 times the margin specified by the approved exchange, approved clearing house, recognised exchange, or a clearing facility appointed by the approved exchange or recognised exchange (as the case may be); and

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(b) in the case of an equity derivatives contract traded on any other exchange, as 3 times the margin specified by the exchange or a clearing facility appointed by the exchange.

6.2.19 For the purposes of paragraph 6.2.18, “margin”, in a case where margin requirements for positions in equity derivatives contracts are calculated on a net basis, means the net margin so calculated.

Equity basic method

6.2.20 A CMSL may use the equity basic method to calculate an equity derivatives position risk requirement for a position in a warrant, forward contract, futures contract, swap, CFD, option or a synthetic long or short position in relation to an equity security.

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<sup>38</sup> For the avoidance of doubt, this includes the position risk requirement calculated in accordance with paragraph 6.2.24(a).

6.2.21 Subject to paragraphs 6.2.22 and 6.2.23, a CMSL applying the equity basic method shall calculate the equity derivatives position risk requirement as the product of –

- (a) the absolute value of the current market value of the notional position calculated in accordance with paragraph 6.1.6; and
- (b) the appropriate equity standard method position risk factor set out in Table 6-1.

6.2.22 In the case of a warrant or purchased option, a CMSL may restrict the equity derivatives position risk requirement calculated in accordance with paragraph 6.2.21 to the current market value of the warrant or option, respectively.

6.2.23 A CMSL shall adjust the equity derivatives position risk requirement for a written option calculated in paragraph 6.2.21 by deducting an amount equal to –

- (a) any positive excess of the exercise value over the current market value of the underlying equity security, in the case of a call option; or
- (b) any positive excess of the current market value of the underlying equity security over the exercise value, in the case of a put option,

restricted to an adjusted equity derivatives position risk requirement of no less than zero.

Interest rate add-on for equity derivatives contracts

6.2.24 A CMSL shall calculate a position risk requirement to cover the interest rate risk in a position in an equity derivatives contract (whether or not the equity derivatives contract has been treated or included as an equity position or equity derivatives position), by applying one of the following 2 approaches to a notional position in a debt security derived in accordance with paragraph 6.2.25:

- (a) calculate an interest rate position risk requirement using the interest rate add-on basic method as set out in paragraph 6.2.26, and include this in its equity derivatives position risk requirement; or
- (b) include the notional position in the calculation of its debt position risk requirement.

6.2.25 For each position in an equity derivatives contract, a CMSL shall derive a notional position in a zero coupon government debt security in the currency concerned, which –

- (a) shall have a residual maturity equal to the period up to the expiry of the equity derivatives contract;
- (b) shall be of a value equal to the current market value of the underlying equity position; and
- (c) shall be either –
  - (i) a long position, in a case where the underlying equity position is a short position; or
  - (ii) a short position, in a case where the underlying equity position is a long position.

Interest rate add-on basic method

6.2.26 A CMSL shall calculate an interest rate position risk requirement for each notional position as the product of –

- (a) the absolute value of the notional position in the zero coupon government debt security; and
- (b) the appropriate interest rate position risk factor under Table 6E-1 of Annex 6E.

**Subdivision 3: Debt Position Risk Requirement**

6.2.27 A CMSL shall calculate a debt position risk requirement in accordance with paragraphs 6.2.28 to 6.2.42 for any position it holds as a principal in the following debt instruments:

- (a) a debt security, except a debt position hedging an option to the extent that the nominal amount of the debt position is matched by the nominal amount of the debt security underlying the option, which the CMSL has included in the calculation of its debt derivatives position risk requirement;
- (b) a non-convertible preference share; and
- (c) any other instrument that has interest rate position risk.

### Currency

6.2.28 For the purposes of paragraph 6.2.27, a CMSL applying the debt building block method as set out in paragraph 6.2.35 to 6.2.42, shall allocate each debt position to an appropriate currency portfolio, and calculate the debt position risk requirement on a currency portfolio by currency portfolio basis.

### Convertible security

6.2.29 For the purposes of paragraph 6.2.27, a CMSL shall include a convertible security in the calculation of its debt position risk requirement, except where the convertible security is one that meets the conditions in paragraph 6.2.1(c) or where the CMSL is permitted under paragraph 6.2.4 to elect and has elected to calculate an equity position risk requirement for the convertible security.

### Inclusion of debt derivatives contracts

6.2.30 For the purposes of paragraph 6.2.27, a CMSL may include any position it holds as a principal in the following debt derivatives contracts:

- (a) a futures contract, forward contract or CFD on a debt security, an index of debt securities or a basket of debt securities;
- (b) an interest rate futures contract or a forward rate agreement;
- (c) an interest rate swap;
- (d) an option on a debt security or an interest rate, provided that the option is in the money by at least the appropriate debt standard method position risk factor set out in Table 6D-1 of Annex 6D for the underlying debt security;
- (e) an option on a futures contract or forward contract on a debt security, or an interest rate, provided that the option is in the money by at least the appropriate debt standard method position risk factor set out in Table 6D-1 of Annex 6D for the underlying debt position;
- (f) an option on a swap, provided that the option is in the money by at least the appropriate debt standard method position risk factor set out in Table 6D-1 of Annex 6D for the underlying debt position;
- (g) a warrant or an option on a debt security, an index of debt securities or a basket of debt securities, provided that the warrant or option is in the money by at least the appropriate debt standard method position risk factor set out in Table 6D-1 of Annex 6D for the underlying debt position;

- (h) a synthetic long or short position in a debt security, an index of debt securities or a basket of debt securities; and
- (i) a credit derivatives contract that the CMSL holds to hedge against a position for which the CMSL is calculating a debt position risk requirement, and where at least one of the sub-paragraphs of paragraph 2.4 of Annex 6B apply<sup>39</sup>.

6.2.31 For the purpose of including a position in a debt derivatives contract in the calculation of its debt position risk requirement, a CMSL shall derive the notional position of the debt derivatives contract in accordance with paragraph 6.1.6.

#### Methods to calculate debt position risk requirement

6.2.32 A CMSL shall use either of the following methods to calculate the debt position risk requirement and apply the chosen method consistently for all positions included in the calculation:

- (a) debt standard method as set out in paragraph 6.2.34; or
- (b) debt building block method as set out in paragraphs 6.2.35 to 6.2.42.

6.2.33 The debt position risk requirement of a CMSL shall be the aggregate of the debt position risk requirements calculated in accordance with paragraph 6.2.32<sup>40</sup>.

#### Debt standard method

6.2.34 A CMSL applying the debt standard method shall calculate its debt position risk requirement by carrying out the following steps:

- (a) determine the net position in each debt security by netting gross positions in the debt security;
- (b) calculate a debt position risk requirement for each net position in the debt security, as the product of the absolute value of the current market value of the debt security and the appropriate debt standard method position risk factor as set out in Table 6D-1 of Annex 6D; and
- (c) aggregate the debt position risk requirements for all net positions in debt securities calculated in accordance with sub-paragraph (b).

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<sup>39</sup> A CMSL may recognise the offset in accordance with paragraph 2.4 of Annex 6B only where the CMSL applies the debt building block method as set out in paragraphs 6.2.35 to 6.2.42.

<sup>40</sup> For the avoidance of doubt, this includes the position risk requirement calculated in accordance with paragraph 6.2.24(b) or 6.2.75(b).

#### Debt building block method

6.2.35 A CMSL applying the debt building block method shall calculate its debt position risk requirement of the CMSL, as the aggregate of the debt specific risk requirement calculated in accordance with paragraphs 6.2.36 and 6.2.37, and the debt general risk requirement calculated in accordance with paragraph 6.2.38 for all currency portfolios.

#### Debt specific risk requirement

6.2.36 To calculate the debt specific risk requirement for a currency portfolio, a CMSL shall –

- (a) in the case of a credit derivatives contract and its hedged position for which a CMSL has applied an offset pursuant to paragraph 2.4 of Annex 6B, multiply the current market value of the resulting net position (ignoring the sign) by the appropriate debt specific risk position risk factor as set out in Table 6D-2 of Annex 6D; and
- (b) in all other cases –
  - (i) allocate each gross position in debt securities to an appropriate currency portfolio in accordance with paragraph 6.2.28;
  - (ii) net long and short positions in each debt security allocated to that currency portfolio;
  - (iii) calculate, for each net position in a currency portfolio, the product of –
    - (A) the absolute value of the current market value of the net position; and
    - (B) the appropriate debt specific risk position risk factor set out in Table 6D-2 of Annex 6D; and
  - (iv) calculate the debt specific risk requirement as the aggregate of the product calculated in sub-paragraph (b)(iii) for all net positions in that currency portfolio.

6.2.37 A CMSL shall calculate a debt specific risk requirement for both the credit derivatives contract and the hedged position if the conditions for applying an offset set out in paragraph 2.4 of Annex 6B are not met.

#### Debt general risk requirement

6.2.38 To calculate the debt general risk requirement for a currency portfolio, a CMSL shall –

- (a) allocate each gross position in debt securities to an appropriate currency portfolio in accordance with paragraph 6.2.28;
- (b) net long and short positions in each debt securities allocated to that currency portfolio; and
- (c) apply the maturity method or, where the CMSL is permitted under paragraph 6.2.40 to elect and has elected to, the duration method, to calculate the debt general risk requirement for that currency portfolio.

