



مصرف الإمارات العربية المتحدة المركزي
CENTRAL BANK OF THE U.A.E.

Standards re Capital Adequacy of Banks in the UAE

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I. Introduction and Scope

I. Introduction

1. The Central Bank seeks to promote the effective and efficient development and functioning of the banking system. To this end, banks are required to manage their capital in a prudent and sustainable manner. It is important that banks' risk exposures are backed by a strong capital base of high quality in order to contribute to the stability of the financial system of the UAE.

2. In introducing these Standards, the Central Bank intends to ensure that banks' capital adequacy is in line with the minimum standards as published by the Basel Committee on Banking Supervision, i.e. the Basel II: International Convergence of Capital Measurement and Capital Standards, June 2006, which was implemented in the UAE in 2009 (Capital Adequacy Standards, Standardised Approach), and the 'Basel III: A global regulatory framework for more resilient banks and banking systems', commonly referred to as 'Basel III'.

3. These Standards support the regulations and elaborate on the supervisory expectations of the Central Bank with respect to capital adequacy requirements. These standards are issued pursuant to the powers vested in the Central Bank under the Central Bank Law.

4. Where these standards, include a requirement to provide information or to take certain measures, or to address certain items listed at a minimum, the Central Bank may impose requirements, which are additional to the listing provided in the relevant article.

5. The Standards follow the calibration developed by the Basel Committee, which includes a maximum risk weight of 1250%, calibrated on a total capital adequacy requirement of 8%. The UAE instituted a higher minimum capital requirement of 10.5% (excluding capital buffers), applicable to all licensed banks. Consequently, the maximum capital charge for a single exposure will be the lesser of the value of the exposure after applying valid credit risk mitigation, netting and haircuts, and the capital resulting from applying a risk weight of 952% (reciprocal of 10.5%) to this exposure.

II. Scope of Application

6. These Standards apply to all banks. Banks must ensure that these Standards are adhered to on a consolidated basis. The group level capital adequacy ratio requirements must measure the capital adequacy of a bank based on its capital strength and risk profile after regulatory consolidation of assets and liabilities of its subsidiaries as specified herein.

7. Note that the solo-level capital adequacy ratio requirements, which measure the capital adequacy of an individual bank based on its stand-alone capital strength, will be issued at a later stage

8. These Standards should be read in conjunction with the associated guidance issued by the Central Bank (Guidance re Capital Adequacy of Banks in the UAE – December 2022).

III. Domestic Systemically Important Banks (D-SIBs)

9. Banks designated by the Central Bank as domestic systemically important banks are required to hold additional risk-based capital ratio buffers, applied to Common Equity Tier 1 (CET1). Banks are notified individually by the Central Bank with regard to the additional requirements.

10. All banks must maintain a leverage ratio of at least 3.0%. Designated domestic systemically important banks must maintain a leverage ratio of at least 3.5%.

IV. Reporting

11. Banks must report to the Central Bank on their capital position in the format and frequency determined by the Central Bank.

12. A bank must provide the Central Bank with any specific information with respect to its capital positions upon request.

V. Independent Review

13. An Independent review of the Central Bank's Capital framework implementation by internal audit is required every year. However, if the Central Bank is not satisfied with the internal audit, Central Bank may require an external review.

14. For D-SIBs, in addition, an independent external review is required every 3 years.

VI. Interpretation

15. The Regulatory Development Division of the Central Bank shall be the reference for interpretation of the provisions of these Standards.

VII. Application

16. The following Standards are already in effect as follows:

- The Tier Capital Supply Standard
- Tier Capital Instruments Standard
- Pillar 2 Standard

17. The remaining Standards are effective from Q2 2021 onwards.

18. Banks must continue to submit the existing Basel Capital reports (live reporting (production) for BRF 95, CAR Returns workbook and Pillar 3).

Pillar 1

II. Tier Capital Supply

1. Scope of Application

1. This Standard formulates capital adequacy requirements that need to be applied to all banks in UAE on a consolidated basis. The consolidated entity includes all worldwide banking subsidiaries, however it excludes insurance companies and non-financial commercial entities that are subsidiaries of the entity licensed in the UAE.
2. Banks are required to deduct, from CET1, the full amount of any capital shortfall of subsidiaries that are regulated and are subject to capital requirements on a worldwide basis. Additionally, any shortfall in the capital requirement of unconsolidated subsidiary (e.g. insurance, commercial entity) must be fully deducted from the CET1 capital (at stand-alone as well as consolidated level)
3. The amount of the capital requirement and capital shortfall for this deduction is to be based on the regulations issued by the subsidiary's regulator (i.e. based on the host regulator's capital adequacy requirements).
4. The Standards follow the international calibration as developed by the Basel Committee, imposing risk weights up to 1250% for assets. The UAE adopted a higher minimum capital requirement of 10.5% minimum CAR (without the capital conservation buffer). Taking into consideration the higher minimum capital requirements of 10.5% in the UAE, the risk weight shall be capped at 952% (reciprocal of 10.5%).

1.1 Investments in the capital of Banking Subsidiaries

5. Majority-owned or controlled banking entities, securities entities (where subject to broadly similar regulation or where securities activities are deemed banking activities) and other financial entities should generally be fully consolidated. Notwithstanding the banks decision on exercising control over an entity and the subsequent consolidation of that entity, the Central Bank reserves the right to determine whether the bank exercises control over an entity and hence may require banks to consolidate/ deconsolidate entities.
6. In instances where it is not feasible to consolidate certain majority-owned banking, securities or other regulated financial entities¹, banks may, subject to prior Central Bank approval, opt for non-consolidation of such entities for regulatory capital purposes.
7. For group level reporting, if any majority-owned financial subsidiaries are not consolidated for capital purposes, all assets, liabilities and third-party capital investments in the subsidiaries will be removed from the bank's balance sheet. All equity and other investments in regulatory capital instruments in those entities attributable to the bank / banking group will be deducted.
8. Banks are required to deduct from CET1 the full amount of any capital shortfalls of subsidiaries excluded from regulatory consolidation, that are regulated entities and are subject to capital requirements. The amount of the capital requirement and capital shortfall for this deduction is to be based on the regulations issued by the subsidiary's regulator (i.e. based on the host regulator's local capital adequacy requirements).

