

MAS 637

28 May 2004

Last revised on 26 September 2007*

NOTICE TO BANKS
BANKING ACT, CAP 19

NOTICE ON RISK BASED CAPITAL ADEQUACY REQUIREMENTS FOR BANKS INCORPORATED IN SINGAPORE

Introduction

This Notice is issued pursuant to section 10(2) of the Banking Act (Cap. 19) ["Banking Act"] and applies to all banks incorporated in Singapore ("Reporting Banks"). This Notice sets out the minimum capital adequacy ratios for a Reporting Bank and the methodology a Reporting Bank shall use for calculating these ratios.

2 The minimum capital adequacy ratio requirements for a Reporting Bank set out in this Notice is based on the capital adequacy framework established in the report "International Convergence of Capital Measurement and Capital Standards" ("the Report") issued by the Basel Committee on Banking Supervision in July 1988 and subsequent amendments to the Report¹.

3 In recognition of the potential non-perfect transferability of capital within a group of related corporations, the Authority will impose capital adequacy ratio requirements on a Reporting Bank at two levels:

(a) the bank standalone ("Solo") level capital adequacy ratio requirement, which measures the capital adequacy of a Reporting Bank based on its standalone capital strength and risk profile, taking into account any adjustments pursuant to MAS Notice 628; and

(b) the consolidated ("Group") level capital adequacy ratio requirement, which measures the capital adequacy of a Reporting Bank based on its capital strength and risk profile after consolidating the assets and liabilities of its subsidiaries and any other company treated as part of the Reporting Bank's group of companies according to Accounting Standards (collectively called "banking group companies"), taking into account:

(i) any exclusions of certain banking group companies under this Notice; and

(ii) any adjustments pursuant to this Notice and MAS Notice 628.

[MAS Notice 637 (Amendment) 2004]
[MAS Notice 637 (Amendment 2) 2005]

4 In addition to complying with the requirements in this Notice, a Reporting Bank should consider whether it has adequate capital to cover its exposure to all risks.

Definitions

5 For the purposes of this Notice

"Accounting Standards" has the same meaning as in section 4(1) of the Companies Act (Cap 50);

"associates" has the same meaning as in section 7(5) of the Companies Act (Cap 50);

"capital investments" in relation to a Reporting Bank, 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 agency;

(d) any lending on non-commercial terms or which is not at arms' length; and

(e) any guarantee issued to third parties for the benefit of subsidiaries and major stake companies on non-commercial terms or which is not at arms' length;

"credit risk-weighted assets ("RWA")" means the risk weighted assets for credit risks determined in the manner provided in paragraphs 20 to 21;

"market RWA" means the risk weighted assets for market risks determined in the manner provided in paragraphs 22 to 24;

"Deductions from Tier 1 Capital" means the deductions set out in paragraph 12;

"Deductions from Total Capital" means the deductions set out in paragraphs 18 and 19;

"financial year" has the same meaning as in section 4(1) of the Companies Act (Cap. 50);

"Limits on perpetual non-cumulative preference shares and innovative Tier 1 capital instruments" means the limits set out in paragraphs 13 to 15;

"Limits on Tier 2 Capital" means the limits set out in paragraphs 17 and 17A;

"major stake company" in relation to a Reporting Bank, means any company in which the Reporting Bank is deemed, by virtue of section 32(7) of the Banking Act and Part VII of the Banking Regulations, to hold a major stake;

"preference shares" has the same meaning as in section 4(1) of the Companies Act (Cap 50);

"Tier 1 Capital" means the sum of the items set out in paragraph 11;

"Tier 2 Capital" means the sum of the items set out in paragraphs 16 and 16B;

"Tier 2 capital instrument" means any of the capital instruments set out in paragraphs 16(b), 16(f), 16B(a) and 16B(b);

"Tier 2 Capital subject to Limits" means the sum of the items set out in paragraphs 16 and 16B, subject to the limits set out in paragraphs 17 and 17A;

"written law" has the same meaning as in section 2 of the Interpretation Act.

[MAS Notice 637 (Amendment) 2007]

6 The expressions used in this Notice shall, except where expressly defined in this Notice or where the context otherwise requires, have the same meanings as in the Banking Act.

Minimum Tier 1 and Total Capital Adequacy Ratios

7 A Reporting Bank shall calculate its Tier 1 capital adequacy ratio ("Tier 1 CAR") as follows:

$$\text{Tier 1 CAR} = \frac{\text{Eligible Tier 1 Capital}}{\text{Credit RWA + Market RWA}}$$

where

$$\text{Eligible Tier 1 Capital} = \text{Tier 1 Capital} - \text{Deductions from Tier 1 Capital; subject to Limits on perpetual non-cumulative preference shares and innovative Tier 1 capital instruments}$$

[MAS Notice 637 (Amendment) 2007]

8 Every Reporting Bank shall calculate its total capital adequacy ratio ("Total CAR") as follows:

$$\text{Total CAR} = \frac{\text{Eligible Total Capital}}{\text{Credit RWA + Market RWA}}$$

where

$$\text{Eligible Total Capital} = \text{Eligible Tier 1 Capital} + \text{Tier 2 Capital subject to Limits} - \text{Deductions from Total Capital}$$

[MAS Notice 637 (Amendment) 2007]

9 Every Reporting Bank shall, at all times, maintain at both the Solo and Group levels, the following ratios:

- a) a Tier 1 CAR of at least 6%;
- b) a Total CAR of at least 10%.

[MAS Notice 637 (Amendment) 2007]

10 In addition to the requirements set out in this Notice, the Authority may, pursuant to section 10(3) of the Banking Act, vary the capital adequacy ratio applicable to a Reporting Bank. The Authority will take into account any relevant risk factor, to ensure that the capital adequacy ratio is commensurate with the overall risk profile of the Reporting Bank. These risk factors include concentration risk, liquidity risk, profitability, and the effectiveness of the Reporting Bank in identifying, measuring, monitoring and managing its risks.

Eligible Tier 1 Capital

Tier 1 Capital

11 Tier 1 Capital shall be the sum of the following items, whether at the Solo or Group level, as the case may be:

- (a) paid-up ordinary share capital;

(b) disclosed reserves, excluding (i) any revaluation reserves, (ii) unrealised fair value gains on revaluation of available-for-sale ("AFS") equity securities, (iii) unrealised fair value gains or losses on revaluation of AFS debt securities and AFS loans, (iv) cumulative fair value gains or losses on cashflow hedges of financial instruments that are measured at amortised cost, (v) unrealised fair value gains or losses on financial liabilities arising from changes in its own credit worthiness, (vi) unrealised fair value gains or losses on non-trading financial liabilities unless the Reporting Bank can demonstrate that the application of the fair value option to these liabilities is part of an identifiable and effective hedging strategy^{1A}, (vii) any gains resulting from securitising its own exposures^{1B}, and (viii) any performance-related payment or benefit from any surplus income generated in its role as servicer of a securitisation transaction that has not been irrevocably received after deducting any interim or final dividends that have been declared by the board of directors of the Reporting Bank or any banking group company on any class of shares and any interim losses incurred since the end of the last financial reporting period. Any interim profits earned since the end of the last financial reporting period may be included as disclosed reserves where the following conditions are met in the 12-month period immediately preceding the inclusion of the interim profits:

- (i) every quarterly financial statement is prepared using the same accounting policies and practices applied in the preparation of the year-end financial statements, unless the change in the accounting policy or practice is in accordance with any statutory requirement;
- (ii) every quarterly financial statement and every significant transaction is reviewed in a timely manner by an external auditor;
- (iii) the external auditor of the Reporting Bank did not express a qualified opinion on any of the quarterly financial statements;

[MAS Notice 637 (Amendment) 2004]

(c) any paid-up perpetual non-cumulative preference shares where:

- (i) the holder of the preference shares has a priority of claim, in respect of the principal and dividends of the preference shares in the event of a winding up of the Reporting Bank, which is lower than that of depositors, other creditors of the bank, and holders of Tier 2 capital instruments, except where such persons rank equally with, or behind the holder of the preference shares;
- (ii) the preference shares are not covered under any arrangement that legally or economically enhances the priority of the claim of the holder of the preference shares as against the persons set out in sub-paragraph (c)(i);
- (iii) the preference shares, if redeemable (whether through a call option, repurchase or otherwise), may be redeemed only at the option of the Reporting Bank with the prior approval of the Authority². Without prejudice to any other matter that the Authority may consider relevant, the Authority shall, in determining whether to grant its approval, have regard to whether the Reporting Bank's capital is likely to remain adequate after redemption;
- (iv) the preference shares do not have any call option within the first five years from the issue date, other than a call option which may be exercised by the Reporting Bank where:

- (A) the preference shares were issued for the purpose of a merger with, or acquisition by, the Reporting Bank and the merger or acquisition is aborted;
- (B) there is a change in tax status of the preference shares due to changes in the applicable tax laws of the country or territory in which the preference shares were issued;
- (C) in the case of a merger or acquisition, the preference shares are exchanged for shares or any instrument of the surviving or new Reporting Bank (as the case may be) with terms and conditions that qualify the shares or

instrument as equal or higher quality capital; or

(D) there is a change in this Notice relating to the recognition of the preference shares as capital for calculating CAR;

(v) the agreement governing the issuance of the preference shares does not contain any provision that mandates or creates an incentive for the Reporting Bank to repay the outstanding principal of the instrument early;

[MAS Notice 637 (Amendment) 2005]

(vi) any dividend paid under the preference shares is only paid to the extent that the Reporting Bank has profits distributable under written law, determined as at the last public disclosure of its financial statements; and

(vii) the Authority has given its approval for the preference shares to be included as Tier 1 Capital;

[MAS Notice 637 (Amendment) 2007]

(d) any innovative Tier 1 capital instrument which, in the opinion of the Authority, complies with the requirements set out in Annex 1;

(e) any minority interest arising from accounting consolidation of subsidiaries³; and

(f) any other instrument issued by a banking group company, which in the opinion of the Authority, is equivalent to a perpetual non-cumulative preference share or innovative Tier 1 capital instrument issued by the Reporting Bank.

[MAS Notice 637 (Amendment) 2007]

11A In applying for approval under paragraph 11(c)(vii), the Reporting Bank shall:

(a) submit an appropriate memorandum of compliance stating how the proposed issuance complies with the requirements in paragraph 11(c), and identifying the relevant portions of the agreement governing the issuance of the instrument which address the requirements; and

(b) confirm to the Authority in writing that it has received a written external legal opinion stating that the requirements in paragraphs 11(c)(i) to (vi) have been met.

[MAS Notice 637 (Amendment) 2007]

Deductions from Tier 1 Capital

12 "Deductions from Tier 1 Capital" shall be the sum of the following items, whether at the Solo or Group level, as the case may be:

(a) goodwill;

(b) any intangible asset, including but not limited to copyright, patents and other intellectual property;

(c) any deferred tax asset, except for any deferred tax assets associated with general provisions qualifying as Upper Tier 2 Capital as set out in paragraph 16(a). At the Solo level, deferred tax assets may be netted against deferred tax liabilities prior to being included as a Deduction from Tier 1 Capital. At the Group level, the following shall not be permitted for the purposes of calculating CAR:

(i) intra-entity netting of deferred tax assets against deferred tax liabilities for any company incorporated outside Singapore;

(ii) inter-entity netting of deferred tax assets against deferred tax liabilities.

However, the Authority may permit (i) and (ii) above if the Reporting Bank confirms in writing to the Authority that it has received written opinions from external auditors and legal advisors that the relevant tax authorities allow or would allow, deferred tax assets to be offset against deferred tax liabilities in a liquidation or winding up of the banking group companies incorporated outside Singapore;

(d) any other item or class of items which the Authority may specify in writing to the Reporting Bank for the purpose of this paragraph.