#### Maturity method

6.2.39 For the purpose of calculating the debt general risk requirement for a currency portfolio under the maturity method, a CMSL shall –

- (a) allocate each net position in debt securities in that currency portfolio into an appropriate maturity band according to the residual maturity and coupon of the debt securities in accordance with Table 6D-3 of Annex 6D. Fixed rate debt securities shall be allocated according to the residual term to maturity and floating rate debt securities according to the residual term to the next repricing date;
- (b) for each maturity band, calculate the total gross long positions as the aggregate of all long positions in the maturity band, and calculate the total gross short position as the aggregate of all short positions in the maturity band;
- (c) for each maturity band, calculate the risk-weighted long position as the product of the total gross long position and the appropriate maturity band general position risk factor as set out in Table 6D-3 of Annex 6D; and calculate the risk-weighted short position as the product of the total gross short position and the appropriate maturity band general position risk factor as set out in Table 6D-3 of Annex 6D;
- (d) calculate the maturity band requirement, as follows:
  - (i) for each maturity band, calculate the maturity band matched amount, being the absolute value of the lesser of the risk-weighted long or short positions in that maturity band;



- (ii) for each maturity band, calculate the product of the maturity band matched amount and the appropriate maturity band matching factor as set out in Table 6D-5 of Annex 6D; and
  - (iii) aggregate the product calculated in sub-paragraph (d)(ii) for all maturity bands;
- (e) calculate the zone requirement, as follows:
- (i) for each zone, calculate the zone matched amount, as the absolute value of the lesser of the aggregate of all risk-weighted long positions of maturity bands in that zone, and the aggregate of all risk-weighted short positions of maturity bands in that zone;
  - (ii) for each zone, calculate the product of the zone matched amount and the appropriate zone matching factor; and
  - (iii) aggregate the product calculated in sub-paragraph (e)(ii) for all zones;
- (f) calculate the adjacent zone requirement, as follows:
- (i) for each zone, calculate the zone unmatched amount as the net of the aggregate of all risk-weighted long positions of maturity bands in that zone, and the aggregate of all risk-weighted short positions in that zone;
  - (ii) for a first pair of adjacent zones, to the extent that an offset can be made, calculate the “adjacent zone matched amount” as the absolute value of the lesser of the 2 zone unmatched amounts of the 2 adjacent zones;
  - (iii) calculate the product of the adjacent zone matched amount and the appropriate adjacent zone matching factor as set out in Table 6D-5 of Annex 6D;
  - (iv) calculate the net amount of the 2 offsetting zone unmatched amounts of the first pair of adjacent zones and allocate this to one of the 2 zones;
  - (v) for the second pair of adjacent zones, to the extent that there are zone unmatched amounts that can be offset, repeat the steps in sub-paragraphs (f)(ii) and (f)(iii), and continue to carry out the step in sub-paragraph (f)(vi);

- (vi) calculate the net amount of the 2 offsetting zone unmatched amounts of the second pair of adjacent zones, and allocate this to one of the 2 adjacent zones; and
  - (vii) aggregate the product calculated in accordance with sub-paragraph (f)(iii) for the 2 pairs of adjacent zones;
- (g) to the extent that there are unmatched amounts in non-adjacent zones after sub-paragraph (f) and an offset can be made, calculate a non-adjacent zone requirement, as follows:
- (i) calculate the non-adjacent zone matched amount as the absolute value of the lesser of the non-adjacent zone unmatched amounts; and
  - (ii) calculate the product of the non-adjacent zone matched amount and the appropriate non-adjacent zone matching factor as set out in Table 6D-5 of Annex 6D;
- (h) calculate the net position risk requirement as the absolute value of the aggregate of the unmatched risk-weighted long and short positions after sub-paragraphs (d) to (g) above; and
- (i) calculate the debt general risk requirement as the aggregate of the –
- (i) maturity band requirement;
  - (ii) zone requirement;
  - (iii) adjacent zone requirement;
  - (iv) non-adjacent zone requirement; and
  - (v) net position risk requirement,
- as determined in sub-paragraphs (d) to (h).

#### Duration method

6.2.40 A CMSL may apply the duration method to calculate its debt general risk requirement provided it has received the prior written approval of the Authority.

6.2.41 For the purpose of calculating the debt general risk requirement of a currency portfolio under the duration method, a CMSL shall apply the steps in paragraph 6.2.39, as modified in the following manner:

- (a) instead of the risk-weighted net position in paragraph 6.2.39(c), the CMSL shall calculate the duration weight of each position, as the product of the current market value of a position, modified duration of the position, and duration method debt general position risk factor as set out in Table 6D-4 of Annex 6D, where modified duration is calculated in accordance with the formula below:

$$\text{Modified duration} = \frac{\text{Duration (D)}}{(1+r)}$$

$$D = \frac{\sum_{t=1}^m \frac{(t \times C_t)}{(1+r)^t}}{\sum_{t=1}^m \frac{C_t}{(1+r)^t}}$$

where –

r = yield to maturity;

C<sub>t</sub> = cash payment in time t;

m = total residual maturity;

- (b) any reference to residual maturity in paragraph 6.2.39 shall be read as a reference to modified duration; and
- (c) any reference to matching factor in paragraph 6.2.39 shall be read as a reference to the matching factor in the duration method.

6.2.42 For the purpose of paragraphs 6.2.39 and 6.2.41, a CMSL shall use separate slotting tables for positions in each currency, except in respect of those currencies in which the CMSL has insignificant exposure to. In such a case, the CMSL may construct a single maturity ladder and slot, within each appropriate maturity band, the net long or short position for each currency. The CMSL shall calculate the individual weighted net long and short positions for each maturity band, by multiplying the net positions by the corresponding debt general risk position risk factor in Table 6D-3 or Table 6D-4 of Annex 6D. The weighted net positions are to be summed within each maturity band, irrespective of whether they are long or short positions, to produce a gross position figure. The CMSL shall then –

- (a) in the case of a CMSL applying the maturity method, apply the treatment specified in paragraph 6.2.39(d) to (i); or

- (b) in the case of a CMSL applying the duration method, apply the treatment specified in paragraph 6.2.39(d) to (i) as modified by paragraph 6.2.41(c).

#### **Subdivision 4: Debt Derivatives Position Risk Requirement**

6.2.43 A CMSL shall calculate a debt derivatives position risk requirement in accordance with paragraphs 6.2.44 to 6.2.53 for any position in a debt derivatives contract, except to the extent that the CMSL is permitted under paragraph 6.2.30 to elect and has elected to calculate a debt position risk requirement for the debt derivatives contract.

6.2.44 A CMSL shall use any of the following methods, as applicable, to calculate the debt derivatives position risk requirement:

- (a) debt hedging method as set out in paragraph 6.2.46;
- (b) debt margin method as set out in paragraphs 6.2.47 to 6.2.49; and
- (c) debt basic method as set out in paragraphs 6.2.50 to 6.2.53.

6.2.45 The debt derivatives position risk requirement of a CMSL shall be the aggregate of the debt derivatives position risk requirements calculated in accordance with paragraph 6.2.44.

##### Debt hedging method

6.2.46 A CMSL may use the debt hedging method specified in Table 6F-1 of Annex 6F to calculate a debt derivatives position risk requirement in relation to a position in a debt security hedging a position in an option on that debt security, to the extent that the position in the debt security matches the notional position in the debt security underlying the option.

##### Debt margin method

6.2.47 A CMSL may use the debt margin method to calculate a debt derivatives position risk requirement for a position in a debt derivatives contract traded on any approved exchange or overseas exchange, and that is subject to a positive margin requirement specified by that approved exchange, overseas exchange, or a clearing facility appointed by that approved exchange or overseas exchange.

6.2.48 A CMSL applying the debt margin method shall calculate the debt derivatives position risk requirement –

- (a) in the case of a debt derivatives contract traded on an approved exchange or a recognised exchange, as 2 times the margin specified by the approved exchange, approved clearing house, recognised exchange, or a clearing facility appointed by the approved exchange or recognised exchange (as the case may be); and

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- (b) in the case of a debt derivatives contract traded on any other exchange, as 3 times the margin specified by the exchange or a clearing facility appointed by the exchange.

6.2.49 For the purposes of paragraph 6.2.48, “margin”, in a case where margin requirements for positions in debt derivatives contracts are calculated on a net basis, means the net margin so calculated.

#### Debt basic method

6.2.50 A CMSL may use the debt basic method to calculate a debt derivatives position risk requirement for a position in a warrant, forward contract, futures contract, swap, CFD, option or a synthetic long or short position in relation to a debt security or an interest rate.

6.2.51 Subject to paragraphs 6.2.52 and 6.2.53, a CMSL applying the debt basic method shall calculate the debt derivatives position risk requirement as the product of –

- (a) the absolute value of the current market value of the notional position calculated in accordance with paragraph 6.1.6; and
- (b) the appropriate debt standard method position risk factor set out in Table 6D-1 of Annex 6D.

6.2.52 In the case of a warrant or purchased option, a CMSL may restrict the debt derivatives position risk requirement calculated in accordance with paragraph 6.2.51 to the current market value of the warrant or option, respectively.

6.2.53 A CMSL shall adjust the debt derivatives position risk requirement for a written option calculated in accordance with paragraph 6.2.51 by deducting an amount equal to –

- (a) any positive excess of the exercise value over the current market value of the underlying debt securities, in the case of a call option; or
- (b) any positive excess of the current market value of the underlying debt securities over the exercise value, in the case of a put option,

restricted to an adjusted debt derivatives position risk requirement of no less than zero.

## Subdivision 5: Commodity Position Risk Requirement

6.2.54 A CMSL shall calculate a commodity position risk requirement in accordance with paragraphs 6.2.55 to 6.2.63 for any position it holds as a principal in any physical commodity or any other instrument that has commodity position risk except gold, and where permitted under paragraph 6.2.58, a position it holds as a principal in a physical commodity derivatives contract except a gold derivatives contract.

6.2.55 For the purpose of calculating its commodity position risk requirement, a CMSL shall –

- (a) express any position in terms of the standard unit of measurement for that position;
- (b) value any position at the current spot price of the physical commodity, converted to the functional currency of the CMSL at the prevailing spot rate; and
- (c) group all its physical commodity positions on a commodity-by-commodity basis, including notional positions in the relevant physical commodity arising from its positions in physical commodity derivatives contracts calculated in accordance with paragraph 6.2.59.

6.2.56 For the purposes of paragraph 6.2.55, a CMSL shall not treat different brands or grades of the same physical commodity as the same physical commodity unless they –

- (a) can be delivered against each other; or
- (b) are close substitutes of each other and have price movements which have exhibited a stable correlation coefficient of at least 0.9 over the last 12 months. The CMSL shall then monitor the correlation coefficient to ensure that it remains at 0.9 on a continuing basis.

6.2.57 A CMSL that intends to rely on the approach in paragraph 6.2.56(b) shall obtain the prior approval of the Authority.