¹ Examples of the types of activities that financial entities might be involved in include financial leasing, issuing credit cards, portfolio management, investment advisory, custodial and safekeeping services and other similar activities that are ancillary to the business of banking.

1.2 Investments in the capital of banking, securities, financial and insurance entities

Banking, securities, financial and insurance entities – (ownership in entity does not exceed 10%)

9. A bank's equity interests in banking, securities, insurance and other financial entities are defined as investments in the capital of banking, securities, insurance and other financial entities if the bank owns up to 10% of the investee's common share capital.

For detailed treatment of investments in such entities, refer to Section 3.9 - Regulatory Adjustments.

Banking, securities, financial and insurance entities – Significant investments (ownership in entity exceeds 10%)

10. Significant investments in banking, securities and other financial entities are defined as investments in the capital of banking, securities and other financial entities (that are outside the scope of regulatory consolidation) wherein the bank owns more than 10% of the investee's common share capital. Such investments will be subject to the treatment outlined in Section 3.10 - Regulatory Adjustments.

1.3 Investments in Commercial Entities

11. Significant investments in commercial entities are subject to the treatment outlined in section 5. Subsidiaries that are commercial entities are not to be consolidated for regulatory capital purposes. In cases where a subsidiary that is a commercial entity has been consolidated for accounting purposes, the entity is to be deconsolidated for regulatory purposes (i.e. all assets, liabilities and equity will be removed from the bank's balance sheet) and the book value of the investment will be subject to the treatment.

For detailed treatment of investments in such entities, refer to Section 5.

2. Eligible capital

2.1 Component of capital

12. Total regulatory capital will consist of the sum of the following items:

- i. Tier 1 capital, composed of
 - a. Common Equity Tier 1 ("CET1")
 - b. Additional Tier 1 ("AT1")
- ii. Tier 2 capital.

These regulatory capital components are net of regulatory adjustments.

13. Article (2.2) of Capital Adequacy Regulation requires banks to apply the following minimum requirement, at all times:

- i. CET1 capital must be at least 7.0% of risk-weighted assets (RWA).
- ii. Tier 1 capital must be at least 8.5% of RWA.

- iii. Total capital, calculated as sum of Tier 1 capital and Tier 2 capital, must be at least 10.5% of RWA.

2.2 Capital Buffers:

14. Article (5.1) of Capital Adequacy Regulation requires banks to maintain a capital conservation buffer (CCB) of 2.5% of total risk weighted assets, in the form of CET1 capital.

15. Article (6) of Capital Adequacy Regulation requires banks to implement a countercyclical buffer (CCyB). Banks must meet the CCyB requirements by using CET1 capital exclusively. Banks will be subject to a countercyclical buffer that varies between zero and 2.5% of total risk weighted assets. The buffer that will apply to each bank will reflect the geographic composition of its portfolio of credit exposures. The CCyB buffer extends the capital conservation buffer (CCB).

16. Domestic Systemically Important Banks (D-SIBs) are required to comply with article (7) of the Capital Adequacy Regulation. The additional requirements for identified D-SIBs will be communicated individually by the Central Bank to each relevant bank. Banks must meet the D-SIB buffer requirements by using CET1 capital. The D-SIB buffer extends the capital conservation buffer (CCB).

17. Based on the outcome of the Supervisory Review and Evaluation Process (SREP) conducted by the Central Bank, a bank may be subject to an additional capital add-on, also referred to as individual Supervisory Capital Guidance requirement (SCG). Banks notified must apply the individual SCG requirement, as set by the Central Bank. The Individual SCG increases the minimum capital requirement.

18. The aggregation of all the capital buffers (CCB, CCyB and D-SIB) form an effective capital conservation buffer. Any breach of the capital conservation buffers will lead to the following additional supervisory requirements and constraints on distributions:

- i. The relevant bank must immediately inform the Central Bank of the breach.
- ii. The relevant bank shall submit an approved plan to restore its regulatory capital to meet the buffer level requirement.
- iii. The relevant bank will be subjected to more intense supervision.
- iv. Capital conservation restrictions will immediately become effective in the form of restriction of dividends as prescribed by the Central Bank.

2.3 Common Equity Tier 1

19. As per Article 3.1 of the Capital Adequacy Regulation, CET1 capital consists of the sum of the following elements:
- i. Common shares issued by a bank which are eligible for inclusion in CET1 (or the equivalent for non-joint stock companies);
 - ii. Share premium resulting from the issue of instruments included in CET1;
 - iii. Retained earnings;
 - iv. Legal reserves;
 - v. Statutory reserves;
 - vi. Accumulated other comprehensive income and other disclosed reserves;
 - vii. Common shares issued by consolidated subsidiaries of a bank and held by third parties, also referred to as minority interest, which are eligible for inclusion in CET1;
 - viii. Regulatory adjustments applied in the calculation of CET1.

20. Retained earnings and other comprehensive income include audited/reviewed interim profit or loss. Expected dividend payments are excluded from CET1.