12A [Deleted by MAS Notice 637 (Amendment) 2007]

12B [Deleted by MAS Notice 637 (Amendment) 2007]

Limits on perpetual non-cumulative preference shares and innovative Tier 1 capital instruments

13 The amount of innovative Tier 1 capital instruments shall not exceed 15% of Eligible Tier 1 Capital of the Reporting Bank at the Solo or Group level, as the case may be. (Please see example at Annex 3.)

14 The amount of perpetual non-cumulative preference shares and innovative Tier 1 capital instruments shall not exceed 30% of Eligible Tier 1 Capital of the Reporting Bank at the Solo or Group level, as the case may be. (Please see example at Annex 3.)

[MAS Notice 637 (Amendment) 2007]

15 Any excess over the 15% and 30% limits described in paragraphs 13 and 14 shall not qualify as Eligible Tier 1 Capital (calculated in the manner set out in paragraph 7) for the calculation of Tier 1 CAR but may qualify as Upper Tier 2 Capital.

Tier 2 Capital

Upper Tier 2 Capital

16 Upper Tier 2 Capital shall comprise the sum of the following items, whether at the Solo or Group level, as the case may be:

(a) general provisions (also referred to as collective impairment provisions), made for impairment losses that have yet to be identified or that have not been allocated specifically to any asset or class of assets, provided the following conditions are satisfied:

(i) deferred tax assets associated with these general provisions ("associated deferred tax assets") shall be deducted from the notional amount of these general provisions;

(ii) the amount of general provisions, after deducting associated deferred tax assets, shall not exceed 1.25% of the sum of credit RWA and market RWA;

[MAS Notice 637 (Amendment) 2004]

(b) any Upper Tier 2 capital instrument which, in the opinion of the Authority, complies with the requirements set out in Annex 2;

[MAS Notice 637 (Amendment) 2007]

(c) 45% of revaluation surpluses on land and building assets, where the following conditions pertaining to revaluations are satisfied:

(i) the valuation of any land and building asset shall be obtained from a qualified

valuer and the increase in value shall be recorded as a revaluation surplus in the financial statements;

- (ii) a new valuation from a qualified property valuer shall be obtained
 - (A) at least once every three years; or
 - (B) where the value of the land or building has been substantially impaired by any event,

whichever occurs earlier;

- (iii) impairment charges taken against any land and building asset may not be netted against revaluation surpluses from any other asset;

- (iv) the external auditor of the Reporting Bank shall not have expressed a qualified opinion on the revaluation of any land and building asset;

(d) 45% of revaluation gains on AFS equity securities that are listed on any securities exchange in Singapore and any Group A Exchange as set out in Table 6 of the Fourth Schedule to the Securities and Futures (Margin and Financial Requirements for Holders of Capital Markets Services License) Regulations (G.N.S498/2002), but excluding any equity security required to be deducted under paragraph 18, where the following conditions pertaining to revaluations are satisfied:

- (i) each equity security shall be valued at least monthly and with greater frequency under volatile market conditions;
- (ii) impairment charges taken against any equity security shall be taken as a charge to profit and loss account and shall not be netted against gains from any other asset; and
- (iii) the external auditors of the Reporting Bank shall not have expressed a qualified opinion on the revaluation of any equity security;

[MAS Notice 637 (Amendment) 2004]

(e) any perpetual non-cumulative preference shares and innovative Tier 1 capital instruments in excess of the 15% and 30% limits described in paragraphs 13 and 14; and

[MAS Notice 637 (Amendment) 2007]

(f) any other instrument issued by a banking group company, which in the opinion of the Authority, is equivalent to an Upper Tier 2 capital instrument issued by the Reporting Bank.

[MAS Notice 637 (Amendment) 2007]

16A A Reporting Bank may continue to include as Upper Tier 2 Capital in its calculation of CAR any Upper Tier 2 capital instrument issued and approved by the Authority before 1 March 2007 where such an instrument has met and continues to meet the requirements in Annex 2 of MAS Notice 637 in force immediately before 1 March 2007.

[MAS Notice 637 (Amendment) 2007]

Lower Tier 2 Capital

16B Lower Tier 2 Capital shall comprise the sum of the following items, whether at the Solo or Group level, as the case may be:

- (a) any Lower Tier 2 capital instrument which, in the opinion of the Authority, complies with the requirements set out in Annex 2A; and

(b) any other instrument issued by a banking group company, which in the opinion of the Authority, is equivalent to a Lower Tier 2 capital instrument issued by the Reporting Bank.

[MAS Notice 637 (Amendment) 2007]

Limits on Tier 2 Capital

17 Tier 2 Capital included for the purpose of calculating Total CAR shall not exceed 100% of Eligible Tier 1 Capital.

[MAS Notice 637 (Amendment) 2007]

17A Lower Tier 2 Capital included for the purpose of calculating Total CAR shall not exceed 25% of the sum of Eligible Tier 1 Capital and Tier 2 Capital subject to Limits.

[MAS Notice 637 (Amendment) 2007]

[MAS Notice 637 (Amendment 2) 2007]

Deductions From Total Capital

18 Deductions from Total Capital shall be the sum of the following items whether at the Solo or Group level, as the case may be:

(a) capital investments in every subsidiary carrying on insurance business as an insurer ("insurance subsidiary") at the Solo level. For purposes of determining Total CAR at the Group level, the assets and liabilities of an insurance subsidiary shall be de-consolidated from the assets and liabilities of the banking group, with goodwill being deducted from Tier 1 Capital and the balance of the capital investment deducted from the sum of Eligible Tier 1 Capital and Tier 2 Capital subject to Limits;

(b) capital investments in every subsidiary approved, licensed, registered or otherwise regulated by the Authority and whose assets and liabilities are not included in the consolidated financial statements of the banking group ("unconsolidated"), unless a deduction has been made pursuant to sub-paragraph (a) above;

(c) capital investments in every unconsolidated subsidiary which is not approved, licensed, registered or otherwise regulated by the Authority, unless any deductions have been made pursuant to sub-paragraph (a) above;

(d) capital investments in every major stake company which is not approved, licensed, registered or otherwise regulated by the Authority, where

(i) the Authority has not approved the holding of a major stake in the company under section 32 of the Banking Act; or

(ii) the company is acquired or held in the course of the satisfaction of debts due to the Reporting Bank or any of its banking group companies to be disposed off at the earliest suitable opportunity,

unless a deduction has been made pursuant to sub-paragraph (c) above;

(e) capital investments in every major stake company in excess of 20% of each tranche of capital investment, where the holding of a major stake in the company is

(i) approved by the Authority under section 32 of the Banking Act; or

(ii) excluded from operation of section 32 of the Banking Act pursuant to section 32(5)(a) ⁴,

unless a deduction has been made pursuant to sub-paragraphs (a) to (c) above.

[MAS Notice 637 (Amendment) 2005]

(f) capital investments in any financial institution incorporated in Singapore which is approved, licensed, registered or otherwise regulated by the Authority, in excess of 2% of Eligible Total Capital of the Reporting Bank at the Solo or Group⁵ level, unless any deductions have been made pursuant to sub-paragraph (a), (b) or (e) above;

(g) full amount of capital deficits in regulated financial subsidiaries and pro-rata share of capital deficits in regulated financial associates. In the event that a recapitalisation plan is in place or an irrevocable commitment has been given by other shareholders to make up the capital deficit, the Authority may approve a corresponding reduction in the amount of deductions in respect of such capital deficits;

(h) any amount that is to be included in Deductions from Total Capital pursuant to MAS Notice 628;

[MAS Notice 637 (Amendment 2) 2005]

(i) [Deleted by MAS Notice 637 (Amendment) 2005]

(j) any other item or class of items which the Authority may specify in writing to the Reporting Bank for the purpose of this paragraph.

19 Notwithstanding paragraph 18(a) above, for purposes of determining Deductions from Total Capital, the capital investments held through the following funds by an insurance subsidiary shall be included as part of the capital investments of the banking group:

(a) any insurance fund established and maintained for its general business or any equivalent fund;

(b) any insurance fund established and maintained for its non-participating policies or any equivalent fund;

(c) any insurance fund established and maintained for its participating policies, and which relates to assets held other than for the purpose of meeting the liabilities in respect of the policies of the insurance fund or any equivalent fund;

(d) any insurance fund established and maintained for its investment-linked policies, and which relates to assets held other than for the purpose of meeting those liabilities in respect of the policies of the insurance fund, the values of which are dependent on the value of the underlying assets or any equivalent fund;

(e) the shareholders' funds of any insurance subsidiary.

Calculation of Risk Weighted Assets

Credit RWA

20 A Reporting Bank shall calculate its credit RWA as the sum of individual RWA arising from all banking book positions and counterparty RWA arising from derivative contracts. The individual RWA shall be derived as follows:

Risk Weighted Assets = Exposure X Applicable Risk Weight

Where Exposure is

- (a) for each on-balance sheet banking book position, the net book value of each position;
- (b) for each off-balance sheet banking book position, other than derivative contracts, calculated by:
 - (i) multiplying the applicable conversion factor set out in Schedule III of Annex 4 with the notional amount for each position, and
 - (ii) deducting specific provisions allocated to each position;
- (c) for each derivative position, calculated by:
 - (i) multiplying the applicable conversion factor as set out in Schedule IV of Annex 4 with the effective notional principal for each derivative position;
 - (ii) adding the marked-to-market value of the derivative position subject to a minimum value of zero (where marked-to-market value of the position is negative); and
 - (iii) deducting specific provisions allocated to each position;
- (d) for each securitisation transaction,
 - (i) the underlying pool of exposures in any securitisation transaction in which the Reporting Bank (A) acts as an ABCP programme sponsor, originator or servicer, (B) provides a liquidity facility or credit enhancement, or (C) participates in a clean-up call, except where the bank has complied with the relevant requirements in MAS Notice 628; and
 - (ii) the underlying pool of exposures in any securitisation transaction to which the Reporting Bank has provided implicit support, as defined in MAS Notice 628, subject to a maximum exposure (including securitisation exposures held in the banking book) equal to that which would apply had the underlying pool of exposures in the securitisation been on its balance sheet,

net of any funded credit protection recognised under MAS Notice 627.

[MAS Notice 637 (Amendment 2) 2005]

21 A Reporting Bank shall use the risk weight for each exposure as set out in Schedule II of Annex 4 unless (a) the Reporting Bank, as Protection Buyer, is permitted to replace the risk weight of the exposure with that of a protection Seller pursuant to MAS Notice 627 or MAS Notice 628; or (b), the exposure is a securitisation exposure as defined in MAS Notice 628, in which case the Reporting Bank shall use the risk weights and if applicable, the CCFs, set out in MAS Notice 628.

[MAS Notice 637 (Amendment 2) 2005]

Market RWA

22 A Reporting Bank shall calculate its capital charges for market risk according to the Standardised Approach as provided for under the "Amendment to The Capital Accord to Incorporate Market Risks" issued by the Basel Committee in 1996, except as regards to its exposure to non-investment grade government securities which shall be assigned a specific risk factor of 4%.

23 A Reporting Bank may also use the Internal Models Approach ("IMA") for calculating capital charges for market risk after it has received written approval from the Authority and subject to such conditions and restrictions as the Authority may impose.

24 A Reporting Bank shall multiply the capital charges for market risk calculated according to the Standardised or Internal Models Approach by 12.5 to arrive at its market RWA.

Regulatory Reporting Requirements

25 Every Reporting Bank shall submit to the Authority, the Tier 1 CAR and Total CAR

(a) at the Solo level as at the end of each month; and

(b) at the Group level as at the end of each quarter, and its associated credit RWA and capital charges for market risk, calculated according to the requirements of this Notice in the format provided at Annex 4 of this Notice no later than the 15th of the following month.

26 This Notice shall take effect on 30 June 2004.

Footnotes

1

The Report and subsequent amendments to the Report may be found at the following website:
<http://www.bis.org>

1A

An effective hedging strategy is one where the gains or losses on the revaluation of these liabilities are offset by corresponding losses or gains on the revaluation of the derivatives that have been clearly identified as hedging such liabilities.