### Inclusion of commodity derivatives contracts

6.2.58 For the purposes of paragraph 6.2.54, a CMSL may include any position it holds as a principal in the following physical commodity derivatives contracts:

- (a) a futures contract, forward contract or a CFD on a physical commodity;

- (b) a commitment to buy or sell a single physical commodity at an average of spot prices prevailing in the future;
- (c) a futures contract or a CFD on a physical commodity index;
- (d) a physical commodity swap; and
- (e) an option on a physical commodity or physical commodity index provided that the option is in the money by at least the commodity net position risk factor.

6.2.59 For the purpose of including a position in a physical commodity derivatives contract in the calculation of its commodity position risk requirement, a CMSL shall derive the notional position of the physical commodity derivatives contract in accordance with paragraph 6.1.6.

Methods to calculate commodity position risk requirement

6.2.60 A CMSL shall use either of the following methods to calculate the commodity position risk requirement and apply the chosen method consistently for all positions included in the calculation:

- (a) commodity standard method as set out in paragraph 6.2.62; or
- (b) commodity maturity ladder method as set out in paragraph 6.2.63.

6.2.61 The commodity position risk requirement of a CMSL shall be the aggregate of the commodity position risk requirements calculated in accordance with paragraph 6.2.60.

Commodity standard method

6.2.62 A CMSL applying the commodity standard method shall calculate the commodity position risk requirement for each physical commodity as the aggregate of –

- (a) the product of –
  - (i) the net position; and
  - (ii) the commodity net position risk factor of 15%; and
- (b) the product of –
  - (i) the gross position, being the aggregate of –
    - (A) the absolute value of the aggregate of the long positions; and

- (B) the absolute value of the aggregate of the short positions; and
- (ii) the commodity gross position risk factor of 3%.

Commodity maturity ladder method

6.2.63 A CMSL applying the commodity maturity ladder method shall calculate the commodity position risk requirement for each physical commodity by –

- (a) offsetting long and short positions maturing –
  - (i) on the same day; or
  - (ii) in the case of positions arising under contracts traded in markets with daily delivery dates, within 10 business days of each other;
- (b) allocating the positions remaining to the appropriate maturity time-bands as follows:
  - (i) up to 1 month<sup>41</sup>;
  - (ii) more than 1 month but not more than 3 months;
  - (iii) more than 3 months but not more than 6 months;
  - (iv) more than 6 months but not more than 12 months;
  - (v) more than 1 year but not more than 2 years;
  - (vi) more than 2 years but not more than 3 years; and
  - (vii) more than 3 years;
- (c) matching long and short positions within each time-band. In each instance, calculating a spread charge equal to the sum of long and short positions matched multiplied by the spread rate of 1.5%;
- (d) carrying unmatched positions remaining to another time-band where they can be matched, then matching them until all matching possibilities are exhausted. In each instance, calculating –

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<sup>41</sup> Spot positions are allocated to this time-band.



- (i) a carry charge equal to the carried position multiplied by the carry rate of 0.6% and the number of time-bands by which the position is carried; and
  - (ii) a spread charge equal to each long and short position matched multiplied by the spread rate of 1.5%;
- (e) calculating the outright charge on the remaining positions (which will either be all long positions or all short positions) equal to the sum of the remaining positions (ignoring the sign) multiplied by the outright rate of 15%; and
- (f) summing the spread charges, carry charge and outright charge calculated in sub-paragraphs (c) to (e) above.

#### **Subdivision 6: Commodity Derivatives Position Risk Requirement**

6.2.64 A CMSL shall calculate a commodity derivatives position risk requirement in accordance with paragraphs 6.2.65 to 6.2.77 for any position in a physical commodity derivatives contract (other than a derivatives contract on gold), except to the extent that the CMSL is permitted under paragraph 6.2.58 to elect and has elected to calculate a commodity position risk requirement for the physical commodity derivatives contract.

6.2.65 A CMSL shall use any of the following methods, as applicable, to calculate the commodity derivatives position risk requirement:

- (a) commodity hedging method set out in paragraph 6.2.67;
- (b) commodity margin method set out in paragraphs 6.2.68 to 6.2.70; or
- (c) commodity basic method set out in paragraphs 6.2.71 to 6.2.74.

6.2.66 The commodity derivatives position risk requirement of a CMSL shall be the aggregate of the commodity derivatives position risk requirements calculated in accordance with paragraph 6.2.65<sup>42</sup>.

#### Commodity hedging method

6.2.67 A CMSL may use the commodity hedging method specified in Table 6F-1 of Annex 6F to calculate a commodity derivatives position risk requirement in relation to a position in a physical commodity hedging a position in an option on that physical commodity, to the

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<sup>42</sup> For the avoidance of doubt, this includes the position risk requirement calculated in accordance with paragraph 6.2.75(a).

extent that the position in the physical commodity matches the notional position in the physical commodity underlying the option.

#### Commodity margin method

6.2.68 A CMSL may use the commodity margin method to calculate a commodity derivatives position risk requirement for a position in a physical commodity derivatives contract traded on any approved exchange or overseas exchange, and that is subject to a positive margin requirement specified by that approved exchange, overseas exchange, or a clearing facility appointed by that approved exchange or overseas exchange.

6.2.69 A CMSL applying the commodity margin method shall calculate the commodity derivatives position risk requirement –

- (a) in the case of a physical commodity derivatives contract traded on an approved exchange or a recognised exchange, as 2 times the margin specified by the approved exchange, approved clearing house, recognised exchange, or a clearing facility appointed by the approved exchange or the recognised exchange (as the case may be); and

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- (b) in the case of a physical commodity derivatives contract traded on any other exchange, as 3 times the margin specified by the exchange or a clearing facility appointed by the exchange.

6.2.70 For the purposes of paragraph 6.2.69, “margin”, in a case where margin requirements for positions in physical commodity derivatives contracts are calculated on a net basis, means the net margin so calculated.

#### Commodity basic method

6.2.71 A CMSL may use the commodity basic method to calculate a commodity derivatives position risk requirement for a position in a forward contract, futures contract, swap, CFD, option or commitment in relation to a position in a physical commodity.

6.2.72 Subject to paragraphs 6.2.73 and 6.2.74, a CMSL applying the commodity basic method shall calculate the commodity derivatives position risk requirement as the aggregate of –

- (a) the product of –
  - (i) the absolute value of the current market value of the notional position calculated in accordance with paragraph 6.1.6; and
  - (ii) the commodity derivatives net position risk factor of 15%; and

- (b) the product of –
  - (i) the gross position, being the aggregate of –
    - (A) the absolute value of the aggregate of the long positions; and
    - (B) the absolute value of the aggregate of the short positions; and
  - (ii) the commodity derivatives gross position risk factor of 3%.

6.2.73 In the case of a purchased option, a CMSL may restrict the commodity derivatives position risk requirement calculated in accordance with paragraph 6.2.72 to the current market value of the option, respectively.

6.2.74 A CMSL shall adjust the commodity derivatives position risk requirement for a written option calculated in accordance with paragraph 6.2.72 by deducting an amount equal to –

- (a) any positive excess of the exercise value over the current market value of the underlying physical commodity, in the case of a call option; or
- (b) any positive excess of the current market value of the underlying physical commodity over the exercise value, in the case of a put option,

restricted to an adjusted commodity derivatives position risk requirement of no less than zero.

#### Interest rate add-on for commodity derivatives contracts

6.2.75 A CMSL shall calculate a position risk requirement to cover the interest rate risk in a position in a physical commodity derivatives contract (whether or not the physical commodity derivatives contract has been treated or included as a position in a physical commodity or position in a physical commodity derivatives contract) by applying one of the following 2 approaches to a notional position in a debt security derived in accordance with paragraph 6.2.76:

- (a) calculate an interest rate position risk requirement using the interest rate add-on basic method set out in paragraph 6.2.77, and include this in its commodity derivatives position risk requirement; or
- (b) include the notional position in the calculation of its debt position risk requirement.

6.2.76 For each position in a physical commodity derivatives contract, a CMSL shall derive a notional position in a zero coupon government debt security in the currency concerned, which –

- (a) shall have a residual maturity equal to the period up to the expiry of the physical commodity derivatives contract;
- (b) shall be of a value equal to the current market value of the underlying position in the physical commodity; and

shall be either –

- (i) a long position, in a case where the underlying position in the physical commodity is a short position; or
- (ii) a short position, in a case where the underlying position in the physical commodity is a long position.

Interest rate add-on basic method

6.2.77 A CMSL shall calculate an interest rate position risk requirement for each notional position as the product of –

- (a) the absolute value of the notional position in the zero coupon government debt security; and
- (b) the appropriate interest rate position risk factor under Table 6E-1 of Annex 6E.

**Subdivision 7: Foreign Exchange Risk Requirement**

6.2.78 A CMSL shall calculate a foreign exchange risk requirement in accordance with paragraphs 6.2.79 to 6.2.86 for its positions in foreign currencies<sup>43</sup> and gold.

Net open position in each foreign currency

6.2.79 Subject to paragraph 6.2.80, a CMSL shall calculate for each foreign currency, its net position in the foreign currency as the aggregate of the following:

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<sup>43</sup> For the purpose of calculating foreign exchange risk requirement, foreign currencies are currencies other than the functional currency of the CMSL.

- (a) net spot position, being the amount of all assets less all liabilities denominated in the foreign currency, and including options denominated in the foreign currency;
- (b) the aggregate of amounts in the foreign currency to be received by the CMSL less the aggregate of amounts in the foreign currency to be paid by the CMSL in relation to foreign currency positions arising from any futures contract or forward contract, including a forward contract associated with cross-currency swaps or other derivatives contracts;
- (c) net positions in products denominated in the foreign currency in relation to any non-foreign currency futures contract, forward contract and other derivatives contracts;
- (d) net underwriting positions in securities denominated in the foreign currency which are unplaced, unsold or unallotted from the day the underwriting arrangement ends, being a day no later than the day after allotment of or close of applications for subscription for securities, whichever is the later; and
- (e) any other off-balance sheet commitment that would result in an asset or liability that is denominated in the foreign currency,

but does not include –

- (i) at the election of the CMSL, any asset deducted in the computation of financial resources or adjusted net head office funds, whichever is applicable;
 

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- (ii) any asset or exposure for which the CMSL has calculated a risk requirement equal to 100% of the value of the asset or the full contract value, as appropriate, under this Notice; and
- (iii) any position the CMSL holds to hedge against a foreign currency position referred to in sub-paragraph (i) or (ii) where the hedging contract is clearly earmarked as a hedge, to the extent that the nominal amount underlying each hedging contract matches the nominal amount of the contract being hedged.