Common shares issued by the bank

21. For an instrument to be included in CET1 capital, it must meet all of the following criteria stated below. In cases where banks issue non-voting common shares, they must be identical to voting common shares of the issuing bank in all respects except the absence of voting rights for inclusion in CET1.

- i. Represents the most subordinated claim in liquidation of the bank.
- ii. The investor is entitled to a claim on the residual assets that is proportional to its share of issued capital, after all senior claims have been paid in liquidation (i.e. has an unlimited and variable claim, not a fixed or capped claim).
- iii. The principal is perpetual and never repaid outside of liquidation (setting aside discretionary repurchases or other means of effectively reducing capital in a discretionary manner that is allowable under relevant law and subject to the prior approval of the Central Bank).
- iv. The bank does nothing to create an expectation at issuance that the instrument will be bought back, redeemed or cancelled, nor do the statutory or contractual terms provide any feature that might give rise to such an expectation.
- v. Distributions are paid out of distributable items, including retained earnings. The level of distributions is not in any way tied or linked to the amount paid in at issuance and is not subject to a contractual cap (except to the extent that a bank is unable to pay distributions that exceed the level of distributable items).
- vi. There are no circumstances under which the distributions are obligatory. Non-payment is, therefore, not an event of default.
- vii. Distributions are paid only after all legal and contractual obligations have been met and payments on more senior capital instruments have been made. This means that there are no preferential distributions, including in respect of other elements classified as the highest quality issued capital.
- viii. The issued capital takes the first and proportionately greatest share of any losses as they occur. Within the highest quality capital, each instrument absorbs losses on a going concern basis proportionately and *pari passu* with all the others.
- ix. The paid-in amount is recognized as equity capital (i.e. not recognized as a liability) for determining balance sheet insolvency.
- x. The paid-in amount is classified as equity under the relevant accounting standards.
- xi. It is directly issued and paid-in and the bank cannot directly or indirectly have funded the purchase of the instrument.
- xii. The paid-in amount is neither secured nor covered by a guarantee of the issuer or related entity or subject to any other arrangement that legally or economically enhances the seniority of the claim.
- xiii. It is either only issued with the approval of the owners of the issuing bank, given directly by the owners or, if permitted by applicable law, given by the Board of Directors or by other persons duly authorized by the owners.
- xiv. It is clearly and separately disclosed on the bank's balance sheet.

2.4 Additional Tier 1 capital

22. Articles 3.2 of the Capital Adequacy Regulation, AT1 capital consists of the sum of the following elements:

- i. Instruments issued by a bank which are eligible for inclusion in AT1 and are not included in CET1 (e.g. perpetual equity instruments, not included in CET1);
- ii. Stock surplus, or share premium, resulting from the issue of instruments included in AT1;

- iii. Instruments issued by consolidated subsidiaries of the bank and held by third parties which are eligible for inclusion in AT1 and are not included in CET1;
- iv. Regulatory adjustments applied in the calculation of AT1.

23. The treatment of instruments issued out of consolidated subsidiaries of the bank and the regulatory deductions applied in the calculation of AT1 capital are addressed in the Tier Capital Instruments Standard.

Instruments issued by the bank that meet the Additional Tier 1 criteria

24. The following is the minimum set of criteria for an instrument issued by the bank to meet or exceed in order for it to be included in Additional Tier 1 capital:

- i. Issued and paid-in
- ii. Subordinated to depositors, general creditors and subordinated debt of the bank
- iii. Is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis bank creditors
- iv. Is perpetual, i.e. there is no maturity date and there are no step-ups or other incentives to redeem
- v. May be callable at the initiative of the issuer only after a minimum of five years:
 - a. To exercise a call option a bank must receive prior Central Bank approval; and
 - b. A bank must not do anything which creates an expectation that the call will be exercised; and
 - c. Banks must not exercise a call unless:
 - 1) They replace the called instrument with capital of the same or better quality and the replacement of this capital is done at conditions which are sustainable for the income capacity of the bank; or
 - 2) The bank demonstrates that its capital position is well above the minimum capital requirements after the call option is exercised.
- vi. Any repayment of principal (e.g. through repurchase or redemption) must be with prior Central Bank's approval and banks should not assume or create market expectations that Central Bank's approval will be given.
- vii. Dividend/coupon discretion:
 - a. the Central Bank and the bank must have full discretion at all times to cancel distributions/payments
 - b. cancellation of discretionary payments must not be an event of default
 - c. banks must have full access to cancelled payments to meet obligations as they fall due
 - d. Cancellation of distributions/payments must not impose restrictions on the bank except in relation to distributions to common stockholders.
- viii. Dividends/coupons must be paid out of distributable items
- ix. The instrument cannot have a credit-sensitive dividend feature, that is a dividend/coupon that is reset periodically based in whole or in part on the banking organization's credit standing.
- x. The instrument cannot contribute to liabilities exceeding assets in the required balance sheet test to determine insolvency.
- xi. Instruments classified as liabilities for accounting purposes must have principal loss absorption through a write-down mechanism which allocates losses to the instrument at a pre-specified trigger point. The loss absorption trigger must be set at a level of 7.625% of CET1. The write-down will have the following effects:
 - 1. Reduce the claim of the instrument in liquidation;
 - 2. Reduce the amount re-paid when a call is exercised; and
 - 3. Partially or fully reduce coupon/dividend payments on the instrument.
- xii. Neither the bank nor a related party over which the bank exercises control or significant influence can have purchased the instrument or otherwise come into possession of the instrument, such as through receipt of collateral or a reverse

- repurchase agreement, nor can the bank directly or indirectly have funded the purchase of the instrument.
- xiii. The instrument cannot have any features that hinder recapitalization, such as provisions that require the issuer to compensate investors if a new instrument is issued at a lower price during a specified time frame.
 - xiv. [Applicable for Islamic banks only] If the instrument is not issued out of an operating entity or the holding company in the consolidated group (e.g. a special purpose vehicle – “SPV”), proceeds must be immediately available without limitation to an operating entity or the holding company in the consolidated group in a form which meets or exceeds all of the other criteria for inclusion in AT1 capital (Refer to the Capital Instruments Standards).
 - xv. In addition to the criteria outlined above, the instrument must meet criteria for minimum requirements to ensure loss absorbency at the point of non-viability. Please refer to the Capital Instruments Standards.