[MAS Notice 637 (Amendment) 2004]

1B

E.g., that associated with expected future margin income resulting in a gain-on-sale that is recognised in equity capital. For avoidance of doubt, fee income generated by the bank for its role in a securitisation transaction need not be excluded from disclosed reserves.

[MAS Notice 637 (Amendment 2) 2005]

2

The Authority is not likely to grant any approval for redemption within the first 5 years from the issue date except in any one of the situations set out in paragraph 11(c)(iv).

Approval is likely to be granted after the first 5 years from the issue date:

- (i) where the preference shares are replaced by equal or higher quality capital (including an increase in retained earnings);
- (ii) where the Reporting Bank or any of its banking group companies is reducing its operations in Singapore or elsewhere; or
- (iii) in any one of the situations set out in paragraph 11(c)(iv).

[MAS Notice 637 (Amendment) 2007]

3

This does not include minority interests in preference shares that do not qualify as Tier 1 Capital.

4

This refers to PE/VC investments as defined in MAS Notice 630.

[MAS Notice 637 (Amendment) 2005]

5

Exposures exempted from deduction that are recorded in the banking book to be risk weighted at 100%. Exposures exempted from deduction that are recorded in the trading book to attract market risk capital charges.

6

[Deleted by MAS Notice 637 (Amendment 2) 2005]

7

[Deleted by MAS Notice 637 (Amendment) 2005]

8

Any Reporting Bank intending to use the IMA for calculating its market risk capital charges shall provide full documentation on the use of Internal Models to calculate its market risk capital requirements concurrent with its application to the Authority. Thereafter, the Authority will schedule a certification programme with the Reporting Bank with a view to determining whether the Authority is prepared to certify the use of the Internal Models Approach by a Reporting Bank.

*Notes on History of Amendments

1. MAS Notice 637 (Amendment) 2004 with effect from 1 Jan 2005.
2. MAS Notice 637 (Amendment) 2005 with effect from 31 August 2005.
3. MAS Notice 637 (Amendment 2) 2005 with effect from 1 October 2005.
4. MAS Notice 637 (Amendment) 2006 with effect from 1 August 2006.
5. MAS Notice 637 (Amendment) 2007 with effect from 1 March 2007.
6. MAS Notice 637 (Amendment 2) 2007 with effect from 1 October 2007.

ANNEX 1: REQUIREMENTS FOR INNOVATIVE TIER I CAPITAL INSTRUMENTS

Requirements relating to the Reporting Bank issuing Innovative Tier 1 Capital Instruments

1.1 A Reporting Bank intending to issue any innovative Tier 1 capital instrument ("IT1") for the purpose of inclusion as Tier 1 Capital, shall:

- (a) consult the Authority well in advance if the instrument has features that are not explicitly addressed by this Annex; and
- (b) obtain the approval of the Authority for the instrument to qualify as Tier 1 Capital.

1.2 In applying for such approval, a Reporting Bank shall:

- (a) submit an appropriate memorandum of compliance stating how the proposed issuance complies with the requirements set out in paragraph 1.3 and where applicable, paragraph 1.4 and identifying the relevant portions of the agreement governing the issuance of the instrument which address the requirements; and
- (b) confirm to the Authority in writing that it has received written external legal and accounting opinions stating that the requirements in paragraph 1.3 and, where applicable, paragraph 1.4 have been met.

Minimum Requirements for IT1 Issued Directly by Reporting Bank

1.3 To qualify for inclusion as Tier 1 Capital, an IT1 shall satisfy the following requirements:

- (a) the IT1 is issued and fully paid-up in cash. Only the net proceeds received from the issuance of IT1s shall be included as capital;
- (b) the IT1 does not have a maturity date;
- (c) the IT1, if redeemable, (whether through a call option, repurchase or otherwise), may only be redeemed -
 - (i) in the case where the IT1 is to be redeemed by, or with the proceeds from, the issuance of equal or higher quality capital, with the prior approval of the Authority; and

- (ii) in any other case, at the option of the Reporting Bank with the prior approval of the Authority¹.

Without prejudice to any other matter that the Authority may consider relevant, the Authority shall, in determining whether to grant its approval, have regard to whether the capital of the Reporting Bank is likely to remain adequate after redemption;

[MAS Notice 637 (Amendment) 2007]
[MAS Notice 637 (Amendment 2) 2007]

- (d) the agreement governing the issuance of the IT1 does not have any call option within the first five years from the issue date, other than a call option which may be exercised by the Reporting Bank where:
 - (i) the IT1 was issued for the purpose of a merger with or acquisition by, the Reporting Bank and the merger or acquisition is aborted;
 - (ii) there is a change in tax status of the IT1 due to changes in the applicable tax laws of the country or territory in which the IT1 was issued;
 - (iii) in the case of a merger or acquisition, the IT1 is exchanged for shares or any instrument of the surviving or new Reporting Bank (as the case may be) with terms and conditions that qualify the shares or instrument as equal or higher quality capital; or
 - (iv) there is a change in this Notice relating to the recognition of the IT1 as capital for calculating CAR;

[MAS Notice 637 (Amendment) 2007]

- (e) the agreement governing the issuance of the IT1 does not contain any provision that mandates or creates an incentive for the Reporting Bank to repay the outstanding principal of the instrument early², other than a call option which may be exercised by the Reporting Bank no earlier than 10 years after the issuance of the IT1, accompanied by a provision whereby the dividend or coupon

¹ The Authority is not likely to grant any approval for redemption under paragraph 1.3(c)(ii) within the first 5 years from the issue date except in any one of the situations set out in paragraph 1.3(d).

Approval is likely to be granted after the first 5 years from the issue date:

- (a) where the IT1 is replaced by equal or higher quality capital (including an increase in retained earnings);
- (b) where the Reporting Bank or any of its banking group companies is reducing its operations in Singapore or elsewhere; or
- (c) in any one of the situations set out in paragraph 1.3(d).

[MAS Notice 637 (Amendment) 2007]
[MAS Notice 637 (Amendment 2) 2007]

² Examples are a cross-default or negative pledge clause or a restrictive covenant for an IT1 issued as debt.

rate payable under the IT1 increases by no more than 100 basis points over the initial rate, less the swap spread between the initial index basis and the stepped-up index basis if the Reporting Bank chooses not to exercise its option, such increase in dividend or coupon rate being the only one during the validity period of the IT1;

[MAS Notice 637 (Amendment) 2007]

- (f) subject to sub-paragraph (h), any dividend or coupon to be paid under the IT1 is only paid to the extent that the Reporting Bank has profits distributable under written law, determined as at the last public disclosure of its financial statements;

[MAS Notice 637 (Amendment 2) 2007]

- (g) the Reporting Bank has full discretion over the amount and timing of dividends or coupons under the IT1 where the Reporting Bank –
 - (i) has not paid or declared a dividend on its ordinary shares in the preceding financial year; or
 - (ii) determines that no dividend is to be paid on such shares in the current financial year;
- (h) the dividends or coupons on the IT1 are non-cumulative or where the dividends or coupons are cumulative and deferred, such dividends or coupons shall only be settled by, or with the proceeds from, the issuance of equal or higher quality capital;

[MAS Notice 637 (Amendment 2) 2007]

- (i) [Deleted by MAS Notice 637 (Amendment 2) 2007]
- (j) the dividend or coupon rate, or the formulae for calculating dividend or coupon payments, is fixed at the time of issuance of the IT1 and is not linked to the credit standing of the Reporting Bank³;

[MAS Notice 637 (Amendment) 2007]

- (k) the IT1 is available to absorb the losses of the Reporting Bank without it being obliged to cease carrying on business. In this regard, for an IT1 classified legally as debt, this condition may be achieved if the agreement governing the issuance of the IT1 specifically provides for the principal and coupon payments to absorb losses where the Reporting Bank would otherwise be insolvent, or for the holders of the IT1 to be treated as if they were holders of a specified class of share capital in any proceedings commenced for the winding up of the Reporting Bank;
- (l) the holder of the IT1 has a priority of claim, in respect of the principal and dividend or coupon payments of the IT1 in the event

³ For the avoidance of doubt, this does not preclude linking dividends or coupons to movements in general market indices.

[MAS Notice 637 (Amendment) 2007]

of a winding up of the Reporting Bank, which is lower than that of depositors, other creditors of the bank, and holders of Tier 2 capital instruments, except where such persons rank equally with, or behind the holders of the IT1;

[MAS Notice 637 (Amendment) 2007]

- (m) the IT1 is not secured or covered under any arrangement that legally or economically enhances the priority of the claim of any holder of the IT1 as against the persons set out in paragraph 1.3(l) above;
- (n) for any IT1 issued as debt by the Reporting Bank, the holder of the IT1 waives his right to set off any amounts he owes the Reporting Bank against any subordinated amount owed to him due to the IT1 and commits to return any set-off amounts or benefits received to the liquidator;

[MAS Notice 637 (Amendment) 2007]

- (o) the subordination provisions of the IT1 are governed by the laws of Singapore. Where the IT1 is to be subject to the laws of a jurisdiction other than Singapore, the Reporting Bank shall satisfy itself and the Authority that all the relevant conditions specified within this Annex are met under the laws of that jurisdiction;
- (p) the main features of the IT1, in particular paragraphs 1.3(f) to (n), are disclosed clearly and accurately;

[MAS Notice 637 (Amendment) 2007]

- (q) the agreement governing the issuance of the IT1 cannot be changed without prior approval of the Authority as the proposed changes may impact its eligibility as Tier 1 Capital.

Additional Requirements For Issuance Via A Special Purpose Vehicle ("SPV")

1.4 A Reporting Bank may include any preference share issued by a SPV which satisfies the requirements in paragraph 1.3 as Tier 1 Capital of the Reporting Bank at the Solo level if the following additional requirements are met:

- (a) the SPV is wholly-owned and managed by the Reporting Bank and under the sole control of the bank;
- (b) the SPV is established for the sole purpose of issuing the preference shares, the entire proceeds of which are lent to the Reporting Bank, without restrictions via an inter-company instrument (hereinafter referred to as "Interco");
- (c) the SPV does not carry on any other business or activity except those mentioned in paragraph 1.4(b) and appropriate arrangements are in place to prevent the SPV from becoming insolvent;
- (d) where dividends from the preference shares are waived by the SPV, the proceeds arising from coupons under the Interco that would

otherwise accumulate in the SPV shall be made available, without restrictions, to the Reporting Bank;

- (e) the agreement governing the issuance of the Interco offers a level of loss absorbency that is identical to any Upper Tier 2 capital instrument issued by the Reporting Bank, except that the Interco shall be dated with a minimum 50-year maturity. At the maturity of the Interco, the SPV shall invest the proceeds from the Reporting Bank in a similar inter-company instrument if the proceeds are not otherwise applied to pay the holders of the preference shares;
- (f) the Interco is available to absorb the Reporting Bank's losses without the Reporting bank being obliged to cease carrying on business. In this regard, it may be achieved if the agreement governing the issuance of the Interco specifically provides that the principal and coupon payments under the Interco are available to absorb losses where the Reporting Bank would otherwise become insolvent, or for the SPV to be treated as if it was the holder of a specified class of share capital in any proceedings commenced for the winding up of the Reporting Bank;
- (g) the SPV's priority of claim in respect of the principal and coupon payments of the Interco in the event of winding up of the Reporting Bank, which is lower than that of depositors and other creditors of the bank except where such persons expressed to rank equally with, or behind the SPV.
- (h) the subordination provisions of the Interco are governed by the laws of Singapore. Where the Interco is governed by the laws of a jurisdiction other than Singapore, the Reporting Bank shall satisfy itself and the Authority that all the relevant conditions specified within this Annex are met under the laws of that jurisdiction;
- (i) the agreement governing the issuance of the Interco does not contain any provision that would require early repayment of the Interco (e.g. a cross-default or negative pledge clause and any restrictive covenant);
- (j) a mandatory exchange of the preference shares issued by the SPV for shares qualifying as a Tier 1 Capital instrument issued by the Reporting Bank shall take place well before a serious deterioration in the financial position of the Reporting Bank. At the minimum, this mandatory exchange shall be triggered and shall take effect immediately⁴ upon the occurrence of any of the following events⁵:
 - (i) the Reporting Bank breaches the published minimum Tier 1 CAR or Total CAR requirements imposed by the Authority;

⁴ The Authority considers it unacceptable for substitution to be contingent on any event, and for the issuance of shares by the Reporting Banks qualifying as Tier 1 Capital to be subject to any delays, such as receipt of approval from investors.