6.2.80 A CMSL shall include a forward contract (including a forward contract associated with a cross-currency swap), futures contract, swap, CFD or option on a foreign currency in the calculation of a net open position in the foreign currency, and shall derive the notional position in accordance with paragraph 6.1.6.

6.2.81 A CMSL shall convert its net open position in each foreign currency to the functional currency of the CMSL (preserving the sign) at the prevailing spot rate.

Net currency open position

6.2.82 A CMSL shall calculate its net currency open position as the higher of the absolute value of –

- (a) the aggregate of net short foreign currency positions; or
- (b) the aggregate of net long foreign currency positions.

Net gold open position

6.2.83 A CMSL shall calculate its net gold open position as the absolute value of the aggregate of the following:

- (a) net spot gold positions, including options on gold;
- (b) the aggregate of all amounts to be received less the aggregate of all amounts to be paid under gold derivatives contracts; and
- (c) any other off-balance sheet commitment that would result in an asset or liability that is denominated in gold,

converted into the functional currency of the CMSL at the prevailing spot rate.

Overall net foreign exchange position

6.2.84 A CMSL shall calculate its overall net foreign exchange position as the aggregate of its net currency open position calculated in accordance with paragraph 6.2.82 and its net gold open position calculated in accordance with paragraph 6.2.83.

Calculation of foreign exchange risk requirement

6.2.85 Subject to paragraph 6.2.86, a CMSL shall calculate its foreign exchange risk requirement as the product of –

- (a) the overall net foreign exchange position calculated in paragraph 6.2.84; and
- (b) the foreign exchange position risk factor of 8%.

6.2.86 The foreign exchange risk requirement of a CMSL shall be zero if the overall net foreign exchange position of the CMSL is not greater than 2% of the financial resources or the adjusted net head office funds, whichever is applicable, of the CMSL.

## Subdivision 8: Other Position Risk Requirement

- 6.2.87 A CMSL licensed only to carry out the regulated activities of –
- (a) fund management;
  - (b) real estate investment trust management;
  - (c) advising on corporate finance;
  - (d) providing custodial services ~~for securities~~;
  - (e) dealing in ~~capital markets products securities~~, where the CMSL is a limited-activity CMSL;
  - ~~(f) trading in futures contracts, where the CMSL is a limited activity CMSL; or~~
  - (f) a combination of the regulated activities set out in (a) to (e);
  - ~~(g) a combination of the regulated activities set out in (a) to (f);~~

which calculates its total risk requirement in accordance with paragraph 3.3.1(b) shall calculate its position risk requirement for any item reported as property, plant and equipment in the balance sheet of the CMSL's latest accounts, as the product of the value of the asset reported in the balance sheet of the CMSL's latest accounts and a position risk factor of 50%.

6.2.88 Where a CMSL acquires or holds a position as a principal in any ~~specified products securities~~, futures contract, forward contract, physical commodity, derivatives contract on a physical commodity, foreign exchange contract, any other financial instrument, or any other non-financial assets other than property, plant, and equipment, for which no method for computation of a position risk requirement has been specified in this Part, except where the CMSL has deducted the asset in the computation of financial resources or adjusted net head office funds, whichever is applicable, under Division 2 of Part III, the CMSL shall –

- (a) immediately consult the Authority and notify the approved exchange or approved clearing house of which the CMSL is a member (if applicable); and  
[SFA 04-N13 (Amendment) 2014]
- (b) until otherwise directed by the Authority, calculate an appropriate position risk requirement for the position, which shall be either –
  - (i) 100% of the current market value of the position; or

- (ii) a percentage of the current market value of the position, or a method of computation as the Authority may allow.



## DERIVATION OF NOTIONAL POSITIONS FOR EQUITY, DEBT, COMMODITIES AND FOREIGN EXCHANGE DERIVATIVES CONTRACTS

### 1 Derivation of Notional Positions for Equity Derivatives Contracts

#### Depository Receipts

1.1 A CMSL should treat a depository receipt as a notional position in the underlying equity security.

#### Convertible Securities

1.2 Where a CMSL includes a convertible security in the equity position risk calculation, it should –

- (a) treat the convertible security as a notional position in the equity security into which it converts; and
- (b) adjust its equity position risk requirement by making –
  - (i) an addition equal to the current value of any loss which the CMSL would make if it did convert to the equity security; or
  - (ii) a deduction equal to the current value of any profit which the CMSL would make if it did convert to the equity security (subject to a maximum reduction equal to the equity position risk requirement on the notional position underlying the convertible security).

#### Futures Contracts, Forward Contracts and CFDs on a Single Equity Security<sup>44</sup>

1.3 A CMSL should treat a futures contract, forward contract or CFD on a single equity security as a notional position in that equity security.

#### Futures Contracts, Forward Contracts and CFDs on an Index or a Basket of Equity Securities<sup>45</sup>

1.4 A CMSL should treat a futures contract, forward contract or CFD on an index or a basket of equity securities as either –

<sup>44</sup> The interest rate risk arising from the other leg of the futures contract, forward contract or CFD shall be included in the position risk requirement to cover interest rate risk calculated in accordance with paragraph 6.2.24.

<sup>45</sup> The interest rate risk arising from the other leg of the futures contract, forward contract or CFD shall be included in the position risk requirement to cover interest rate risk calculated in accordance with paragraph 6.2.24.

- (a) a notional position in each of the underlying equity securities with a value reflecting that equity security's contribution to the total market value of the equity securities in the index or basket; or
- (b) if there is –
  - (i) one country in the index or basket, a notional position in the index or basket with a value equal to the total market value of the equity securities in the index or basket; or
  - (ii) more than one country in the index or basket -
    - (A) several notional basket positions, one for each country basket with a value reflecting that country's contribution to the total market value of the equity securities in the index or basket; or
    - (B) one notional basket position in a separate, hypothetical country with a value equal to the total market value of the equity securities in the index or basket.

#### Equity Swaps<sup>46</sup>

1.5 A CMSL should treat an equity swap where the CMSL is receiving an amount based on the change in value of a single equity security or index of equity securities and paying an amount based on the change in value of another equity security or index of equity securities as a notional long position in the former and a notional short position in the latter.

#### Warrants and Options

1.6 A CMSL should treat a purchased (sold) call warrant or option, or sold (purchased) put warrant or option, on an equity security as a notional long (short) position in the underlying equity security.

## **2 Derivation of Notional Positions for Debt Derivatives Contracts**

#### Futures Contracts, Forward Contracts and CFDs on Debt Security

2.1 A CMSL should treat a purchased (sold) futures contract, forward contract or CFD on a single debt security as –

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<sup>46</sup> Where one of the legs involves receiving/paying a fixed or floating interest rate, that exposure shall be included in the position risk requirement to cover interest rate risk calculated in accordance with paragraph 6.2.24.

- (a) a notional long (short) position in the underlying debt security (or the “cheapest-to-deliver” security<sup>47</sup>, taking into account the conversion factor, where the contract can be satisfied by delivery of one from a range of securities); and
- (b) a notional short (long) position in a zero coupon government debt security (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this Part) or zero coupon zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a residual maturity equal to the expiry date of the futures contract, forward contract or CFD.

Futures Contracts, Forward Contracts and CFDs on an Index or a Basket of Debt Securities

2.2 A CMSL should convert a futures contract, forward contract or CFD on an index or a basket of debt securities into forward contracts on single debt securities as follows:

- (a) in the case of a single currency index or basket of debt securities –
  - (i) a series of forward contracts, one for each of the constituent debt securities in the index or basket, of an amount which is a proportionate part of the total underlying instruments of the contract according to the weighting of the relevant debt security in the index or basket; or
  - (ii) a single forward contract on a hypothetical debt security; or
- (b) in the case of multiple currency indices or baskets of debt securities –
  - (i) a series of forward contracts (using the method described in subparagraph (a)(i) above); or
  - (ii) a series of forward contracts, each one on a hypothetical debt security to represent one of the currencies in the index or basket, of an amount which is a proportionate part of the total underlying instruments of the contract according to the weighting of the relevant currency in the index or basket,

and treat the resulting positions according to paragraph 2.1.

2.3 A CMSL should assign a hypothetical debt security in paragraph 2.2, a debt standard method position risk factor (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this

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<sup>47</sup> The “cheapest-to-deliver” security shall be readily identifiable and most profitable for the CMSL to deliver.

Part) or a debt specific risk position risk factor and a debt general risk position risk factor (in the case of applying paragraph 6.2.32(b) of this Part), equal to the highest that would apply to the debt securities relevant for the hypothetical debt security in the index or basket, even if they relate to different debt securities and regardless of the proportion of those debt securities in the index or basket.

Interest Rate Futures and Forward Rate Agreements

2.4 A CMSL should treat a short (long) interest rate futures contract or a long (short) forward rate agreement as –

- (a) a notional short (long) position in a zero coupon government debt security (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this Part) or zero coupon zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a residual maturity equal to the sum of the period to expiry of the futures contract or settlement date of the forward rate agreement and the maturity of the borrowing or deposit; and
- (b) a notional long (short) position in a zero coupon government debt security (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this Part) or zero coupon zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a residual maturity equal to the period to expiry of the futures contract or settlement date of the forward rate agreement.

Interest Rate Swaps and Foreign Exchange Swaps

2.5 A CMSL should treat interest rate swaps or foreign exchange swaps<sup>48</sup> as two notional positions as follows –

	<b>Notional position 1</b>	<b>Notional position 2</b>
CMSL receives fixed and pays floating	A short position in a government debt security (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this Part) or zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a coupon equal to the floating rate and a residual maturity equal to the reset date.	A long position in a government debt security (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this Part) or zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a coupon equal to the fixed rate of the swap and a residual maturity equal to the period to expiry of the swap.
CMSL receives floating and pays fixed	A short position in a government debt security (in the case of applying paragraph 6.2.32(a) or	A long position in a government debt security (in the case of applying paragraph 6.2.32(a) or

<sup>48</sup> For a foreign exchange swap, the two notional positions would be denominated in different currencies.