Share premium resulting from the issue of instruments included in Additional Tier 1 capital;

25. Share premium that is not eligible for inclusion in CET1, will only be permitted to be included in AT1 capital if the shares giving rise to the stock surplus are permitted to be included in AT1 capital.

2.5 Tier 2 capital

26. Articles 3.3 of the Capital Adequacy Regulation, Tier 2 capital consists of the sum of the following elements:

- i. Banks using the standardized approach for credit risk: general provisions or general loan loss reserves, up to maximum of 1.25% of credit RWA;
- ii. Instruments issued by the bank that meet the criteria for inclusion in Tier 2 capital, and are not included in Tier 1 capital;
- iii. Share premium resulting from the issue of instruments included in Tier 2 capital;
- iv. Instruments which are eligible for inclusion of Tier 2 (refer to paragraph 27)
- v. Instruments issued by consolidated subsidiaries of the bank and held by third parties that meet the criteria for inclusion in Tier 2 capital, and are not included in Tier 1 capital;
- vi. Regulatory adjustments applied in the calculation of Tier 2.

27. The treatment of instruments issued out of consolidated subsidiaries of the bank and the regulatory deductions applied in the calculation of Tier 2 capital are addressed in the Tier Capital Instrument Standard.

Instruments issued by the bank that meet the Tier 2 criteria

28. The objective of Tier 2 capital is to provide loss absorption on a gone-concern basis. Based on this objective, the minimum set of criteria for an instrument to meet or exceed in order for it to be included in Tier 2 capital are set out below.

Criteria for inclusion in Tier 2 Capital

- i. Issued and paid-in.
- ii. Subordinated to depositors and general creditors of the bank.
- iii. Is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis depositors and general bank creditors
- iv. Maturity:

- a. minimum original maturity of at least five years
- b. recognition in regulatory capital in the remaining five years before maturity will be amortized on an annualized straight line basis (i.e. 20% incremental reduction in recognition every successive year in the last five years)
- c. there are no step-ups or other incentives to redeem
- v. May be callable at the initiative of the issuer only after a minimum of five years:
 - a. To exercise a call option a bank must receive prior Central Bank's approval;
 - b. A bank must not do anything that creates an expectation that the call will be exercised; and
 - c. Banks must not exercise a call unless:
 - 1. They replace the called instrument with capital of the same or better quality and the replacement of this capital is done at conditions which are sustainable for the income capacity of the bank; or
 - 2. The bank demonstrates that its capital position is well above the minimum capital requirements after the call option is exercised.
- vi. The investor must have no rights to accelerate the repayment of future scheduled payments (coupon or principal), except in bankruptcy and liquidation.
- vii. The instrument cannot have a credit-sensitive dividend feature, that is a dividend/coupon that is reset periodically based in whole or in part on the banking organization's credit standing.
- viii. Neither the bank nor a related party over which the bank exercises control or significant influence can have purchased the instrument or otherwise come into possession of the instrument, such as through receipt of collateral or a reverse repurchase agreement, nor can the bank directly or indirectly have funded the purchase of the instrument.
- ix. **[Applicable for Islamic banks only]** If the instrument is not issued out of an operating entity or the holding company in the consolidated group (e.g. a special purpose vehicle – "SPV"), proceeds must be immediately available without limitation to an operating entity or the holding company in the consolidated group in a form which meets or exceeds all of the other criteria for inclusion in Tier 2 Capital (Refer to the Capital Instruments Standards).

29. In addition to the criteria outlined above, the instrument must meet the minimum requirements to ensure loss absorbency at the point of non-viability. Please refer to the Capital Instruments Standards.

Share premium resulting from the issue of instruments included in Tier 2 capital

30. Share premium that is not eligible for inclusion in Tier 1, will only be permitted to be included in Tier 2 capital if the shares giving rise to the stock surplus are permitted to be included in Tier 2 capital.

General provisions/General loan-loss reserves:

31. Provisions or loan-loss reserves held against future, presently unidentified losses are freely available to meet losses which subsequently materialize and therefore qualify for inclusion within Tier 2. Provisions ascribed to identified deterioration of particular assets or known liabilities, whether individual or grouped, should be excluded. Furthermore, general provisions or general reserves for loan losses will be limited to a maximum of 1.25% of credit risk weighted risk assets calculated under the standardised approach.

Capital component of Capital Adequacy Regulation

32. If a bank has complied with the minimum CET1 and Tier 1 capital ratios, the excess AT1 capital can be counted to meet the total capital ratio, also referred to as Capital Adequacy Ratio (CAR).

33. Profit-sharing investment accounts must not be classified as part of an Islamic bank's regulatory capital as referred to in Article 2 of Capital Adequacy Regulation.

34. Investment risk reserves and a portion of the Profit Equalization Reserve (PER), if any, belong to the equity of investment account holders, and thus must not be used in the calculation of an Islamic bank's regulatory capital. As the purpose of a PER is to smooth the profit pay-outs and not to cover losses, any portion of a PER that is part of the Islamic bank's reserves must not be treated as regulatory capital as referred to in Article 2 of Capital Adequacy Regulations.