⁵ All instrument issued via an SPV approved by the Authority on or before 31 December 2004 or any such proposed instruments for which an application for approval from the Authority has been made for on or before 31 December 2004 need not comply with requirements set out in paragraph 1.4(j) where it has met the requirements set out in paragraph 1.4(j) of MAS Notice 637 on or before 31 December 2004.

- (ii) the Authority exercises its powers under section 49(2)(c) of the Banking Act, or any successor provision, to assume control of and carry on the business of the Reporting Bank or direct some other person to assume control of and carry on the business of the bank;
- (ia) the Authority exercises its powers under section 49(2) of the Banking Act, or any successor provisions to direct the Reporting Bank to effect an exchange;
- (iii) any proceedings are commenced for the winding up of the Reporting Bank, whether in Singapore or elsewhere;
- (iv) the SPV ceases to be wholly owned, managed and under the sole control of the Reporting Bank. For the purposes of this requirement, an SPV is considered to be wholly owned, managed and under the sole control of a Reporting Bank when:
 - (A) The Reporting Bank owns and controls the voting power attached to all the ordinary shares of the SPV;
 - (B) All the executive officers of the SPV are either employees of the Reporting Bank or appointees of the Reporting Bank. Where an appointee is a non-employee, the appointee shall be appointed pursuant to a management contract which requires the appointee to act in accordance with any instruction of the Reporting Bank;
 - (C) The majority of the Board of Directors of the SPV are employees of the Reporting Bank or are appointees of the Reporting Bank. In the case where appointees are non-employees, these persons are appointed pursuant to a management contract which requires them to act in accordance with any instruction of the Reporting Bank; and
 - (D) No person other than the Reporting Bank has the capacity to determine the outcome of decisions on the financial and operating policies of the SPV.

The rate of exchange in terms of the ratio of shares of the Reporting Bank to preference shares issued by the SPV shall be fixed at the time of issuance of the preference shares of the SPV. The Reporting Bank shall maintain a sufficient margin of authorised share capital that is not issued to enable exchange to take place at any time;

[MAS Notice 637 (Amendment) 2004]

- (k) the agreement governing the issuance of the Interco and the preference shares issued by the SPV cannot be changed without the prior approval of the Authority as the proposed changes may impact the instrument's eligibility as Tier 1 Capital.

ANNEX 2: REQUIREMENTS FOR UPPER TIER 2 CAPITAL INSTRUMENTS

Requirements Relating to the Reporting Bank Issuing Upper Tier 2 Capital Instruments

1.1 A Reporting Bank intending to issue any Upper Tier 2 capital instrument ("UT2") for the purpose of inclusion as Tier 2 Capital shall:

- (a) consult the Authority well in advance if the instrument has additional features that are not explicitly addressed in paragraph 1.3; and
- (b) obtain the approval of the Authority for the instrument to qualify as Upper Tier 2 Capital.

[MAS Notice 637 (Amendment) 2007]

1.2 In applying for such approval, a Reporting Bank shall:

- (a) submit an appropriate memorandum of compliance stating how the proposed issuance complies with the requirements set out in paragraph 1.3 and identifying the relevant portions of the agreement governing the issuance of the instrument which address the requirements; and
- (b) confirm to the Authority in writing that it has received a written external legal opinion stating that the requirements in paragraph 1.3 have been met.

[MAS Notice 637 (Amendment 2) 2007]

Minimum Requirements for UT2

1.3 To qualify for inclusion as Upper Tier 2 Capital, an UT2 shall satisfy the following requirements:

- (a) the UT2 is issued and fully paid-up in cash. Only the net proceeds received from the issuance of UT2 shall be included as capital;
- (b) the UT2 does not have a maturity date;

[MAS Notice 637 (Amendment) 2007]

- (c) the UT2, if redeemable (whether through a call option, repurchase or otherwise), may only be redeemed at the option of the Reporting Bank with the prior approval of the Authority¹. Without prejudice to any other matter that the Authority may consider relevant, the Authority shall, in determining whether to grant its approval, have regard to whether the Reporting Bank's capital is likely to remain adequate after redemption;

[MAS Notice 637 (Amendment) 2007]

- (d) the agreement governing the issuance of the UT2 does not have any call option within the first five years from the issue date, other than a call option which may be exercised by the Reporting Bank where:
 - (i) the UT2 was issued for the purpose of a merger with or acquisition by, the Reporting Bank and the merger or acquisition is aborted;
 - (ii) there is a change in tax status of the UT2 due to changes in the applicable tax laws of the country or territory in which the UT2 was issued;
 - (iii) in the case of a merger or acquisition, the UT2 is exchanged for shares or any instrument of the surviving or new Reporting Bank (as the case may be) with terms and conditions that qualify the shares or instrument as equal or higher quality capital; or
 - (iv) there is a change in this Notice relating to the recognition of the UT2 as capital for calculating CAR;

[MAS Notice 637 (Amendment) 2007]

- (e) the agreement governing the issuance of the UT2 does not contain any provision that mandates or creates an incentive for the Reporting Bank to repay the outstanding principal of the instrument

¹ The Authority is not likely to grant any approval for redemption within the first 5 years from the issue date except in any one of the situations set out in paragraph 1.3(d) or where there are strong justifications (e.g. the Reporting Bank makes a simultaneous issue of new capital which is of equal or higher quality).

Approval is likely to be granted after the first 5 years from the issue date:

- (a) where the UT2 is replaced by equal or higher quality capital (including an increase in retained earnings);
- (b) where the Reporting Bank or any of its banking group companies is reducing its operations in Singapore or elsewhere; or
- (c) in any one of the situations set out in paragraph 1.3(d).

[MAS Notice 637 (Amendment) 2007]

early², other than a call option which may be exercised by the Reporting Bank no earlier than 10 years after the issuance of the UT2, accompanied by a provision whereby the dividend or coupon rate payable under the UT2 increases by no more than 100 basis points over the initial rate, less the swap spread between the initial index basis and the stepped-up index basis if the Reporting Bank chooses not to exercise its option, such increase in dividend or coupon rate being the only one during the validity period of the UT2;

[MAS Notice 637 (Amendment) 2007]

- (f) the agreement governing the issuance of the UT2 provides the Reporting Bank with an option to defer any dividend or coupon payment on the instrument, where the Reporting Bank -
 - (i) has not paid or declared a dividend on its ordinary and other classes of preference shares in the preceding financial year; or
 - (ii) determines that no dividend is to be paid on such shares in the current financial year. Such deferred dividends or interest may bear interest, but the interest rate payable on deferred dividends or interest shall not exceed market rates;
- (g) the dividend or coupon rate, or the formulae for calculating dividend or coupon payments, is fixed at the time of issuance of the UT2 and is not linked to the credit standing of the Reporting Bank³;
- (h) the UT2 is available to absorb the losses of the Reporting Bank without it being obliged to cease carrying on business. In this regard, for an UT2 classified legally as debt, this condition may be achieved if the agreement governing the issuance of the UT2 specifically provides for the principal and coupon payments to absorb losses where the Reporting Bank would otherwise be insolvent, or for the holders of the UT2 to be treated as if they were holders of a specified class of share capital in any proceedings commenced for the winding up of the Reporting Bank;
- (i) the holder of the UT2 has a priority of claim in respect of the principal and dividend or coupon payments of the UT2, in the event of a winding up of the Reporting Bank, which is lower than that of depositors, other creditors of the bank, and holders of Lower Tier 2 capital instruments, except where such persons rank equally with, or behind holders of the UT2;

[MAS Notice 637 (Amendment) 2007]

² Examples are a cross-default or negative pledge clause or a restrictive covenant for an UT2 issued as debt.

³ For the avoidance of doubt, this does not preclude linking dividends or coupons to movements in general market indices.

[MAS Notice 637 (Amendment) 2007]

Annex 2

(j) the UT2 is not secured or covered under any arrangement that legally or economically enhances the priority of the claim of any holder of the UT2 as against the persons set out in the paragraph 1.3(i) above;

(k) for any UT2 issued as debt by the Reporting Bank, the holder of the UT2 waives his right to set off any amounts he owes the Reporting Bank against any subordinated amount owed to him due to the UT2 and commits to return any set-off amounts or benefits received to the liquidator;

[MAS Notice 637 (Amendment) 2007]

(l) the subordination provisions of the UT2 are governed by the laws of Singapore. Where the UT2 is to be subject to the laws of a jurisdiction other than Singapore, the Reporting Bank shall satisfy itself and the Authority that all the relevant conditions specified in paragraph 1.3 are met under the laws of that jurisdiction;

(m) the main features of the UT2, in particular paragraphs 1.3(f) to (k) above are disclosed clearly and accurately;

[MAS Notice 637 (Amendment) 2007]

(n) the agreement governing the issuance of the UT2 cannot be changed without prior approval of the Authority as the proposed changes may impact its eligibility as Tier 2 Capital subject to Limits; and

[MAS Notice 637 (Amendment) 2007]

(o) [Deleted by MAS Notice 637 (Amendment) 2007]

(p) where a Reporting Bank issues subordinated debt in a foreign currency, the debt is to be revalued periodically (at least monthly) in terms of Singapore dollars at the prevailing exchange rates. Where the Reporting Bank intends to use a swap to hedge the foreign exchange exposure arising from the foreign currency debt, it shall first consult the Authority on the capital treatment applicable to the hedge.

ANNEX 2A: REQUIREMENTS FOR LOWER TIER 2 CAPITAL INSTRUMENTS

Requirements Relating to the Reporting Bank Issuing Lower Tier 2 Capital Instruments

1.1 A Reporting Bank intending to issue any Lower Tier 2 capital instrument ("LT2") for the purpose of inclusion as Tier 2 Capital shall:

- (a) consult the Authority well in advance if the instrument has additional features that are not explicitly addressed in paragraph 1.3; and
- (b) obtain the approval of the Authority for the instrument to qualify as Lower Tier 2 Capital.

1.2 In applying for such approval, a Reporting Bank shall:

- (a) submit an appropriate memorandum of compliance stating how the proposed issuance complies with the requirements set out in paragraph 1.3 and identifying the relevant portions of the agreement governing the issuance of the instrument which address the requirements; and
- (b) confirm to the Authority in writing that it has received a written external legal opinion stating that the requirements in paragraph 1.3 have been met.