	6.2.51 of this Part) or zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a coupon equal to the fixed rate of the swap and a residual maturity equal to the period to expiry of the swap.	6.2.51 of this Part) or zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a coupon equal to the floating rate and a residual maturity equal to the reset date.
CMSL receives and pays floating	A short position in a government debt security (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this Part) or zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a coupon equal to the floating rate and a residual maturity equal to the reset date.	A long position in a government debt security (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this Part) or zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) with a coupon equal to the floating rate and a residual maturity equal to the reset date.

#### Warrants and Options

2.6 A CMSL should treat a purchased (sold) call warrant or option, or sold (purchased) put warrant or option, on a debt security, as a notional long (short) position in the underlying debt security.

2.7 A CMSL should treat an option on an interest rate as a notional position in a zero coupon government debt security (in the case of applying paragraph 6.2.32(a) or 6.2.51 of this Part) or zero coupon zero-specific-risk debt security (in the case of applying paragraph 6.2.32(b) of this Part) as follows:

- (a) as a long (short) position, in the case of a purchased (sold) call option or a sold (purchased) put option;
- (b) of a value equal to the nominal value of the option; and
- (c) which has a residual maturity equal to the sum of the period to expiry of the option and the period for which the interest rate is fixed.

2.8 A CMSL should treat an option on a futures contract or forward contract on a debt security or on an index or a basket of debt securities as a notional position in the underlying futures contract or forward contract.

2.9 A CMSL should treat an option on an interest rate futures contract or a forward rate agreement as a notional position in the underlying interest rate futures contract or forward rate agreement.

### Credit Default Swaps

2.10 A CMSL that is a protection seller (buyer) should treat its position in a credit default swap as –

- (a) for the purpose of calculating the debt general risk requirement where any periodic premiums or interest payments are due under the swap, a notional long (short) position in a zero-specific-risk debt security with a coupon equal to the appropriate fixed or floating rate and a residual maturity equal to the expiry date of the swap or the date on which the interest rate will be reset, respectively; and
- (b) for the purpose of calculating the debt specific risk requirement, a notional long (short) position in the reference obligation, or where the swap is a qualifying debt security referred to in Annex 6D, a long (short) position in the swap, with a residual maturity equal to the expiry date of the swap.

### Total Rate of Return Swaps

2.11 A CMSL that is a protection seller (buyer) should treat its position in a total rate of return swap as –

- (a) for the purpose of calculating the debt general risk requirement –
  - (i) a notional long (short) position in the reference obligation with a residual maturity equal to the expiry date of the swap; and
  - (ii) where any periodic premiums or interest payments are due under the swap, a notional short (long) position in a zero-specific-risk debt security with a coupon equal to the appropriate fixed or floating rate and a residual maturity equal to the expiry date of the swap or the date on which the interest rate will be reset respectively; and
- (b) for the purpose of calculating the debt specific risk requirement, a notional long (short) position in the reference obligation with a residual maturity equal to the expiry date of the swap.

### First-to-default Credit Derivatives Contracts

2.12 A CMSL that is a protection seller (buyer) should treat its position in a first-to-default credit derivatives contract as –

- (a) for the purpose of calculating the debt general risk requirement where any periodic premiums or interest payments are due under the credit derivatives contract, a notional long (short) position in a zero-specific-risk debt security with a coupon equal to the appropriate fixed or floating rate and a residual

maturity equal to the expiry date of the credit derivatives contract or the date on which the interest rate will be reset respectively;

- (b) for the purpose of calculating the debt specific risk requirement, long (short) positions in each of the reference obligations in the contract, with the debt specific risk requirement capped at the maximum payout possible under the contract.

2.13 Where a CMSL holds a risk position in one of the reference obligations underlying a first-to-default credit derivatives contract, and this credit derivatives contract hedges the risk position, the CMSL may reduce with respect to the hedged amount both the debt specific risk requirement for the reference obligation and that part of the debt specific risk requirement for the credit derivatives contract that relates to this particular reference obligation. Where a CMSL holds multiple risk positions in reference obligations underlying a first-to-default credit derivatives contract, this offset is only allowed for that underlying reference obligation having the lowest debt specific risk requirement.

### **3 Derivation of Notional Positions for Physical Commodity Derivatives Contracts (Excluding Gold Derivatives Contracts)**

#### Futures Contracts, Forward Contracts and CFDs on a Single Physical Commodity<sup>49</sup>

3.1 A CMSL should treat a futures contract, forward contract or CFD on a single physical commodity which settles according to the difference between the price set on trade date and that prevailing at the maturity date of the contract as a notional position equal to the total quantity of the physical commodity underlying the contract that has a maturity equal to the expiry date of the contract.

#### Commitment to Buy or Sell a Single Physical Commodity at an Average of Spot Prices Prevailing in the Future

3.2 A CMSL should treat a commitment to buy (sell) at the average spot price of a single physical commodity prevailing over some period between trade date and maturity date as a combination of –

- (a) a long (short) position equal to the total quantity of the physical commodity underlying the contract with a maturity equal to the maturity date of the contract; and
- (b) a series of short (long) notional positions, one for each of the reference dates where the contract price remains unfixed, each of which is a fractional share

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<sup>49</sup> The interest rate risk arising from the other leg of the futures contract, forward contract or CFD shall be included in the position risk requirement to cover interest rate risk calculated in accordance with paragraph 6.2.75.

of the total quantity of the physical commodity underlying the contract and has a maturity equal to the relevant reference date.

Futures Contracts and CFDs on a Physical Commodity Index<sup>50</sup>

3.3 A CMSL should treat a futures contract or CFD on a physical commodity index which settles according to the difference between the price set on trade date and that prevailing at the maturity date of the contract as either –

- (a) a single notional physical commodity position (separate from all other physical commodities) equal to the total quantity of the physical commodities underlying the contract that has a maturity equal to the maturity date of the contract; or
- (b) a series of notional positions, one for each of the constituent physical commodities in the index, each of which is a proportionate part of the total quantity of the physical commodities underlying the contract according to the weighting of the relevant physical commodity in the index and has a maturity equal to the maturity date of the contract.

Commodity Swaps<sup>51</sup>

3.4 A CMSL should treat a physical commodity swap as a series of notional positions, one for each payment under the swap, each of which equals the total quantity of the physical commodity underlying the contract, has a maturity equal to the payment date and is long or short as follows:

	<b>Receiving amounts unrelated to any physical commodity's price</b>	<b>Receiving the price of physical commodity 'b'</b>
Paying amounts unrelated to any physical commodity's price	N.A.	Long positions in physical commodity 'b'
Paying the price of physical commodity 'a'	Short positions in physical commodity 'a'	Short positions in physical commodity 'a' and long positions in physical commodity 'b'

<sup>50</sup> The interest rate risk arising from the other leg of the futures contract, forward contract or CFD shall be included in the position risk requirement to cover interest rate risk calculated in accordance with paragraph 6.2.75.

<sup>51</sup> Where one of the legs involves receiving/paying a fixed or floating interest rate, that exposure shall be included in the position risk requirement to cover interest rate risk calculated in accordance with paragraph 6.2.75.



### Options

3.5 A CMSL should treat an option on a physical commodity or commodity index as a notional position in the underlying physical commodity position.

## **4 Derivation of Notional Positions for Foreign Currency and Gold Derivatives Contracts**

### Foreign Exchange Futures Contracts, Forward Contracts and CFDs

4.1 A CMSL should treat a futures contract, forward contract or CFD on foreign exchange as two notional currency positions:

- (a) a long notional position in the currency which the CMSL has contracted to buy; and
- (b) a short notional position in the currency which the CMSL has contracted to sell,

where each notional position has a value equal to the present value<sup>52</sup> of the amount of each currency to be exchanged in the case of a futures contract or forward contract.

### Foreign Exchange Swaps

4.2 A CMSL should treat a swap on foreign exchange as –

- (a) a long notional position in the currency which the CMSL has contracted to receive interest and principal; and
- (b) a short notional position in the currency which the CMSL has contracted to pay interest and principal,

where each notional position has a value equal to the present value amount of all cash flows in the relevant currency.

### Futures Contracts, Forward Contracts and CFDs on Gold

4.3 A CMSL should treat a futures contract, forward contract or CFD on gold as a notional position in gold with a value equal to the amount of gold underlying the contract multiplied by the current spot price for gold, except in the case of a forward contract where the CMSL, in accordance with industry norms, may use the net present value of each position, discounted using prevailing interest rates and valued at prevailing spot rates.

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<sup>52</sup> This is normally equal to the amount underlying the contract multiplied by the current spot price, except in the case of a forward contract where the CMSL, in accordance with industry norms, may use the net present value of each position, discounted using prevailing interest rates and valued at prevailing spot rates.

#### Foreign Exchange Options

4.4 A CMSL should treat a purchased (written) call option, or a written (purchased) put option, as a long (short) position in the commodity currency and a short (long) position in the term currency, each of an amount equivalent to the notional face value of the underlying contract.

#### Options on Gold

4.5 A CMSL should treat an option on gold as a notional position in the underlying gold position.

## NETTING FOR POSITION RISK REQUIREMENT

### 1 Netting for Equity and Equity Derivatives Position Risk Requirement

1.1 For the purpose of calculating the equity position risk requirement or the equity derivative position risk requirement, a CMSL may net –

- (a) a long position against a short position (including notional positions) in an identical equity security<sup>53</sup>, equity index or equity basket in the same country portfolio; and
- (b) a matched position in a depository receipt against the corresponding underlying equity security or identical equity securities in different country portfolios provided that any costs of conversion are fully taken into account<sup>54</sup>.

1.2 Notwithstanding paragraph 1.1, a CMSL that intends to net long and short positions in an arbitrage strategy<sup>55</sup> shall obtain the prior approval of the Authority. The Authority may grant the approval subject to such conditions or restrictions as the Authority may impose.