2.6 Additional criteria for AT1 and Tier 2 instruments: Minimum requirements to ensure loss absorbency at the point of non-viability.

35. In order for an instrument issued by a bank to be included in AT1 or Tier 2 capital, it must also meet or exceed the minimum requirements defined in Capital Instruments Standards. These requirements are in addition to the criteria for AT1 and Tier 2 instruments stated above.

2.7 Minority interest (i.e. non-controlling interest) and other capital issued out of consolidated subsidiaries

Common shares issued by consolidated subsidiaries (that is within the scope of regulatory consolidation)

36. Minority interest arising from the issue of common shares by a fully consolidated subsidiary of the bank may receive recognition in CET1 only if:

- i. The instrument giving rise to the minority interest would, if issued by the bank, meet all of the criteria for classification as common shares for regulatory capital purposes; and
- ii. The subsidiary that issued the instrument is itself a bank. (It is noted that minority interest in a subsidiary that is a bank is strictly excluded from the parent bank's common equity if the parent bank or affiliate has entered into any arrangements to fund directly or indirectly minority investment in the subsidiary whether through an SPV or through another vehicle or arrangement. The treatment outlined here, thus, is strictly available where all minority investments in the bank subsidiary solely represent genuine third party common equity contributions to the subsidiary.)

37. The amount of capital meeting the above criteria that will be recognized in consolidated CET1 is calculated as follows

Total minority interest meeting the two criteria above minus the amount of the surplus CET1 of the subsidiary attributable to the minority shareholders.

- i. Surplus CET1 of the subsidiary is calculated as the CET1 (after the application of regulatory deductions) of the subsidiary minus the lower of:
 - a. the minimum CET1 requirement of the subsidiary plus the capital conservation buffer (i.e. 9.5% of risk weighted assets) and
 - b. the portion of the parent's consolidated minimum CET1 requirement plus the capital conservation buffer (i.e. 9.5% of consolidated risk weighted assets) that relates to the subsidiary.
- ii. The amount of the surplus CET1 that is attributable to the minority shareholders is calculated by multiplying the surplus CET1 by the percentage of CET1 that is held by minority shareholders.

Tier 1 qualifying capital issued by consolidated subsidiaries (that is within the scope of regulatory consolidation)

38. Tier 1 capital instruments issued by a fully consolidated subsidiary of the bank to third party investors (including amounts under paragraph 37) may receive recognition in Tier 1 capital only if the instruments would, if issued by the bank meet all of the criteria for classification as Tier 1 capital.

39. The amount of this capital that will be recognized in Tier 1 will be calculated as follows:

Total Tier 1 of the subsidiary issued to third parties minus the amount of the surplus Tier 1 of the subsidiary attributable to the third party investors.

- i. Surplus Tier 1 of the subsidiary is calculated as the Tier 1 of the subsidiary (after the application of regulatory deductions) minus the lower of:
 - a. the minimum Tier 1 requirement of the subsidiary plus the capital conservation buffer (i.e. 11% of risk weighted assets) and
 - b. the portion of the parent's consolidated minimum Tier 1 requirement plus the capital conservation buffer (i.e. 11% of consolidated risk weighted assets) that relates to the subsidiary.
- ii. The amount of the surplus Tier 1 that is attributable to the third party investors is calculated by multiplying the surplus Tier 1 by the percentage of Tier 1 that is held by third party investors.

The amount of this Tier 1 capital that will be recognized in Additional Tier 1 will exclude amounts recognized in CET1 under paragraph 37.

Tier 1 and Tier 2 qualifying capital issued by consolidated subsidiaries (that is within the scope of regulatory consolidation)

40. Total capital instruments (i.e. Tier 1 and Tier 2 capital instruments) issued by a fully consolidated subsidiary of the bank to third party investors (including amounts under paragraph 37 and 39) may receive recognition in Total Capital only if the instruments would, if issued by the bank, meet all of the criteria for classification as Tier 1 or Tier 2 capital

41. The amount of this capital that will be recognized in consolidated Total Capital will be calculated as follows:

Total capital instruments of the subsidiary issued to third parties minus the amount of the surplus Total Capital of the subsidiary attributable to the third party investors.

- i. Surplus Total Capital of the subsidiary is calculated as the Total Capital of the subsidiary (after the application of regulatory deductions) minus the lower of:
 - a. the minimum Total Capital requirement of the subsidiary plus the capital conservation buffer (i.e. 13% of risk weighted assets) and
 - b. the portion of the parent's consolidated minimum Total Capital requirement plus the capital conservation buffer (i.e. 13% of consolidated risk weighted assets) that relates to the subsidiary.
- ii. The amount of the surplus Total Capital that is attributable to the third party investors is calculated by multiplying the surplus Total Capital by the percentage of Total Capital that is held by third party investors.

The amount of this Total Capital that will be recognized in Tier 2 will exclude amounts recognized in CET1 under paragraph 37 and amounts recognized in AT1 under paragraph 39 above.

42. An illustrative example for calculation of minority interest and other capital issued out of consolidated subsidiaries that is held by the third parties is furnished as Appendix 4 in *Guidance for Capital Adequacy of Banks in the UAE*.

Other Instructions relating to the calculation of the amount of minority interest

43. All calculations must be undertaken in respect of the subsidiary on a sub-consolidated basis (i.e. the subsidiary must consolidate all of its subsidiaries that are also included in the wider consolidated group). However, the bank may elect to give no recognition (in consolidated capital of the group) to the capital issued by the subsidiary to third parties.