[MAS Notice 637 (Amendment 2) 2007]

Minimum Requirements for LT2

1.3 To qualify for inclusion as Tier 2 Capital, an LT2 shall satisfy the following requirements:

- (a) the LT2 is issued and fully paid-up in cash. Only the net proceeds received from the issuance of LT2 shall be included as capital;
- (b) the LT2 has a minimum original maturity of at least 5 years. Where the agreement governing the issuance of the LT2 provides for the loan to be drawn down in a series of tranches, the minimum original maturity for each tranche shall be 5 years from the date of its draw-down;

- (c) any redemption of the LT2 at the option of the Reporting Bank (whether through a call option, repurchase or otherwise) is subject to the prior approval of the Authority¹. Without prejudice to any other matter that the Authority may consider relevant, the Authority shall, in determining whether to grant its approval, have regard to whether the Reporting Bank's capital is likely to remain adequate after redemption;
- (d) the agreement governing the issuance of the LT2 does not contain any provision that mandates or creates an incentive for the Reporting Bank to repay the outstanding principal of the instrument early², other than a call option which may be exercised by the Reporting Bank no earlier than 5 years after the issuance of the LT2, accompanied by a provision whereby the dividend or coupon rate payable under the LT2 increases by no more than:
 - (i) in the case of an LT2 with a maturity of less than 10 years, 50 basis points over the initial rate, less the swap spread between the initial index basis and the stepped-up index basis; or
 - (ii) in the case of an LT2 with a maturity of 10 years or more, 100 basis points over the initial rate, less the swap spread between the initial index basis and the stepped-up index basis,if the Reporting Bank chooses not to exercise its option, such increase in dividend or coupon rate being the only one during the validity period of the LT2;
- (e) where the LT2 provides the holders with the option to demand repayment prior to maturity, the earliest possible repayment date will be regarded as the effective maturity date of the LT2 for the purposes of this paragraph;

¹ Approval is likely to be granted where:

- (a) the LT2 is replaced by equal or higher quality capital (including an increase in retained earnings);
- (b) the Reporting Bank or any of its banking group companies is reducing its operations in Singapore or elsewhere;
- (c) the LT2 was issued for the purposes of a merger with, or acquisition by, the Reporting Bank and the merger or acquisition is aborted;
- (d) there is a change in tax status of the LT2 due to changes in the applicable tax laws of the country or territory in which the LT2 was issued;
- (e) in the case of a merger or acquisition, the LT2 is exchanged for shares or any instrument of the surviving or new Reporting Bank (as the case may be) with terms and conditions that qualify the shares or instrument as equal or higher quality capital; or
- (f) there is a change in this Notice relating to the recognition of the LT2 as capital for calculating CAR.

² Examples are a cross-default or negative pledge clause or a restrictive covenant for an LT2 issued as debt.

- (f) the dividend or coupon rate, or the formulae for calculating dividend or coupon payments is fixed at the time of issuance of the LT2 and is not linked to the credit standing of the Reporting Bank³;
- (g) the holder of the LT2 has a priority of claim in respect of the principal and dividend or coupon payments of the LT2, in the event of a winding up of the Reporting Bank, which is lower than that of depositors and other creditors of the Reporting Bank, except where such persons rank equally with, or behind holders of the LT2;
- (h) the LT2 is not secured or covered under any arrangement that legally or economically enhances the priority of the claim of any holder of the LT2 as against the persons set out in paragraph 1.3(g) above;
- (i) for any LT2 issued as debt by the Reporting Bank, the holder of the LT2 waives his right to set off any amounts he owes the Reporting Bank against any subordinated amount owed to him due to the LT2 and commits to return any set-off amounts or benefits received to the liquidator;
- (j) the subordination provisions of the LT2 are governed by the laws of Singapore. Where the LT2 is to be subject to the laws of a jurisdiction other than Singapore, the Reporting Bank shall satisfy itself and the Authority that all the relevant conditions specified in paragraph 1.3 are met under the laws of that jurisdiction;
- (k) the main features of the LT2, in particular paragraphs 1.3(f) to (i) above, are disclosed clearly and accurately;
- (l) the agreement governing the issuance of the LT2 cannot be changed without the prior approval of the Authority as the proposed changes may impact its eligibility as Tier 2 Capital subject to Limits;
- (m) the LT2 does not qualify in full for inclusion as Tier 2 Capital subject to Limits in its final 4 years to maturity. The eligible amount shall be amortised on a straight-line basis by 20% per annum. Where the LT2 is repayable in separate tranches, each tranche shall be amortised individually, as if it were a separate loan. The amortisation schedule is as follows:

<u>Years to maturity (x)</u>	<u>Amortised amount eligible to be included in Tier 2 Capital subject to Limits</u>
$x > 4$	100%
$3 < x \leq 4$	80%
$2 < x \leq 3$	60%
$1 < x \leq 2$	40%
$x \leq 1$	20% ; and

³ For the avoidance of doubt, this does not preclude linking dividends or coupons to movements in general market indices.

- (n) where a Reporting Bank issues subordinated debt in a foreign currency, the debt is to be revalued periodically (at least monthly) in terms of Singapore dollars at the prevailing exchange rates. Where the Reporting Bank intends to use a swap to hedge the foreign exchange exposure arising from the foreign currency debt, it shall first consult the Authority on the capital treatment applicable to the hedge.

[MAS Notice 637 (Amendment) 2007]

ANNEX 3: APPLICATION OF THE LIMITS ON PERPETUAL NON-CUMULATIVE PREFERENCE SHARES, INNOVATIVE TIER 1 CAPITAL INSTRUMENTS AND TIER 2 CAPITAL

This Annex explains by way of a examples, the application of –

- the 30% limit on perpetual non-cumulative preference shares and innovative Tier 1 capital instruments;
- the 15% limit on innovative Tier 1 capital instruments;
- the limit on Tier 2 Capital; and
- the limit on Lower Tier 2 Capital,

set out in paragraphs 13 to 15, 17 and 17A of the Notice.

Example of financial information of a Reporting Bank:

Paid-up ordinary share capital	\$55
Disclosed reserves	\$25
Perpetual non-cumulative perpetual preference share capital ("Preference shares")	\$14
Innovative Tier 1 Capital approved by the Authority ("IT1")	\$16
Upper Tier 2 capital instruments approved by the Authority ("UT2")	\$15
Minority Interest ("MI")	\$5
Goodwill	\$10
Intangible assets	\$5
General provisions	\$5
45% of revaluation surplus on land and building assets ("Revaluation surplus")	\$5
45% of revaluation gains on AFS equity securities ("Revaluation gains")	\$6

Application of the 30% Limit on IT1 and Preference shares

Example 1:

- Step 1: Calculate the portion of Tier 1 Capital that will form the threshold to compute the Allowable IT1 and Preference shares as defined in Step 2 below according to the following formula:

<p><i>Paid-up ordinary share capital (\$55)</i></p> <p style="text-align: center;">+</p> <p><i>Disclosed reserves(\$25)</i></p> <p style="text-align: center;">+</p> <p><i>MI (\$5)</i></p> <p style="text-align: center;">less</p> <p><i>Goodwill (\$10)</i></p> <p style="text-align: center;">less</p> <p><i>Intangible assets (\$5)</i></p>
<p><i>Portion of Tier 1 Capital that will form the threshold for Step 2 = \$70</i></p>

- Step 2: Calculate the maximum amount of IT1 and Preference shares that can be included as Eligible Tier 1 Capital (“Allowable IT1 and Preference shares”) as follows:

<p><u>Portion of Tier 1 Capital that will form the threshold (\$70) * 30%</u></p> <p style="text-align: center;">70%</p>
<p><i>Allowable IT1 and Preference shares = \$30</i></p>

Application of the 15% Limit on IT1

Example 2:

- Step 1: Determine the 30% limit for Allowable IT1 and Preference shares (See Example 1)
- Step 2: (A) Where the amount of Preference shares (e.g. \$16) is more than half of Allowable IT1 and Preference shares
- Calculate the amount of IT1 that can be included as Eligible Tier 1 Capital (“Allowable IT1”) as follows:

<p><i>Allowable IT1 and Preference shares (\$30)</i> Less <i>Preference shares (\$16)</i></p>
<p><i>Allowable IT1 = \$14</i> <i>and</i> <i>Excess of \$2 can be included in Upper Tier 2 Capital for calculating Total CAR</i></p>

(B) Where the amount of Preference shares is less than half of Allowable IT1 and Preference shares

Calculate the amount of non-IT1 that can be included as Eligible Tier 1 Capital as follows:

<p><i>Paid-up ordinary share capital (\$55)</i> + <i>Disclosed reserves (\$25)</i> + <i>Preference shares (\$14)</i> + <i>MI (\$5)</i> less <i>Goodwill (\$10)</i> less <i>Intangible assets (\$5)</i></p>
<p><i>Amount of non-IT1 = \$84</i></p>

Step 3: Calculate Allowable IT1 as follows:

<p><u><i>Amount of non-IT1(\$84) * 15%</i></u> 85%</p>
<p><i>Allowable IT1 = \$14.82</i> <i>and</i> <i>Excess of \$1.18 can be included in Upper Tier 2 Capital for calculating Total CAR</i></p>

Application of the Limit on Tier 2 Capital

Example 3:

Step 1: Calculate Eligible Tier 1 Capital (following from Example 2B) as follows:

<i>Paid-up ordinary share capital (\$5)</i> + <i>Disclosed reserves (\$25)</i> + <i>Preference shares (\$14)</i> + <i>IT1 (\$14.82)</i> + <i>MI (\$5)</i> less <i>Goodwill(\$10)</i> less <i>Intangible assets (\$5)</i>
<i>Eligible Tier 1 Capital = \$98.82</i>

Step 2: Calculate the amount that is allowable as Tier 2 Capital as follows:

<i>Eligible Tier 1 Capital (\$98.82) *100%</i>
<i>Allowable Tier 2 Capital = \$98.82</i>

Application of the Limit on Lower Tier 2 CapitalExample 4:

Step 1: Calculate Eligible Tier 1 Capital (Step 1 of Example 3).

Step 2: Calculate Upper Tier 2 Capital as follows:

<i>General provisions (\$5)</i> + <i>UT2 (\$15)</i> + <i>Excess IT1 inadmissible as Eligible Tier 1 (\$1.18)¹</i> + <i>Revaluation surplus (\$5)</i> + <i>Revaluation gains (\$6)</i>
<i>Upper Tier 2 Capital = \$32.18</i>

Step 3: Calculate the amount allowable as Lower Tier 2 Capital as follows:

$\frac{[\textit{Eligible Tier 1 Capital } (\$98.82) + \textit{Upper Tier 2 Capital } (\$32.18)] * 25\%}{75\%}$
<i>Allowable Lower Tier 2 Capital = \$43.67</i>

[MAS Notice 637 (Amendment) 2007]
 [MAS Notice 637 (Amendment 2) 2007]

¹ Following from Example 2B, there is \$1.18 of IT1 that is inadmissible as Eligible Tier 1 Capital which can be included as Upper Tier 2 Capital for the purposes of calculating Total CAR.

Notes :

Schedule I

- 1a/ Includes marked-to-market gains/losses in the trading book.
 1b/ Includes interim profits provided the conditions set out in paragraph 11(b)(i)-(iii) of MAS Notice 637 are met.
 1c/ Excludes revaluation reserves.
 2a/ Aggregate of Paid-up Non-cumulative Preference Shares and Innovative Tier 1 Capital Instruments cannot exceed 30% of Eligible Tier 1 Capital, i.e., Item (A).
 2b/ Cannot exceed 15% of Eligible Tier 1 Capital, i.e., Item (A).
 3/ Deferred Tax Assets ("DTAs") not associated with General Provisions ("GPs") qualifying as Upper Tier 2 Capital.
 4/ GPs net of associated DTAs can be admitted as Upper Tier 2 capital, up to a maximum of 1.25% of sum of credit risk weighted assets ("RWA") and market RWA, [i.e., Item (F) + Item (H).]
 5/ Subject to a haircut of 55% and provided the conditions as set out in paragraph 16(c)(i)-(iv) of MAS Notice 637 are met.
 6/ Subject to a haircut of 55% and provided the conditions as set out in paragraph 16(d)(i)-(iv) of MAS Notice 637 are met.
 7/ Tier 2 Capital included for the purpose of calculating Total CAR shall not exceed 100% of Eligible Tier 1 Capital i.e. Item (A). Lower Tier 2 Capital included for the purpose of calculating Total CAR shall not exceed 25% of the sum of Eligible Tier 1 Capital and Tier 2 Capital subject to Limits.
 8/ For purposes of determining Total CAR at Group level, deconsolidate assets and liabilities of insurance subsidiaries from the banking group and deduct goodwill from Eligible Tier 1 Capital. The balance of capital investments shall be deducted from the sum of Eligible Tier 1 Capital and Tier 2 Capital subject to Limits, i.e., Item (C).
 9/ These are capital investments in FIs regulated by the Authority in excess of 2% of Eligible Total Capital at the Solo or Group level. The first 2% of capital investment shall be risk-weighted at 100% if recorded in the banking book and shall attract market risk capital charges if recorded in the trading book.
 10/ Some of these elements may be combined if Reporting Bank is certified to use the Internal Models Approach for computing capital charges for market risks