### 2 Netting for Debt and Debt Derivatives Position Risk Requirement

2.1 For the purpose of calculating the debt position risk requirement or debt derivatives position risk requirement, a CMSL may net -

- (a) a long position against a short position (including notional positions) in an identical issue<sup>56</sup>; or
- (b) a matched position in a futures contract or forward contract against its corresponding underlying exposures or financial instruments<sup>57</sup>.

<sup>53</sup> Two equities are the same if they enjoy the same rights in all respects and are fungible with each other.

<sup>54</sup> Any foreign exchange risk arising out of these positions shall be dealt with under foreign exchange position risk requirement.

<sup>55</sup> Examples of arbitrage strategies include futures-related arbitrage strategies such as when a CMSL takes an opposite position in exactly the same index at different dates or in different market centres, or when a CMSL takes an opposite position in contracts at the same date in a different but similar index.

<sup>56</sup> Even though the issuer is the same, no offsetting shall be permitted between different issues since differences in coupon rates, liquidity, call features, etc. mean that prices may diverge in the short run.

<sup>57</sup> However, the position representing the time to expiry of the futures contract or forward contract should be included in the calculation of the position risk requirement.

2.2 Where a futures contract or forward contract comprises a range of deliverable debt securities, a CMSL may net a short position in the futures contract or forward contract against a long position in the corresponding “cheapest-to-deliver” underlying security. This netting is permitted only where the CMSL has sold the futures contract or forward contract.

2.3 A CMSL may net opposite positions in the same category of interest rate or debt-related instruments if –

(a) the positions –

- (i) relate to the same underlying instruments;
- (ii) are of the same notional value; and
- (iii) are denominated in the same currency,

and –

(b) in the case of –

- (i) futures contracts, the offsetting positions in the notional or underlying instrument to which the futures contract relates are for identical products and mature within 7 days of each other;
- (ii) swaps and forward rate agreements, the reference rates (for floating rate positions) are identical and the coupons are closely matched (i.e. within 15 basis points); and
- (iii) swaps, forward rate agreements and forward contracts, the next interest fixing date or, for fixed coupon positions or forward contracts, the residual maturity correspond as follows:
  - (A) the same day, if the next interest fixing date or residual maturity is less than one month;
  - (B) within 7 days, if the next interest fixing date or residual maturity is between one month and a year; or
  - (C) within 30 days, if the next interest fixing date or residual maturity is more than a year.

2.4 For the purpose of calculating the debt specific risk requirement for a credit derivatives contract and its hedged position, a CMSL may –

- (a) apply a full offset when the values of the two legs always move in opposite directions and broadly to the same extent. This would be the case when –
  - (i) the two legs consist of completely identical instruments; or
  - (ii) a long cash position is hedged by a total rate of return swap and there is an exact match between the reference obligation and the underlying instrument (i.e. the cash position)<sup>58</sup>;
- (b) apply an 80% offset to the side of the transaction with the higher debt specific risk requirement and a zero specific risk requirement on the other side when the values of the two legs (i.e. long and short) always move in opposite directions but not broadly to the same extent. This would be the case when –
  - (i) a long cash position is hedged by a credit default swap;
  - (ii) there is an exact match in terms of –
    - (A) the reference obligation;
    - (B) the residual maturity of both the reference obligation and the credit derivatives contract; and
    - (C) the currency of the underlying instrument; and
  - (iii) the key features of the credit derivatives contract (e.g. credit event definitions, settlement mechanisms) do not cause the price movement of the credit derivatives contract to materially deviate from the price movement of the cash position; and
- (c) apply the higher of the two debt specific risk requirements when the values of the two legs (i.e. long and short) usually move in opposite directions. This would be the case when –
  - (i) the position would be captured in sub-paragraph (a)(ii) but for an asset mismatch between the reference obligation and the underlying instrument where –

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<sup>58</sup> The maturity of the swap itself may be different from that of the underlying instrument

- (A) the reference obligation ranks pari passu with or is junior to the underlying instrument; and
  - (B) the underlying instrument and reference obligation share the same counterparty and legally enforceable cross-default or cross acceleration clauses are in place;
- (ii) the position would be captured in sub-paragraph (a)(i) or (b) but for a currency or residual maturity mismatch between the credit derivatives contract and the underlying instrument; or
  - (iii) the position would be captured in sub-paragraph (b) but for an asset mismatch between the cash position and the reference obligation, and the underlying instrument is included in the deliverable obligations in the documentation of the credit derivatives contract.

### **3 Netting for Commodity and Commodity Derivatives Position Risk Requirement**

3.1 For the purpose of calculating the commodity position risk requirement or commodity derivatives position risk requirement, a CMSL may net the long positions against the short positions in an identical physical commodity for the purposes of computing the net position.

3.2 Positions in different sub-categories of the same physical commodity shall only be treated as the same physical commodities if the physical commodities meet the conditions set out in paragraph 6.2.56(a) or (b) of Part VI.

## QUALIFYING EQUITY INDICES

Country or Territory	Index
Australia	S&P/ASX 200 Index
Canada	S&P/TSX Composite Index
Europe	STOXX Europe 50 Index Euro STOXX 50 Index
France	CAC 40 Index
Germany	DAX Index
Hong Kong	Hang Seng China Enterprises Index Hang Seng Index
Italy	FTSE MIB Index
Japan	Nikkei 225
Malaysia	FTSE Bursa Malaysia KLCI Index
Netherlands	AEX Index
Singapore	MSCI Singapore Free Index MSCI Singapore Index FTSE Straits Times Index
South Korea	KOSPI 200 Index
Sweden	OMX Stockholm 30 Index
Taiwan	MSCI Taiwan Index
United Kingdom	FTSE 100 Index
United States of America	S&P 500 Index Dow Jones Industrial Average
Others	Any index approved by the Authority

**APPLICABLE RISK FACTORS FOR CALCULATION OF DEBT POSITION RISK FACTORS**

**Table 6D-1: Debt Standard Method Position Risk Factors**

Maturity Band		Debt Position Risk Factor (%)		
Coupon		Government Debt Securities	Qualifying Debt Securities	Other Debt Securities
3% or more	less than 3%			
One month or less	One month or less	0.00	0.25	8.00
More than one month but not more than 3 months	More than one month but not more than 3 months	0.20	0.45	8.20
More than 3 months but not more than 6 months	More than 3 months but not more than 6 months	0.40	0.65	8.40
More than 6 months but not more than 12 months	More than 6 months but not more than 12 months	0.70	1.70	8.70
More than one year but not more than 2 years	More than one year but not more than 1.9 years	1.25	2.25	9.25
More than 2 years but not more than 3 years	More than 1.9 years but not more than 2.8 years	1.75	3.35	9.75
More than 3 years but not more than 4 years	More than 2.8 years but not more than 3.6 years	2.25	3.85	10.25
More than 4 years but not more than 5 years	More than 3.6 years but not more than 4.3 years	2.75	4.35	10.75
More than 5 years but not more than 7 years	More than 4.3 years but not more than 5.7	3.25	4.85	11.25



Maturity Band		Debt Position Risk Factor (%)		
Coupon		Government Debt Securities	Qualifying Debt Securities	Other Debt Securities
3% or more	less than 3%			
	years			
More than 7 years but not more than 10 years	More than 5.7 years but not more than 7.3 years	3.75	5.35	11.75
More than 10 years but not more than 15 years	More than 7.3 years but not more than 9.3 years	4.50	6.10	12.50
More than 15 years but not more than 20 years	More than 9.3 years but not more than 10.6 years	5.25	6.85	13.25
More than 20 years	More than 10.6 years but not more than 12.0 years	6.00	7.60	14.00
	More than 12.0 years but not more than 20 years	8.00	9.60	16.00
	More than 20 years	12.50	14.10	20.50

**Table 6D-2: Debt Building Block Method – Debt Specific Risk Position Risk Factors**

<b>Category</b>	<b>Credit quality grade as per Table 5A-1</b>	<b>Residual maturity</b>	<b>Specific Position Risk Factor</b>
Government <sup>59,60</sup>	1	N.A	0.00%
	2 or 3	6 months or less	0.25%
		More than 6 and up to and including 24 months	1.00%
		More than 24 months	1.60%
	4 or 5	N.A	8.00%
	6	N.A	12.00%
	Unrated	N.A	8.00%
Qualifying	N.A	6 months or less	0.25%
		More than 6 and up to and including 24 months	1.00%
		More than 24 months	1.60%
Others	4	N.A	8.00%
	5 or 6	N.A	12.00%
	Unrated	N.A	8.00%

For the purposes of Tables 6D-1 and 6D-2 –

- The “government” category includes –
  - (a) all forms of government-issued **specified products securities**, including bonds, treasury bills and other short-term instruments; and
  - (b) any **specified products securities** issued by PSEs which qualify for a 0% risk weight under Annex 5B.
- The “qualifying” category includes –
  - (a) any security that is issued by an multilateral agency;
  - (b) any security issued by a PSE which has a credit quality grade of “3” or better as set out in Table 5A-1 of Annex 5A or any unrated securities issued by a PSE which

<sup>59</sup> An exposure to any security issued by –  
 (a) the Singapore Government or the Authority; or  
 (b) other central governments with an external credit assessment of investment grade, which is denominated in domestic currency and funded by the CMSL in the same currency shall be assigned a 0% debt specific risk position risk factor.

<sup>60</sup> The Authority may, at its discretion, assign a higher debt specific risk position risk factor other than that set out in Table 6D-2 to securities issued by certain governments, especially in cases where the securities are denominated in a currency other than that of the issuing government.

belongs to a country with a credit quality grade of “1” as set out in Table 5A-1 of Annex 5A<sup>61</sup>; and

- (c) any security which has a credit quality grade of “3” or better as set out in Table 5A-1 of Annex 5A, from external credit assessments by at least two recognised ECAs.