44. Where capital has been issued to third parties out of an SPV, none of this capital can be included in CET1. However, such capital can be included in consolidated AT1 or Tier 2 capital and treated as if the bank itself had issued the capital directly to the third-parties only if:

- i. it meets all the relevant entry criteria; and
- ii. the only asset of the SPV is its investment in the capital of the bank in a form that meets or exceeds all the relevant entry criteria (as required by criterion xiv for Additional Tier 1 and criterion ix for Tier 2 capital)

In cases where the capital has been issued to third parties through an SPV via a fully consolidated subsidiary of the bank, such capital may, subject to the requirements of this paragraph, be treated as if the subsidiary itself had issued it directly to the third parties and may be included in the bank's consolidated AT1 or Tier 2 in accordance with the treatment outlined in paragraphs 39 and 41.

3. Regulatory adjustments

45. This Standard sets out the regulatory adjustments to be applied to regulatory capital. In all cases, these adjustments are applied in the calculation of CET1.

3.1 Goodwill and other intangibles

46. Goodwill and all other intangibles must be deducted in the calculation of CET1 (this deduction includes mortgage servicing rights), including any goodwill included in the valuation of significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation. The full amount is to be deducted net of any associated deferred tax liability, which would be extinguished if the intangible assets become impaired or derecognized under the relevant accounting standards.

47. Banks are required to use the IFRS definition of intangible assets to determine which assets are classified as intangible and required to be deducted.

3.2 Deferred tax assets

48. Deferred tax assets (DTAs) that rely on future profitability of the bank to be realized are to be deducted in the calculation of CET1. Deferred tax assets may be netted with associated deferred tax liabilities (DTLs) only if the DTAs and DTLs relate to taxes levied by the same taxation authority and the relevant taxation authority permits offsetting.

49. The treatment for DTA are classified as:

- i. Where these DTAs relate to temporary differences (e.g. allowance for credit losses) the amount to be deducted is set out in the "threshold deductions".
- ii. All other DTAs, e.g. those relating to operating losses, such as the carry forward of unused tax losses, or unused tax credits, are to be deducted in full net of DTL as described above.

50. The DTLs permitted to be netted against DTAs must exclude amounts that have been netted against the deduction of goodwill, intangibles and defined benefit pension assets, and must be allocated on a pro rata basis between DTAs subject to the threshold deduction treatment and DTAs that are to be deducted in full.

51. An over-installment of tax or, in some jurisdictions, current year tax losses carried back to prior years may give rise to a claim or receivable from the government or local tax authority. Such amounts are typically classified as current tax assets for accounting purposes. The recovery of such a claim or receivable would not rely on the future profitability of the bank and would be assigned the relevant sovereign risk weighting.

3.3 Cash flow hedge reserve

52. The amount of the cash flow hedge reserve that relates to the hedging of items that are not fair valued on the balance sheet (including projected cash flows) should be derecognized in the calculation of CET1. This means that positive amounts should be deducted and negative amounts should be added back.

53. This treatment specifically identifies the element of the cash flow hedge reserve that is to be derecognized for prudential purposes. It removes the element that gives rise to artificial volatility in common equity, as in this case the reserve only reflects one half of the picture (the fair value of the derivative, but not the changes in fair value of the hedged future cash flow).

3.4 Gain on sale related to securitization transactions

54. Derecognize in the calculation of CET1 any increase in equity capital resulting from a securitization transaction, such as that associated with expected Future Margin Income (FMI) resulting in a gain-on-sale.

3.5 Cumulative gains and losses due to changes in own credit risk on fair valued financial liabilities

55. Derecognize in the calculation of CET1, all unrealized gains and losses that have resulted from changes in the fair value of liabilities that are due to changes in the bank's own credit risk.

3.6 Defined benefit pension fund assets and liabilities

56. Defined benefit pension fund liabilities, as included on the balance sheet, must be fully recognized in the calculation of CET1 (i.e. CET1 cannot be increased through derecognizing these liabilities).

57. For each defined benefit pension fund that is an asset on the balance sheet, the asset should be deducted in the calculation of CET1 net of any associated deferred tax liability, which would be extinguished if the asset should become impaired or derecognized under the relevant accounting standards.

58. Assets in the fund to which the bank has unrestricted and unfettered access can, with Central Bank's approval, offset the deduction. Such offsetting assets should be given the risk weight they would receive if they were owned directly by the bank.

59. This treatment addresses the concern that assets arising from pension funds may not be capable of being withdrawn and used for the protection of depositors and other creditors of a bank. The concern is that their only value stems from a reduction in future payments into the fund. The treatment allows banks to reduce the deduction of the asset if they can address these concerns and show that the assets can be easily and promptly withdrawn from the fund.

3.7 Investments in own shares (treasury stock)

60. All of a bank's investments in its own common shares, whether held directly or indirectly, will be deducted in the calculation of CET1 (unless already derecognized under the relevant accounting standards).

61. In addition, any own stock, which the bank could be contractually obliged to purchase, should be deducted in the calculation of CET1. The treatment described will apply irrespective of the location of the exposure in the banking book or the trading book. In addition:

- i. Gross long positions may be deducted net of short positions in the same underlying exposure only if the short positions involve no counterparty risk.
- ii. Banks should look through holdings of index securities to deduct exposures to own shares. However, gross long positions in own shares resulting from holdings of index securities may be netted against short position in own shares resulting from short positions in the same underlying index. In such cases, the short positions may involve counterparty risk (which will be subject to the relevant counterparty credit risk charge).

62. Following the same approach outlined above, banks must deduct investments in their own AT1 in the calculation of their AT1 capital and must deduct investments in their own Tier 2 in the calculation of their Tier 2 capital.