Schedule II

- 10A/ This includes any outstanding receivables arising from any delivery-versus-payment transaction up to and including the fourth business day after the date of settlement.
 11/ Only OECD public sector enterprises approved by the Authority on an exceptional basis.
 12/ Qualifying multilateral and regional development banks means the World Bank Group (e.g. the International Bank for Reconstruction and Development and the International Finance Corporation), the Asian Development Bank, the African Development Bank, the European Bank for Reconstruction and Development, the Inter-American Development Bank, the European Investment Bank, the European Investment Fund, the Nordic Investment Bank, the Caribbean Development Bank, the Islamic Development Bank, the Council of Europe Development Bank and any multilateral or regional development bank that is approved by the Authority on an exceptional basis.
 12A/ Qualifying international organisations means the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Community and any international organisation that is approved by the Authority on an exceptional basis.
 13/ (a) This includes any loan secured against residential mortgages ("residential mortgage loan") meeting the following conditions:
 (i) The loan is secured against a first lien mortgage or secured against a 2nd lien mortgage if the Central Provident Fund of Singapore holds the first lien position;
 (ii) The loan is not past due by more than 90 days and is not rated as a classified loan under MAS Notice 612;
 (iii) The loan is secured against a mortgage of a completed property, an uncompleted property in Singapore, or an uncompleted property in a jurisdiction approved by the Authority on an exceptional basis;
 (iv) The loan is not to companies engaged in residential building or development; and
 (v) The loan-to-value ("LTV") ratio calculated in accordance with MAS Notice 632 is:
 (A) less than or equal to 80% ("LTV Requirement") at inception of the loan; or
 (B) more than 80% but less than or equal to 90% at inception of the loan, where there is qualifying mortgage insurance covering at least the portion of each loan in excess of 80% at the inception of the loan;
 (b) For the purpose of paragraph 13(a)(v)(A), any residential mortgage loan refinanced after 30 Jun 2004 may be accorded a 50% risk weight if the LTV of the residential mortgage loan is not more than 80% either at refinancing date or at the first date when the loan was disbursed to finance the purchase of the residential property, provided no additional funds are disbursed to the borrower other than funds required to discharge the borrower from its previous loan and to cover associated legal and valuation costs;
 (c) Where conditions (i) to (iv) set out in paragraph 13(a) are met, the following loans shall be deemed to have met the LTV Requirement and may be accorded a 50% risk weight:
 (i) Residential mortgage loans originated by a bank on or before 30 Jun 2004, or
 (ii) Notwithstanding (b) above, any residential mortgage loan that is refinanced after 30 Jun 2004, where the loan was originated by the same bank on or before 30 Jun 2004 and no additional funds are disbursed to the borrower other than funds required to discharge the borrower from its previous loan and to cover associated legal and valuation costs; and
 (d) For the purpose of paragraph 13(a)(v)(B), qualifying mortgage insurance is subject to the following conditions:
 (i) the coverage shall be provided by a registered insurer under the Insurance Act (Cap. 42) which carries on mortgage insurance business in Singapore and which is not a related corporation of the Reporting Bank;
 (ii) the registered insurer providing the mortgage insurance ("mortgage insurer") shall have a credit rating of at least A- by Standard and Poor's, A3 by Moody's Investors Service or A- by Fitch Ratings at the inception of the mortgage insurance coverage and a credit rating of at least BBB- by Standard and Poor's, Baa3 by Moody's Investors Service or BBB- by Fitch Ratings on an ongoing basis;
 (iii) the Reporting Bank shall employ robust procedures and processes to control residual risks such as legal, operational, liquidity and market risks;
 (iv) the Reporting Bank shall conduct sufficient legal review to verify that, and have a well founded legal basis to ensure that all documentation used in documenting the mortgage insurance is binding on all parties and legally enforceable in the relevant jurisdictions, and undertake such future review as necessary to ensure continued enforceability; and
 (v) the Reporting Bank shall ensure that the mortgage insurance coverage complies with the following:
 (A) it represents a direct claim on the mortgage insurer and is explicitly referenced to specific exposures, so that the extent of cover is clearly defined and incontestable;
 (B) it is irrevocable (see Guideline 1), i.e. there shall be no clause in the mortgage insurance contract that would allow the mortgage insurer to unilaterally cancel the coverage or that would increase the effective cost of coverage as a result of deteriorating credit quality of the loan;
 (C) it is unconditional, i.e. there shall be no clause in the mortgage insurance contract outside the direct control of the Reporting Bank that could prevent the mortgage insurer from being obliged to pay out in a timely manner in the event that the borrower fails to make the payments due;
 (D) the definition of a qualifying default or non-payment of the borrower in the mortgage insurance contract shall be aligned with that used by the Reporting Bank;

- (E) the documentation governing the transaction allows the bank to seek repayment from the mortgage insurer for any money outstanding on the qualifying default or non-payment of the borrower in a timely manner. The Reporting Bank shall have the right to receive such payments without first having to take legal action against the borrower for repayment of the mortgage loan (see Guideline 2);
- (F) it is an explicitly documented obligation assumed by the mortgage insurer; and
- (G) it covers all types of payments that the borrower is expected to make under the documentation governing the loan.

Guidelines :

- 1/ The Authority will not normally regard exclusions relating to the non-payment by the Reporting Bank of money due in respect of the mortgage insurance contract, and clearly defined non-credit related events (e.g. exclusions relating to bank negligence and fraud, title defects, physical damage to the collateral, acts of war and rebellion, and claims contrary to law) as a failure to meet this condition.
- 2/ Where a mortgage insurer is expected to pay claims only after the enforcement of collateral has taken place, the mortgage insurer should pay claims promptly once the collateral has been realised and the loss has been established. However, if this is not completed before 24 months, the Reporting Bank shall have the right to receive such payments regardless of the status of realising the collateral. In this case, the claim payment will be based on the estimated value of the collateral and a final settlement will occur upon realising the collateral.
- 13a/ For the purpose of item 1.6A(b), lending of a capital nature shall include any subordinated debt, convertible debt and debt with warrants or "equity kickers".
- 14/ All on-balance sheet banking book assets not included under Schedule 1.1 to 1.8, including premium paid for options, warrants and margin deposits for exchange traded derivative transactions, but excluding precious metals and commodities.
- 15/ Exposures in assets should reflect net book value.
- 16/ Exposures which are fully collateralised by a security accorded a lower risk weight may receive a risk weight applicable to the collateral instrument, provided there is legal certainty that the bank has the right to liquidate or take possession of the collateral that is pledged or transferred, in a timely manner, in the event of default, insolvency or bankruptcy of the borrower. Similarly, an exposure that is unconditionally guaranteed by an entity in a lower risk weight category may receive a risk weight applicable to the guarantor.

Schedule III

- 17/ The capital treatment for commitments to provide liquidity facilities to ABCP or other securitisation vehicles shall be governed by MAS Notice 628.

Schedule IV

- 18/ The Credit Conversion Factors (CCFs) are to be used to obtain the Credit Risk Equivalent Amount by multiplying the CCFs by the Exposures and weighted according to the nature of the counterparty. Instruments traded on recognised exchanges (Exchanges in Singapore + Group A Exchanges) which are 1) subject to daily margining requirements and 2) included under Schedule II are exempted.
- 19/ Foreign exchange derivative contracts of less than 14 days in original maturity may be excluded.
- 20/ Total replacement cost (marked-to-market value) of all derivative contracts with positive value.
- 21/ Potential Future Credit Exposure i.e. multiply Effective Notional Principal for each contract with Conversion Factors based on the residual maturity and type of the instruments.

Schedule V

- 22/ The Net Exposure position (converted to Singapore dollars) under bond, forward, futures, and swap transactions, and the delta equivalent position (for banks using the delta-plus approach) arising from exposures to options.
- 23/ Investment grade refers to a rating of Baa or higher by Moodys, a rating of BBB or higher for Standard & Poor's, or a rating of BBB or higher by Fitch.

Schedule VIa & VIb

- 24/ The Notional Exposure (converted to Singapore dollars) captures all interest rate sensitive instruments including bonds, forwards, futures, FRAs and swap transactions, and the delta equivalent position (for banks using the delta-plus approach) arising from interest rate sensitive option contracts.
- 25/ Weighted Individual Positions for each time band are notional exposures multiplied by the risk weights (for maturity method), or the price sensitivity of each band multiplied by the assumed change in yield under the duration method.

Schedule VII

- 26/ The net position (converted to Singapore dollars) captures all equity instruments including forwards, futures, equity swap transactions, and the delta equivalent position (for banks using the delta-plus approach) arising from equity option contracts.
- 27/ The specific risk capital charge for exposures to any individual security will be 8%, unless the portfolio is both liquid and well-diversified, in which case the charge will be 4%. The specific risk capital charge for exposures to any equity index will be 8%, unless the index is a broad index, in which case, the charge will be 2%. A broad index refers to either one of the following: (i) S&P ASX 200 Index, (ii) Dow Jones STOXX 50 Index, (iii) Dow Jones Euro Stoxx 50 Index, (iv) CAC 40 Index, (v) DAX Index, (vi) Hang Seng Index, (vii) Milan MIB 30 Index, (viii) Nikkei 225 Index, (ix) KOSPI 200 Index, (x) KL Composite Index, (xi) Amsterdam Exchanges Index, (xii) MSCI Singapore Index, (xiii) OMX (Stockholm) Index, (xiv) MSCI Taiwan Index, (xv) FTSE 100 Index, (xvi) S&P 500 Index, (xvii) NASDAQ 100 Index, (xviii) Canada TSE 35 Index, or any index that is approved by the Authority on an exceptional basis.
- 28/ 2% capital charge may be applied to only one index with the opposite position exempt from the capital charge.
- 29/ Similar indices must contain sufficient common components to justify offsetting.
- 30/ Such arbitrage activities have to meet the conditions for exemption from standardised methodology that the trade has been deliberately entered into and separately controlled and that the composition of the basket of stocks represents at least 90% of the index when broken down into its notional components.

Schedule VIII

- 31/ The position converted to Singapore dollars captures all foreign exchange exposures in the banking and trading book, including spot, forward, futures, and swap transactions, and the delta equivalent position arising from foreign exchange option contracts.

Schedule IX

- 32/ The net exposure position (converted to Singapore dollars) captures all commodity exposures in the banking and trading book, including spot, forward, futures, and commodity swap transactions, and the delta equivalent position (for banks using the delta-plus approach) arising from commodity option contracts.