**Table 6D-3: Debt Building Block Method – Maturity Method Debt General Risk Position Risk Factors**

Maturity Band		Zone	Debt General Risk Position Risk Factor (%)
More than 3%	Not more than 3%		
Not more than one month	Not more than one month	1	0.00
More than one month but not more than 3 months	More than one month but not more than 3 months		0.20
More than 3 months but not more than 6 months	More than 3 months but not more than 6 months		0.40
More than 6 months but not more than 12 months	More than 6 months but not more than 12 months		0.70
More than one year but not more than 2 years	More than one year but not more than 1.9 years	2	1.25
More than 2 years but not more than 3 years	More than 1.9 years but not more than 2.8 years		1.75
More than 3 years but not more than 4 years	More than 2.8 years but not more than 3.6 years		2.25
More than 4 years but not more than 5 years	More than 3.6 years but not more than 4.3 years	3	2.75
More than 5 years but not more than 7 years	More than 4.3 years but not more than 5.7 years		3.25
More than 7 years but not more than 10 years	More than 5.7 years but not more than 7.3 years		3.75
More than 10 years but not more than 15 years	More than 7.3 years but not more than 9.3 years		4.50
More than 15 years but not more than 20 years	More than 9.3 years but not more than 10.6 years		5.25
More than 20 years	More than 10.6 years but not more than 12.0 years		6.00
	More than 12.0 years but not more than 20 years		8.00
	More than 20 years		12.50

<sup>61</sup> Where a security has more than one external credit assessment and these map into different credit quality grades, paragraph 2 of Annex 5A shall apply.

**Table 6D-4: Debt Building Block Method – Duration Method Debt General Risk Position Risk Factors**

<b>Modified Duration</b>	<b>Zone</b>	<b>Debt General Risk Position Risk Factor (%)</b>
Not more than one month	1	1.00
More than 1 month but not more than 3 months		1.00
More than 3 months but not more than 6 months		1.00
More than 6 months but not more than 1 year		1.00
More than 1 year but not more than 1.9 years	2	0.90
More than 1.9 years but not more than 2.8 years		0.80
More than 2.8 years but not more than 3.6 years		0.75
More than 3.6 years but not more than 4.3 years	3	0.75
More than 4.3 years but not more than 5.7 years		0.70
More than 5.7 years but not more than 7.3 years		0.65
More than 7.3 years but not more than 9.3 years		0.60
More than 9.3 years but not more than 10.6 years		0.60
More than 10.6 years but not more than 12.0 years		0.60
More than 12.0 years but not more than 20 years		0.60
More than 20 years	0.60	

**Table 6D-5: Debt Building Block Method – General Risk Requirement Matching Factor For Maturity and Duration Methods**

<b>Item</b>	<b>Matching Factor</b>	
	<b>Maturity Method</b>	<b>Duration Method</b>
Maturity Band Matching Factor	10%	5%
Zone Matching Factor (Zone 1)	40%	40%
Zone Matching Factor (Zone 2)	30%	30%
Zone Matching Factor (Zone 3)	30%	30%
Adjacent Zone Matching Factor	40%	40%
Non-adjacent Zone Matching Factor	100%	100%

**INTEREST RATE POSITION RISK FACTORS FOR INTEREST RATE ADD-ON BASIC METHOD****Table 6E-1: Interest Rate Position Risk Factors for Interest Rate Add-On Basic Method**

<b>Residual Maturity of the Notional Government Debt Securities</b>	<b>Interest Rate Position Risk Factor</b>
3 months or less	0.20%
More than 3 months but not more than 6 months	0.40%
More than 6 months but not more than 12 months	0.70%
More than one year but not more than 2 years	1.25%
More than 2 years but not more than 3 years	1.75%
More than 3 years but not more than 4 years	2.25%
More than 4 years but not more than 5 years	2.75%
More than 5 years but not more than 7 years	3.25%
More than 7 years but not more than 10 years	3.75%
More than 10 years but not more than 15 years	4.50%
More than 15 years but not more than 20 years	5.25%
More than 20 years	6.00%

## HEDGING METHOD

Table 6F-1: Hedging Method

CMSL's <b>securities</b> position in the underlying instrument	CMSL's option position	Position Risk Requirement		
		Option is in the money by		Option is out of the money
		Not less than PRF	Less than PRF	
(1) Long <b>securities</b>	(a) Long put	Zero	Wp	X
	(b) Short call	Y	Y	Hedging Method is not Permitted
(2) Short <b>securities</b>	(a) Long call	Zero	Wc	X
	(b) Short put	Y	Y	Hedging Method is not Permitted

In Table 6F-1 –

- PRF is the appropriate Standard Method Position Risk Factor as set out in Table 6-1 of Division 2 of this Part and Table 6D-1 of Annex 6D
- Wp is  $\{(PRF-1) \times \text{securities position in the underlying instrument at exercise price}\}$  plus the current market value of **underlying securities** position in the underlying instrument
- Wc is  $\{(1+ PRF) \times \text{securities position in the underlying instrument at exercise price}\}$  minus the current market value of **underlying securities** position in the underlying instrument
- X is the current market value of ~~underlying securities~~ position in the underlying instrument  $\times$  PRF
- Y is the higher of –
- (current market value of ~~underlying securities~~ position in the underlying instrument  $\times$  PRF) minus the current market value of option; or
  - zero.

For the purposes of calculating the commodity derivatives position risk requirement –

~~(a) references to securities in Table 6F-1 shall be read as commodities; and~~

(a) references to PRF in Table 6F-1 shall be read as the commodity net position risk factor referred to in paragraph 6.2.62(a) of Part VI.

~~(b) references to PRF in Table 6F-1 shall be read as the commodity net position risk factor referred to in paragraph 6.2.62(a) of Part VI.~~

## PART VII: UNDERWRITING RISK REQUIREMENT

### Overview

7.1.1 Where a CMSL enters into any legally binding agreement or arrangement to underwrite or to sub-underwrite any **specified products securities**, the CMSL shall calculate an underwriting risk requirement in accordance with paragraphs 7.1.2 to 7.1.3, or in such manner as the Authority may specify by notice in writing to the relevant CMSL concerned.

### Calculation of the underwriting risk requirement

7.1.2 A CMSL shall calculate an underwriting risk requirement as the product of –

- (a) the net underwriting exposure calculated under paragraph 7.1.3;
- (b) the appropriate standard method position risk factor applicable to the issue as prescribed under Part VI; and
- (c) the underwriting risk factor, which is 20%, or such other percentage as the Authority may specify by notice in writing to the relevant CMSL concerned.

7.1.3 A CMSL shall calculate a net underwriting exposure to **specified products securities**, from the day it commits to underwriting the **specified products securities** or the day when an underwriting agreement is signed, whichever is earlier, to the day the underwriting arrangement ends, not being a day that is later than the day after allotment of, or close of application for the subscription for the **specified products securities**, whichever is later, as the gross underwriting commitment of the CMSL, less the aggregate of amounts which the CMSL has sub-underwritten to, placed with, sold to or allotted to –

- (a) a bank licensed under the Banking Act (Cap. 19);
- (b) a merchant bank;
- (c) a finance company licensed under the Finance Companies Act (Cap. 108);
- (d) a company or society registered under the Insurance Act (Cap. 142);
- (e) a CMSL licensed to carry out the regulated activity of dealing in **capital markets products, securities, trading in futures contracts**, fund management or real estate investment trust management;
- (f) a financial institution that is approved, licensed, registered or otherwise regulated by an authority in a foreign jurisdiction exercising any function that corresponds to a regulatory function of the Authority under the Banking Act (Cap. 19), the Finance Companies Act (Cap. 108), Insurance Act



(Cap. 142), the Monetary Authority of Singapore Act (Cap. 186), or the Act, in a foreign jurisdiction and has a long-term external credit assessment of investment grade; and

- (g) any other person, provided that –
  - (i) full payment has been received by the CMSL from such person for the sub-underwritten, placed, sold or allotted amount; or
  - (ii) the sub-underwritten, placed, sold or allotted amount can be offset against acceptable collateral received by the CMSL from such person under a netting agreement that satisfies the conditions specified in Annex 5F of Part V.

## **PART VIII: LARGE EXPOSURE RISK REQUIREMENT**

### **Division 1: Overview of Large Exposure Risk Requirement**

8.1.1 A CMSL shall calculate its large exposure risk requirement as the sum of the following, unless otherwise specified by the Authority by notice in writing to the relevant CMSL concerned:

- (a) counterparty large exposure requirement calculated in accordance with paragraphs 8.2.1 to 8.2.3; and
- (b) issuer large exposure requirement calculated in accordance with paragraphs 8.3.1 to 8.3.18.

### **Division 2: Calculation of Counterparty Large Exposure Requirement**

8.2.1 A CMSL shall calculate its total counterparty large exposure requirement as the sum of its individual counterparty large exposure requirements calculated in accordance with paragraphs 8.2.2 to 8.2.3.

8.2.2 Where a CMSL's total exposure to a counterparty, calculated in accordance with paragraph 8.2.3 below, is equal to or exceeds 20% of the CMSL's financial resources or adjusted net head office funds, whichever is applicable, the CMSL shall calculate an individual counterparty large exposure requirement as follows:

- (a) calculate a risk requirement for each counterparty exposure that is included as part of the CMSL's total exposure to the counterparty, as 100% of the counterparty risk requirement calculated in accordance with Part V, up to a maximum risk requirement equal to the difference between the full value of the contract giving rise to the counterparty exposure and the counterparty risk requirement calculated in accordance with Part V; and
- (b) aggregate the risk requirements that are calculated in accordance with subparagraph (a).