3.8 Reciprocal cross holdings in the capital of banking, financial and insurance entities

63. Reciprocal cross holdings of capital that are designed to artificially inflate the capital position of banks will be deducted in full from CET1.

3.9 Investments in the capital of banking, securities, financial and insurance entities where the bank owns up to 10% of the issued common share capital of the entity

64. The regulatory adjustment described in this Standard applies to investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation and where the bank does not own more than 10% of the issued common share capital of the entity. In addition,

- i. Investments include direct, indirect and synthetic holdings of capital instruments. For example, banks should look through holdings of index securities to determine their underlying holdings of capital.

If banks find it operationally burdensome to look through and monitor their exact exposure to the capital of other financial institutions as a result of their holdings of index securities, Central Bank may permit banks, subject to prior supervisory approval, to use a conservative estimate. The methodology for the estimate should demonstrate that in no case will the actual exposure be higher than the estimated exposure. If a look-through or an acceptable estimate are not possible, the full amount of the investment should be accounted for.

- ii. Holdings in both the banking book and trading book are to be included. Capital includes common stock and all other types of cash and synthetic capital instruments (e.g. subordinated debt). It is the net long position that is to be included (i.e. the gross long position net of short positions in the same underlying exposure where the maturity of the short position either matches the maturity of the long position or has a residual maturity of at least one year).
- iii. Underwriting positions held for five working days or less can be excluded. Underwriting positions held for longer than five working days must be included.

- iv. If the capital instrument of the entity in which the bank has invested does not meet the criteria for CET1, AT1, or Tier 2 capital of the bank, the capital is to be considered common shares for the purposes of this regulatory adjustment.
- v. Banks may, with prior Central Bank's approval, exclude temporarily certain investments where these have been made in the context of resolving or providing financial assistance to reorganize a distressed institution.

65. If the total of all holdings listed above in aggregate exceed 10% of the bank's common equity (after applying all other regulatory deductions in full, apart from the deductions outlined in this Standard (paragraph 63 to 71)) then the amount above 10% is required to be deducted from CET1.

66. Amounts below the threshold that are not deducted are to be risk weighted as follows:

- i. Amounts below the threshold that are in the banking book are to be risk weighted as per the credit risk (i.e. investments that are not listed and not marked to market will be risk weighted at 150% and investments that are listed will be risk weighted at 100%).
- ii. Amounts below the threshold that are in the trading book are to be risk weighted as per the market risk rules.

3.10 Significant investments in the capital of banking, securities, financial and insurance entities that are outside the scope of regulatory consolidation

67. The regulatory adjustment described in this Standard applies to investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation where the bank owns more than 10% of the issued common share capital of the issuing entity or where the entity is an affiliate of the bank. An affiliate of a bank is defined as a company that controls, or is controlled by, or is under common control with, the bank. Control of a company is defined as (1) ownership, control, or holding with power to vote 20% or more of a class of voting securities of the company; or (2) consolidation of the company for financial reporting purposes. In addition,

- i. Investments include direct, indirect and synthetic holdings of capital instruments. For example, banks should look through holdings of index securities to determine their underlying holdings of capital.
- ii. Holdings in both the banking book and trading book are to be included. Capital includes common stock and all other types of cash and synthetic capital instruments (e.g. subordinated debt). It is the net long position that is to be included (i.e. the gross long position net of short positions in the same underlying exposure where the maturity of the short position either matches the maturity of the long position or has a residual maturity of at least one year)
- iii. Underwriting positions held for five working days or less can be excluded. Underwriting positions held for longer than five working days must be included.
- iv. If the capital instrument of the entity in which the bank has invested does not meet the criteria for CET1, AT1, or Tier 2 capital of the bank, the capital is to be considered common shares for the purposes of this regulatory adjustment. If the investment is issued out of a regulated financial entity and not included in regulatory capital in the relevant sector of the financial entity, it is not required to be deducted.
- v. Banks may, with prior Central Bank's approval, exclude temporarily certain investments where these have been made in the context of resolving or providing financial assistance to reorganize a distressed institution.

68. All investments included above that are not common shares must be fully deducted from CET1.

69. Investments included above that are common shares will be subject to the “Threshold deductions” treatment described in the section 4 below.

4. Threshold deductions

70. Instead of a full deduction, the following items may each receive limited recognition when calculating CET1, with recognition capped at 10% of the bank’s common equity (after applying all other regulatory deductions in full, apart from the deductions outlined in this Standard (paragraph 69 to 71)):

- i. Significant investments in the common shares of unconsolidated financial institutions (banking, securities and other financial entities) and insurance entities as referred to in Section 3.10 (paragraph 66). Any amount exceeding this 10% threshold is deducted from CET1 capital;
- ii. DTAs that rely on future profitability and arise from temporary differences. Any amount exceeding this 10% threshold is deducted from CET1 capital

The amount below the 10% threshold of the above two items are aggregated and must not exceed 15% of the Common Equity Tier 1 capital (after application of all other regulatory adjustments and the amount of significant investments in the common shares of unconsolidated financial institutions and deferred tax assets in full). The calculation for threshold deduction is explained with an example in Appendix 5 in *Guidance for Capital Adequacy of Banks in the UAE*.

71. The amount of the two items (outlined in paragraph 69) that are not deducted in the calculation of CET1 will be risk weighted at 250%.

Former deductions from capital

72. The following items, which under former Central Bank’s Regulations were deducted 50% from Tier 1 and 50% from Tier 2 (or had the option of being deducted or risk weighted), will receive a 1250% risk weight:

- i. Certain securitization exposures;
- ii. Non-payment/delivery on non-DvP and non-PvP transactions; and
- iii. Significant investments in commercial entities

5. Significant investments in commercial entities

73. Significant investments in commercial entities are defined as investments in commercial entities that are, on an individual basis, greater than or equal to 10% of the bank’s CET1 capital (after the application of all regulatory deductions). The amount in excess of the threshold of 10% (for each individual investment) will be risk weighted at 1250%.