Capital Adequacy Ratio Calculation

As at _____

	Bank S\$'000	Group S\$'000
1 Capital Elements		
1.1 Tier 1 Capital		
(a) Paid Up Ordinary Share Capital		
(b) Disclosed Reserves 1a, 1b, 1c/		
(c) Paid-up Non-cumulative Preference Shares 2a/		
(d) Innovative Tier 1 Capital Instruments 2a, 2b/		
(e) Tier 1 Minority Interests		
less:		
1.2 Deductions from Tier 1 Capital		
(a) Goodwill		
(b) Intangible Assets		
(c) Deferred Tax Assets 3/		
(d) Other Supervisory Deductions		
Eligible Tier 1 Capital = Tier 1 Capital Less Deductions from Tier 1 Capital (Item A) 2a, 2b/		
1.3 Upper Tier 2 Capital		
(a) General Provisions 4/		
(b) Upper Tier 2 Capital Instruments		
(c) Revaluation surplus on land and buildings assets 5/		
(d) Revaluation surplus on equity securities 6/		
(e) Non-cumulative Preference Shares & Innovative Tier 1 Capital Instruments in excess of limits		
1.3A Lower Tier 2 Capital 7/		
Tier 2 Capital subject to Limits - (Item B) 7/		
Eligible Tier 1 Capital + Tier 2 Capital subject to Limits (Item C) = (Item A) + (Item B)		
1.4 Deductions from Total Capital		
(a) Capital Investments in insurance subsidiary companies 8/		
(b) Capital Investments in unconsolidated subsidiary companies approved, licensed, registered or regulated by the Authority		
(c) Capital Investments in other unconsolidated subsidiary companies not regulated by the Authority		
(d) Capital investments in major stake companies not approved, licensed, registered or regulated by the Authority		
1 For entities not approved under S32 of BA		
2 For entities acquired or held in the course of the satisfaction of debts		
(e) Capital Investments in Major Stake companies in excess of 20% of the investee companies		
1 For entities approved by the Authority under S32 of BA		
2 For entities excluded from operation of S32 of BA		

Capital Adequacy Ratio Calculation

As at _____

	Bank S\$'000	Group S\$'000
(f) Capital Investments in financial institutions (FIs) incorporated in Singapore which is approved, licensed, registered or regulated by the Authority 9/		
(g) Capital deficits in regulated financial subsidiaries and financial associates		
(h) Any amount that is to be included in Deductions from Total Capital pursuant to MAS Notice 628		
(i) Other supervisory deductions		
Deductions from Total Capital - (Item D)		
Eligible Total Capital (Item E) = (Item C) - (Item D)		
2 Credit Risk-Weighted Assets ("RWA")		
(a) On Balance Sheet Banking Book Positions (Pls see Schedule II)		
(b) Off Balance Sheet Banking Book Positions, other than derivative contracts (Pls see Schedule III)		
(c) Derivative positions (Pls see Schedule IV)		
Total Credit RWA - (Item F)		
3 Capital Charge for Market Risk 10/		
(a) Charges for interest rate (specific) risks - (Pls see Schedule V)		
(b) Charges for interest rate (general market) risks - (Pls see Schedule VI)		
(c) Charges for equity position risks (Pls see Schedule VII)		
(d) Charges for foreign exchange risks (Pls see Schedule VIII)		
(e) Charges for commodities risks (Pls see Schedule IX)		
(f) Charges for options risks (Pls see Schedule X)		
Total Capital Charges for Market Risk - (Item G)		
Total Market RWA (Item H) = (Item G) x 12.5%		
4 Capital Adequacy Ratios		
Tier 1 CAR = Item A / (Item F + Item H)		
Total CAR = Item E / (Item F + Item H)		

CALCULATION OF RISK WEIGHTED ASSETS FOR ON BALANCE SHEET BANKING BOOK POSITIONS

Exposures 15/ & 16/ As at _____	Total risk weighted assets
------------------------------------	----------------------------

1 Exposure Category

1.1 Cash items

- (a) Cash (excludes precious metal) 10A/
- (b) Cash items in process of collection

1.2 Claims on central governments, central banks and public sector entities

- (a) Claims on (i) OECD central government or central bank and (ii) non-OECD central government and central banks denominated and funded in domestic currency
- (b) All other claims on central governments or central banks other than in 1.2(a)
- (c) Claims on domestic public sector entities (statutory bodies of Singapore)
- (d) Claims on "qualifying" OECD public sector entities and regional governments 11/
- (e) All other claims on public sector entities and regional governments

1.3 Claims on banks

- (a) Claims on qualifying multilateral and regional development banks 12/ and qualifying international organisations 12A/
- (b) Claims on multilateral and regional development banks and international organisations other than those included under paragraph 1.3(a)
- (c) Claims on OECD banks and loans guaranteed by OECD banks
 - i) Where the bank holds < 20% equity stake in these OECD banks
 - ii) Where the bank has an equity stake ≥ 20% in these OECD banks
- (d) Claims on domestic banks and loans guaranteed by domestic banks
 - Gross claims
 - Less: lending of a capital nature deducted from capital under Sch I 1.4
 - Claims net of deductions from capital
- (e) Claims on other non-OECD banks and loans guaranteed by non-OECD banks
 - i) with a residual maturity of under 1 year
 - ii) with a residual maturity of 1 year and over
 - a) Where the bank holds < 20% equity stake in these non-OECD banks
 - b) Where the bank has an equity stake ≥ 20% in these non-OECD banks

1.4 Claims on non-bank financial Institutions

- (a) Claims on finance companies regulated by the Authority under the Finance Companies Act
 - Gross claims
 - Less: lending of a capital nature deducted from capital under Sch I 1.4
 - Claims net of deductions from capital
- (b) Claims on financial institutions incorporated in Singapore and regulated by the Authority
 - Gross claims
 - Less: lending of a capital nature deducted from capital under Sch I 1.4
 - Claims net of deductions from capital

	Applicable Risk Weight					Bank S\$'000	Group S\$'000	Bank S\$'000	Group S\$'000
	0%	20%	50%	100%	200%				
(a) Cash (excludes precious metal) 10A/	x								
(b) Cash items in process of collection		x							
(a) Claims on (i) OECD central government or central bank and (ii) non-OECD central government and central banks denominated and funded in domestic currency	x								
(b) All other claims on central governments or central banks other than in 1.2(a)				x					
(c) Claims on domestic public sector entities (statutory bodies of Singapore)		x							
(d) Claims on "qualifying" OECD public sector entities and regional governments 11/		x							
(e) All other claims on public sector entities and regional governments				x					
(a) Claims on qualifying multilateral and regional development banks 12/ and qualifying international organisations 12A/	x								
(b) Claims on multilateral and regional development banks and international organisations other than those included under paragraph 1.3(a)				x					
(c) Claims on OECD banks and loans guaranteed by OECD banks									
i) Where the bank holds < 20% equity stake in these OECD banks		x							
ii) Where the bank has an equity stake ≥ 20% in these OECD banks									
Gross claims									
Less: lending of a capital nature deducted from capital under Sch I 1.4									
Claims net of deductions from capital		x							
(d) Claims on domestic banks and loans guaranteed by domestic banks									
Gross claims									
Less: lending of a capital nature deducted from capital under Sch I 1.4									
Claims net of deductions from capital		x							
(e) Claims on other non-OECD banks and loans guaranteed by non-OECD banks									
i) with a residual maturity of under 1 year		x							
ii) with a residual maturity of 1 year and over									
a) Where the bank holds < 20% equity stake in these non-OECD banks				x					
b) Where the bank has an equity stake ≥ 20% in these non-OECD banks									
Gross claims									
Less: lending of a capital nature deducted from capital under Sch I 1.4									
Claims net of deductions from capital				x					
(a) Claims on finance companies regulated by the Authority under the Finance Companies Act									
Gross claims									
Less: lending of a capital nature deducted from capital under Sch I 1.4									
Claims net of deductions from capital		x							
(b) Claims on financial institutions incorporated in Singapore and regulated by the Authority									
Gross claims									
Less: lending of a capital nature deducted from capital under Sch I 1.4									
Claims net of deductions from capital				x					

CALCULATION OF RISK WEIGHTED ASSETS FOR ON BALANCE SHEET BANKING BOOK POSITIONS

Exposures 15/ & 16/
As at _____ Total risk weighted assets _____

1 Exposure Category	Applicable Risk Weight					Bank S\$'000	Group S\$'000	Bank S\$'000	Group S\$'000
	0%	20%	50%	100%	200%				
(c) Claims on non-bank financial institutions not regulated by the Authority									
i) Where the bank holds < 20% equity stake in these financial institutions					x				
ii) Where the bank has an equity stake ≥ 20% in these non-bank financial institutions									
Gross claims									
Less: lending of a capital nature deducted from capital under Sch I 1.4									
Claims net of deductions from capital					x				
1.5 Capital instruments of financial Institutions									
(a) Capital investments in and lending of a capital nature to financial institutions incorporated in Singapore and regulated by the Authority (up to 2% of total capital)					x				
(b) Investments in equity and capital instruments issued by banks incorporated outside Singapore					x				
1.6 Claims on clients									
(a) "Qualifying" loans secured against mortgage on residential property 13/					x				
(b) All other loans secured against mortgage on residential property other than 1.6(a)					x				
(c) Claims on commercial entities									
i) Where the bank holds < 20% equity stake in the commercial entities									
Gross claims									
Less: Capital Investments (including lending of a capital nature) in non-approved major stakes entities deducted from capital under Sch I 1.4(d)									
Claims net of deductions from capital					x				
ii) Where the bank has an equity stake ≥ 20% in these commercial entities									
Gross claims									
Less: Capital Investments (including lending of a capital nature) in non-approved major stakes entities deducted from capital under Sch I 1.4(d)									
Less: Capital Investments and lending of a capital nature for approved major stakes in excess of 20% in these commercial entities deducted from capital under Sch I 1.4(e)(1)									
Claims net of deductions from capital					x				
1.6A PEVC investments									
a) Where the bank holds < 20% equity stake in the PEVC entities									
b) Where the bank has an equity stake ≥ 20% in these PEVC entities									
Gross investments (i.e. capital investments including lending of a capital nature)									
Less: Capital Investments (including lending of a capital nature) in excess of 20% in the PEVC entities deducted from capital under Sch I 1.4(e)(2) 13a/									
Amount net of deductions from capital (i.e., investment amount representing the first 20% stake in the PEVC entities)					x				
1.7 Premises, plant and equipment and other fixed assets					x				
1.8 Real estate					x				
1.9 All other assets 14/									
Gross "other assets"									
Less: Capital Investments in and lending of a capital nature to unconsolidated subsidiaries deducted from capital under Sch I 1.4									
Claims net of deductions from capital					x				
Total On Balance Sheet Risk Weighted Assets								xxxx	xxxx

CALCULATION OF RISK WEIGHTED ASSETS OF OFF- BALANCE SHEET BANKING BOOK POSITIONS, OTHER THAN DERIVATIVE CONTRACTS

1 OFF-BALANCE-SHEET ASSETS	Conversion Factors	Notional Amounts	As at _____ Bank (S\$'000) Applicable Risk Weights				Group (S\$'000) Applicable Risk Weights							
			0%	20%	50%	100%	Notional Amounts	0%	20%	50%	100%			
1.1 Direct Credit Substitutes :														
(a) General guarantees of indebtedness	100%													
(b) Standby letters of credit serving as financial guarantees for loans and securities	100%													
(c) Acceptances (including endorsements with the character of acceptances)	100%													
1.2 Certain Transaction-Related Contingent Items :														
(a) Performance bonds, bid bonds, warranties	50%													
(b) Standby letters of credit related to particular transactions	50%													
1.3 Short-Term Self-Liquidating Trade Related :														
(a) Documentary credits collateralised by underlying shipments	20%													
1.4 Sale and Repurchase Agreements and Assets Sales with Recourse, where the Credit Risk remains with the Bank	100%													
1.5 Forward purchase, forward deposits and partly-paid shares and securities, which represent commitments with certain drawdown	100%													
1.6 Note Issuance facilities and Revolving Underwriting Facilities	50%													
1.7 Other Commitments: 17/														
(a) Formal Standby Facilities and credit lines with original maturity exceeding 1 year	50%													
1.8 Similar Commitment with an Original Maturity of less than 1 year, or which can be cancelled anytime	0%													
Total Credit Equivalent Amount (Item A)			xx	xx	xx	xx			xx	xx	xx	xx		
Risk Weighted Assets (Risk Weights x Item A)			xx	xx	xx	xx	xxxx		xx	xx	xx	xx	xxxx	