8.2.3 For the purpose of paragraph 8.2.2, the total exposure of the CMSL to a counterparty is the sum of the counterparty exposures that the CMSL calculates in accordance with Part V, in relation to the counterparty, excluding the following exposures:

- (a) any exposure to the Singapore Government or a PSE in Singapore;

- (b) any exposure to the Authority;
- (c) any exposure to a central government or a central bank that has an external credit assessment of investment grade;
- (d) any exposure arising from current account deposits, savings account deposits, and fixed deposits, including accrued interest placed with a banking institution, a merchant bank, or a finance company licensed under the Finance Companies Act (Cap. 108).
- (e) any exposure referred to in paragraph 5.2.34 of Part V;
- (f) any free delivery;
- (g) any repurchase, reverse repurchase, or **specified products securities** borrowing or lending agreement or similar agreement before the due date of the agreement;
- (h) any exposure calculated in relation to **product securities** financing;
- (i) any exposure calculated in relation to a counterparty's account for the trading of any derivatives contracts on **an approved exchange** ~~a futures exchange~~ or an overseas **futures** exchange and which is subject to maintenance margin requirements, where the counterparty –
  - (i) does not have an outstanding margin call;
  - (ii) has either –
    - (A) a margin call outstanding not more than 3 business days from the day the margin call is made, if the margin call is to be satisfied by remittance denominated in Japanese Yen; or
    - (B) a margin call outstanding not more than 2 business days from the day the margin call is made, if the margin call is to be satisfied by remittance denominated in currencies other than Japanese Yen;
- (j) any asset deducted in the computation of financial resources or adjusted net head office funds, whichever is applicable;
 

[SFA 04-N13 (Amendment) 2014]
- (k) any exposure secured by an acceptable collateral;

- (l) such other exposure as the Authority may specify by notice in writing to the relevant CMSL concerned; and
- (m) provided the CMSL has received prior written approval from the Authority, 80% of any exposure to a counterparty which is –
  - (i) a multilateral agency; or
  - (ii) a financial institution licensed, approved or designated by the Authority under the Banking Act (Cap. 19), the Finance Companies Act (Cap. 108), the Monetary Authority of Singapore Act (Cap. 186), or the Act, or registered under the Insurance Act (Cap. 142);
  - (iii) a recognised exchange;
  - (iv) a clearing facility appointed by a recognised exchange; and
  - (v) an entity which is a member of an approved exchange, an approved clearing house or any entity referred to in sub-paragraphs (m)(iii) to (m) (iv).

[SFA 04-N13 (Amendment) 2014]

### **Division 3: Calculation of Issuer Large Exposure Requirement**

8.3.1 A CMSL shall calculate its total issuer large exposure requirement as the sum of its individual issuer large exposure requirements calculated in accordance with paragraphs 8.3.2 to 8.3.18.

8.3.2 Where a CMSL’s total equity exposure to an issuer calculated in accordance with paragraph 8.3.3, total debt exposure to an issuer calculated in accordance with paragraph 8.3.4, or total equity and debt exposure to an issuer calculated in accordance with paragraph 8.3.5, exceeds the exposure limits specified in Table 8-1, the CMSL shall calculate an individual issuer large exposure requirement in accordance with paragraphs 8.3.3 to 8.3.18.

Table 8-1: Tests of Issuer Large Exposure

Exposure	Financial Resources Test	Issue Size Test	Large Equity Exposure Amount, Large Debt Exposure Amount, or Large Total Equity and Debt Exposure Amount
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<b>Issuer Large Exposure Exists if -</b>			
Equity	Total equity exposure to an issuer calculated in accordance with paragraph 8.3.3 exceeds 10% of the CMSL's financial resources or adjusted net head office funds, whichever is applicable.	Total equity exposure calculated in accordance with paragraph 8.3.3 arising from an individual series of equity securities issued by an issuer exceeds 5% of the issue size of that series of equity securities. The issue size of each series of equity securities refers to the market capitalisation of the issue.	Amount in excess of 10% of the CMSL's financial resources or adjusted net head office funds, whichever is applicable, or amount in excess of 5% of issue size of each series.
Debt	Total debt exposure to an issuer calculated in accordance with paragraph 8.3.4 exceeds 10% of the CMSL's financial resources or adjusted net head office funds, whichever is applicable.	Total debt exposure calculated in accordance with paragraph 8.3.4 arising from an individual series of debt securities issued by an issuer exceeds 10% of the issue size of that series of debt securities.	Amount in excess of 10% of the CMSL's financial resources or adjusted net head office funds, whichever is applicable, or amount in excess of 10% of issue size of each series.
Total Equity and Debt	Total equity and debt exposure to an issuer calculated in accordance with paragraph 8.3.5 exceeds 10% of the CMSL's financial resources or adjusted net head office funds, whichever is applicable.	Not applicable.	Amount in excess of 10% of the CMSL's financial resources or adjusted net head office funds, whichever is applicable.

8.3.3 A CMSL shall calculate its total equity exposure to an issuer as the absolute value of the net position that the CMSL holds as a principal in equity securities issued by the

issuer, including notional positions arising from derivatives contracts on equity securities issued by the issuer, and –

- (a) in the case of a futures contract or forward contract on equity securities, the underlying equity securities;
- (b) in the case of an option (including a warrant) on equity securities that is in the money, the underlying equity securities; and
- (c) where the CMSL has entered into an agreement or arrangement to underwrite or to sub-underwrite an offer of equity securities, a position in those equity securities which are unplaced or unallotted after the date of subscription or the date of allotment of the equity securities,

but does not include any excluded issuer exposure.

8.3.4 A CMSL shall calculate its total debt exposure to an issuer as the absolute value of the net position that the CMSL holds as a principal in debt securities issued by the issuer, including notional positions arising from derivatives contracts on debt securities issued by the issuer, and –

- (a) in the case of a futures contract or forward contract on debt securities, the underlying debt securities;
- (b) in the case of an option (including a warrant) on debt securities that is in the money, the underlying debt securities; or
- (c) where the CMSL has entered into an agreement or arrangement to underwrite or to sub-underwrite an offer of debt securities, a position in those debt securities which are unplaced or unallotted after the date of subscription or the date of allotment of the debt securities,

but does not include any excluded issuer exposure.

8.3.5 A CMSL shall calculate its total equity and debt exposure to an issuer as the aggregate of its total equity exposure to the issuer calculated under paragraph 8.3.3 and its total debt exposure to the issuer calculated under paragraph 8.3.4.

Individual issuer large exposure requirement

8.3.6 Subject to paragraph 8.3.7, where the CMSL has exposure to both equity and debt securities issued by an issuer, the CMSL shall calculate the individual issuer large exposure requirement as the higher of –

- (a) the sum of the individual issuer equity large exposure requirement calculated in accordance with paragraphs 8.3.8 to 8.3.11, and the individual issuer debt large exposure requirement calculated in accordance with paragraphs 8.3.12 to 8.3.16; or
- (b) the individual issuer total equity and debt large exposure requirement calculated in accordance with paragraph 8.3.17.

8.3.7 For the purposes of this Part and Part VI, the sum of the position risk requirement for the CMSL's principal positions in the equity and debt securities of an issuer and the individual issuer large exposure requirement for the CMSL's exposure to the equity and debt securities of the issuer shall be restricted to 100% of the CMSL's net long or short positions in those equity and debt securities.

Individual issuer equity large exposure requirement

8.3.8 Subject to paragraphs 8.3.9 to 8.3.11, where the CMSL's total equity exposure to an individual issuer exceeds the exposure limits specified in Table 8-1, the CMSL shall calculate an individual issuer equity large exposure requirement as the product of –

- (a) the large equity exposure amount set out in Table 8-1; and
- (b) the appropriate equity standard method position risk factor set out in Part VI.

8.3.9 For the purposes of 8.3.8, a CMSL may apply 50% of the appropriate equity standard method position risk factor to any amount of the large equity exposure amount arising from a position in a collective investment scheme or a closed-end fund that is managed by the CMSL.

8.3.10 Where the CMSL's total equity exposure to an individual issuer exceeds the exposure limits under the issue size test specified in Table 8-1, the CMSL shall calculate the individual issuer equity large exposure requirement of the CMSL to the issuer as the aggregate of the issuer equity large exposure requirements for each individual series of the equity securities.

8.3.11 Where the CMSL's total equity exposure to an individual issuer exceeds the exposure limits under both the financial resources and issue size tests specified in Table 8-1, the large equity exposure amount for the purposes of paragraph 8.3.8 shall be the higher of the large equity exposure amounts calculated under these 2 tests.

Individual issuer debt large exposure requirement

8.3.12 Subject to paragraphs 8.3.13 to 8.3.16, where the CMSL's total debt exposure to an individual issuer exceeds the exposure limits specified in Table 8-1, the CMSL shall calculate an individual issuer debt large exposure requirement as the product of –

- (a) the large debt exposure amount set out in Table 8-1; and
- (b) the appropriate debt standard method position risk factor set out in Part VI.

8.3.13 For the purposes of 8.3.12, a CMSL may apply 50% of the appropriate debt standard method position risk factor to any amount of the large debt exposure amount arising from a position in a collective investment scheme or a closed-end fund that is managed by the CMSL.

8.3.14 Where the CMSL's total debt exposure to an individual issuer exceeds the exposure limits under the financial resources test specified in Table 8-1, the appropriate debt standard method position risk factor used to calculate the individual issuer debt large exposure requirement under paragraph 8.1.12 shall be the factor applicable to the debt securities with the greatest date-to-maturity period.

8.3.15 Where the CMSL's total debt exposure to an individual issuer exceeds the exposure limits under the issue size test specified in Table 8-1, the CMSL shall calculate the individual issuer debt large exposure requirement of the CMSL to the issuer as the aggregate of the issuer debt large exposure requirements for each individual series of the debt securities.

8.3.16 Where the CMSL's total debt exposure to an individual issuer exceeds the exposure limits under both the financial resources and issue size tests specified in Table 8-1, the large debt exposure amount for the purposes of paragraph 8.3.12 shall be the higher of the large debt exposure amounts calculated under the 2 tests.

Individual issuer total equity and debt large exposure requirement

8.3.17 Where a CMSL's total equity and debt exposure to an individual issuer exceeds the exposure limits under the financial resources test specified in Table 8-1, it shall calculate the individual issuer total equity and debt large exposure requirement, as the product of –

- (a) the large total equity and debt exposure amount set out in Table 8-1; and
- (b) the appropriate standard method position risk factor set out in Part VI, which is –
  - (i) the standard method position risk factor set out in Part VI applicable to the instrument held in the larger proportion; or



- (ii) the higher standard method position risk factor set out in Part VI applicable if both equity and debt securities are held in equal proportions.

8.3.18 For the purposes of 8.3.17, a CMSL may apply 50% of the appropriate standard method position risk factor to any amount of the large total equity and debt exposure amount arising from a position in a collective investment scheme or a closed-end fund that is managed by the CMSL.

### **Endnotes of History of Amendments**

1. SFA 04-N13 (Amendment) 2014 with effect from 6 March 2014.
2. SFA 04-N13 (Amendment) 2016 with effect from 1 November 2016.