CAPITAL CHARGE FOR SPECIFIC RISKS ARISING FROM INTEREST RATE POSITIONS

			As at _____			
			Bank (S\$'000)		Group (S\$'000)	
	Categories of Exposures	Specific Risk Factor	Notional Marked-to-Market Value of Exposures 22/	Capital Charge	Notional Marked-to-Market Value of Exposures 22/	Capital Charge
1	Net exposures to securities issued by governments or central banks rated investment grade by at least 2 of the 3 specified credit rating agencies - Item A 23/	0%				
2	Net exposures to securities issued by governments or central banks other than 1 - Item B	4%				
3	Net exposures to private issuers rated investment grade by at least 2 of the 3 specified credit rating agencies, with residual maturity of 6 months or less - Item C 23/	0.25%				
4	Net exposures to Singapore statutory board issuers, with residual maturity of 6 months or less - Item D	0.25%				
5	Net exposures to private issuers rated investment grade by at least 2 of the 3 specified credit rating agencies, with residual maturity of between 6 months and 24 months - Item E 23/	1%				
6	Net exposures to Singapore statutory board issuers, with residual maturity of between 6 months and 24 months - Item F	1%				
7	Net exposures to private issuers rated investment grade by at least 2 of the 3 specified credit rating agencies, with residual maturity exceeding 24 months - Item G 23/	1.6%				
8	Net exposures to Singapore statutory board issuers, with residual maturity exceeding 24 months - Item H	1.6%				
9	Net exposures to other securities - Item I	8.00%				

TOTAL CAPITAL CHARGE - (Sum of Item A to I)**xxxx****xxxx**

CAPITAL REQUIREMENTS FOR INTEREST RATE GENERAL MARKET RISKS

As at _____

	Bank (S\$'000)			Group (S\$'000)		
	(A) Vertical Disallowance*	(B) Horizontal Disallowance*	(C) Overall Net Position*	(A) Vertical Disallowance**	(B) Horizontal Disallowance**	(C) Overall Net Position**
1 Itemise currencies in this row						
2 SGD Interest Rate Positions						
3 USD						
4 Other currencies pls itemise & specify						
5 Residual currencies						
6 .						
7 .						
Total						

Interest Rate General Mkt Risk = (A) + (B) + (C)



*Please refer to Sch VIa (Bank)

**Please refer to Sch VIb (Group)

CALCULATION OF GENERAL MARKET RISK REQUIREMENT FOR INTEREST RATE SENSITIVE INSTRUMENTS IN TRADING BOOK FOR BANK EXPOSURES

As at : _____

SGD Notional Exposures	Choice of Method : Maturity / Duration														
SGD															
Time Band No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Positive Notional Exposures 24/															
Negative Notional Exposures															

SGD Exposures	SGD															Total
Zone No.	1				2			3								
Time Band No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Weighted Individual Positive Positions 25/																
Weighted Individual Negative Positions																
Vertical Disallowances																
Net Position within Zone																
Horizontal Disallowances within zone																
Horizontal Disallowances 2 (Zone 1 & 2)																
Horizontal Disallowances 2 (Zone 2 & 3)																
Horizontal Disallowances 3 (Zone 1 & 3)																
Total Charge																

CALCULATION OF GENERAL MARKET RISK REQUIREMENT FOR INTEREST RATE SENSITIVE INSTRUMENTS IN TRADING BOOK FOR GROUP EXPOSURES

As at : _____

SGD Notional Exposures	SGD															Choice of Method : Maturity / Duration
Time Band No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Positive Notional Exposures 24/																
Negative Notional Exposures																

SGD Exposures	SGD															
Zone No.	1				2			3								
Time Band No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Weighted Individual Positive Positions 25/																
Weighted Individual Negative Positions																
Vertical Disallowances																xx
Net Position within Zone																xx
Horizontal Disallowances within zone																xx
Horizontal Disallowances 2 (Zone 1 & 2)																xx
Horizontal Disallowances 2 (Zone 2 & 3)																xx
Horizontal Disallowances 3 (Zone 1 & 3)																xx
Total Charge																xxxx

CAPITAL REQUIREMENTS FOR EQUITY POSITION RISKS IN TRADING BOOK

As at _____

Bank (\$\$'000)**Group (\$\$'000)****Specific risk charges for individual equity security counter**

Counter	Bank (\$\$'000)			Group (\$\$'000)		
	Net Long/Short Position 26/	Risk Factor 27/	Specific Risk Requirement	Net Long/Short Position 26/	Risk Factor 27/	Specific Risk Requirement
Equity 1	XXX	8%	XXX	XXX	8%	XXX
Equity 2	XXX	8%	XXX	XXX	8%	XXX
.	XXX	8%	XXX	XXX	8%	XX
.	XXX	8%	XXX	XXX	8%	XX
Other counters (pls specify and itemize)	XXX	8%	XXX	XXX	8%	XX
Total specific risks requirements			ITEM A			ITEM A

General market risk charges - individual equity security counters and national market indices

National Markets	Bank (\$\$'000)			Group (\$\$'000)		
	Net Position 26/	Risk Factor	General Market Risk Requirement	Net Position 26/	Risk Factor	General Market Risk Requirement
Singapore	XXX	8%	XXX	XXX	8%	XXX
United States	XXX	8%	XXX	XXX	8%	XXX
Other national markets (pls specify and itemize)	XXX	8%	XXX	XX	8%	XX
Total general market risk requirements			ITEM B			ITEM B

Risk charges for exposures to broad indices

National Markets	Bank (\$\$'000)			Group (\$\$'000)		
	Net Position 26/	Risk Factor 27/	Risk Requirement for Broad Indices	Net Position 26/	Risk Factor 27/	Risk Requirement for Broad Indices
Net position in index contract A	XXX	2%	XXX	XXX	2%	XXX
Net position in index contract B	XXX	2%	XXX	XXX	2%	XXX
Other indices (pls specify and itemize)	XXX	2%	XXX	XX	2%	XX
Total exposures to broad indices			ITEM C			ITEM C

Risk charges for arbitrage transactions

Arbitrage Positions	Bank (\$\$'000)			Group (\$\$'000)		
	Matched Positions 26/	Risk Factor	Risk Requirement	Matched Positions 26/	Risk Factor	Risk Requirement
Matched positions in same underlying index with different settlement dates or markets 28/	XXX	2%	XXX	XXX	2%	XXX
Matched positions in different but similar indices entered into on the same day 29/	XXX	2%	XXX	XXX	2%	XXX
Index versus basket of constituent stocks comprising 90% of the index 30/	XXX	4%	XXX	XXX	4%	XXX
Total requirements for disallowances			ITEM D			ITEM D

TOTAL CAPITAL CHARGE FOR EQUITY RISKS - ITEM A + ITEM B + ITEM C + ITEM D**Total****Total**

CAPITAL REQUIREMENTS FOR FOREIGN EXCHANGE POSITIONS

Foreign currencies	S\$ Equivalent of Foreign Currency (S\$'000)			
	As at :			
	Bank		Group	
	Long Position	Short Position	Long Position	Short Position
Position in: 31/				
Australian Dollar				
Canadian Dollar				
Chinese Renminbi				
Danish Krone				
Euro				
Hong Kong Dollar				
Indian Rupee				
Indonesian Rupiah				
Japanese Yen				
Korean Won				
Malaysian Ringgit				
New Taiwan Dollar				
New Zealand Dollar				
Norwegian Kroner				
Philippine Peso				
Pound Sterling				
Saudi Arabian Riyal				
Swedish Krona				
Sri Lanka rupee				
Swiss Franc				
Thai Baht				
US Dollar				
Others (please specify and itemize)				
SUM OF NET LONG OR SUM OF NET SHORTS	xxx	xxx	xxx	xxx
Net Exposure in Foreign Exchange (Higher of sum of net longs or sum of net shorts) - Item A			xxx	xxx
Net Exposure in Gold (absolute amount of higher of net long or net short) - Item B			xxx	xxx
Net Exposure in Foreign Exchange and Gold - Item C (Item A+B)			xxx	xxx
Capital charge (8% X Items C) - Item D			xxx	xxx

CAPITAL REQUIREMENTS FOR COMMODITIES

**Commodity Positions
(S\$'000)**

As at :

Positions in: 32/ Silver Brent Others (please specify and itemise)	Bank			Group		
	Long Position	Short Position	Absolute net exposure position	Long Position	Short Position	Absolute net exposure position
	xx	xx	xx	xx	xx	xx
	xx	xx	xx	xx	xx	xx
Sum of Absolute Net Long or Net Short - Item A						
Capital Charge for total net long or short position in each commodity (Item A*15%) - Item B						

PLUS Either

For banks choosing the maturity ladder approach

	Bank			Group		
	Disallowance for matched positions within band (1.5%* Matched position)	Disallowance for positions carried forward (0.6% * Position carried forward)	Total Disallowances for matched positions and positions carried forward	Disallowance for matched positions within band (1.5%* Matched position)	Disallowance for positions carried forward (0.6% * Position carried forward)	Total Disallowances for matched positions and positions carried forward
Silver						
Time band 1 (0-1 months)	xx	xx	xx	xx	xx	xx
Time band 2 (1-3 months)	xx	xx	xx	xx	xx	xx
Time band 3 (3-6 months)	xx	xx	xx	xx	xx	xx
Time band 4 (6-12 months)	xx	xx	xx	xx	xx	xx
Time band 5 (1-2 years)	xx	xx	xx	xx	xx	xx
Time band 6 (2-3 years)	xx	xx	xx	xx	xx	xx
Time band 7 (more than 3 years)	xx		xx	xx		xx
Brent						
Time band 1 (0-1 months)	xx	xx	xx	xx	xx	xx
Time band 2 (1-3 months)	xx	xx	xx	xx	xx	xx
Time band 3 (3-6 months)	xx	xx	xx	xx	xx	xx
Time band 4 (6-12 months)	xx	xx	xx	xx	xx	xx
Time band 5 (1-2 years)	xx	xx	xx	xx	xx	xx
Time band 6 (2-3 years)	xx	xx	xx	xx	xx	xx
Time band 7 (more than 3 years)	xx		xx	xx		xx
Others (please specify and itemise)						
TOTAL for basis risks, interest rate gaps risks and forward gap risks under maturity ladder approach - Item C	xx	xx	xx	xx	xx	xx

For banks choosing the Simplified Approach

	Bank	Group
	Overall charge for basis risks, interest rate risks and forward gap risks (3% * (Gross long positions + Gross short positions).	Overall charge for basis risks, interest rate risks and forward gap risks (3% * (Gross long positions + Gross short positions).
Silver	xx	xx
Brent	xx	xx
Others (please specify and itemise)	xx	xx
TOTAL for basis risks, interest rate gaps risks and forward gap risks under simplified approach - Item D	xx	xx
TOTAL CAPITAL CHARGE FOR COMMODITIES RISKS - ITEM E (ITEM B + ITEM C or ITEM B + ITEM D)	xxx	xxx

CAPITAL REQUIREMENTS FOR OPTIONS

For banks choosing the delta-plus approach

	Capital Charges (S\$'000)					
	As at :					
	Bank			Group		
	Gamma	Vega charge - Option price sensitivity of Vega multiplied by difference from assumed volatility	Gamma plus vega charge	Gamma	Vega charge - Option price sensitivity of Vega multiplied by difference from assumed volatility	Gamma plus vega charge
Interest Rate Options (Pls specify currency)						
Time band 1	xx	xx	xx	xx	xx	xx
Time band 2	xx	xx	xx	xx	xx	xx
.						
.						
Time band 14	xx	xx	xx	xx	xx	xx
Time band 15	xx	xx	xx	xx	xx	xx
Equity Options						
Singapore	xx	xx	xx			
USA	xx	xx				
(please specify and itemise by national market)	xx	xx	xx	xx	xx	xx
Foreign Exchange and Gold Options						
AUD	xx	xx	xx	xx	xx	xx
.						
.						
US Dollar	xx	xx	xx	xx	xx	xx
Others (please specify and itemize)	xx	xx	xx	xx	xx	xx
Commodity options						
Silver						x
Brent						
Others (please specify and itemise)	xx	xx	xx	xx	xx	xx
TOTAL CAPITAL CHARGE FOR OPTIONS RISKS - ITEM A						
			xxx			xxx

Banks adopting the scenario approach shall report matrices of the outcome of simultaneous shocks to change in price of the underlying instrument and the change in historical volatility of the underlying instrument.

Banks adopting the simplified approach shall consult supervisors on the appropriate reporting requirements.