74. If the aggregate of the amount of such significant investments that is not in excess of the threshold (i.e. amount of such investments not risk weighted at 1250%) is greater than 25% of the bank’s CET1 capital (after the application of all regulatory deductions), the amount in excess of 25% must also be risk weighted at 1250%. The amount in excess will be allocated to individual investments in a proportionate basis (refer to Appendix 3 in *Guidance for Capital Adequacy of Banks in the UAE* for an illustrative example).

75. Amounts below the thresholds that are not risk weighted at 1250% are to be risk weighted as follows:

- i. Amounts below the thresholds that are in the banking book are to be risk weighted as per the credit risk rules (i.e. investments that are not listed will be risk weighted at 150% and investments that are listed will be risk weighted at 100%).
- ii. Amounts below the thresholds that are in the trading book are to be risk weighted as per the market risk rules.

6. Transitional Arrangements

76. Minority investment in banking, financial and insurance entities that are not deducted as per section 3.9 will be risk weighted at 100% if the entity is listed and 150% if the entity is unlisted. Application of risk weight for unlisted entities will have transitional arrangement as follows:

Year	End of 2017	1 st Jan 2018	1 st Jan 2019	1 st Jan 2020 onwards
Risk weights	100%	115%	130%	150%

77. Equity investment in commercial entities that are below the thresholds as per section 5 will be risk weighted at 100% if the entity is listed and 150% if the entity is unlisted. Application of risk weight for unlisted companies will have transitional arrangement as follows:

Year	End of 2017	1 st Jan 2018	1 st Jan 2019	1 st Jan 2020 onwards
Risk weights	100%	115%	130%	150%

III. Tier Capital Instruments

1. Introduction

1. This Standard must be read in conjunction with the Capital Regulations Circular No 52/2017, in which Tier Capital the Tier Capital Supply Standard defines criteria required for capital to be classified as Additional Tier 1 (AT1) and Tier 2 (T2). Non-exhaustive examples of features are optional calls, coupon payments, and distributable items.

2. The purpose of this Standard is to:

- Clarify the requirements for classification of AT1 and T2 instruments in the UAE
- Provide a robust Tier Capital instrument framework to the industry,
- Support a standardisation of AT1 and T2 instruments in the market
- Implement a clear application and approval process.

2. Capital Approval

3. Banks wishing to issue any type of capital, including AT1 and T2, must request approval of the Central Bank of the UAE prior to issuance of the instrument. The bank may only issue the intended capital component after having submitted documentation described in the Application Process in the Appendix to this Standard and after the Board of the Central Bank of the UAE has approved the issuance of the instrument.

4. The Central Bank requires banks to issue AT1 and T2 instruments that are simple and robust in absorbing loss. The capital instrument Standard intends to:

- Ensure the soundness of individual institutions
- Reduce the variety of capital instruments in the market
- Regulate the quality of instruments issued in the UAE
- Monitor the amount of capital being issued in the market; and
- Enhance the financial stability of the banking sector.

3. Scope of Application

5. This Standard explains the requirements for Tier Capital instruments, the application process, and approval procedures followed by the Central Bank. It applies to all local banks operating in the UAE since only local banks are permitted to issue Additional Tier 1 or Tier 2 instruments. Foreign branches, however, are permitted to issue Tier 2 subordinated term loans from their Head Offices restricted to a maximum of 3% of their risk-weighted assets. Banks are responsible for ensuring that their capital instruments comply with all applicable requirements. This Standard will be updated from time to time to reflect relevant regulatory development.

4. Definitions and Interpretations

In general, terms in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In addition, for this Standard, the following terms have the meanings defined in this section.

- a. **Capital Regulations, Standards and Guidance**, means regulatory capital requirements for the maintenance of capital applicable to the issuer, including transitional rules. It includes the Capital Regulation, the Capital Standards, and Capital Guidance.
- b. **Central Bank** means the Central Bank of the United Arab Emirates.
- c. **Distributable Items** means the amount of the issuer's consolidated retained earnings and

reserves after the transfer of any amounts to non-distributable reserves, all as set out in the most recent audited or auditor reviewed consolidated financial statements of the issuer or any equivalent or successor term from time to time as prescribed by the Capital Regulations, including the applicable criteria for Tier 1 capital instruments that do not constitute Common Equity Tier 1 Capital;

- d. **Grandfathering** is part of the transition process. In order to qualify for the grandfathering arrangements, an instrument must have a particular cut-off date. Any instrument entered into before 1st January 2018, which does not meet the qualifying criteria for the particular tier of capital, in this Standard will be grandfathered.
- e. **Non-Viable:** The bank shall be Non-Viable if it is at least (a) insolvent, bankrupt, unable to pay a material part of its obligations as they fall due or unable to carry on its business, or (b) any other event or circumstance occurs that the Central Bank deems necessary to declare the bank to be Non-Viable.
- f. **Point of Non-Viability (PONV):** A Point of Non-Viability means that the Regulator has determined that the bank has or will become non-viable without: (a) a write-down of the principal amount of the instrument, or (b) a public injection of capital (or equivalent support).
- g. **Tier Capital Instruments:** Capital instruments other than Core Equity Tier 1 (CET1) capital, that qualify for recognition as Additional Tier 1 (AT1) or Tier 2 (T2) regulatory capital instruments according to the requirements of this Standard.

5. General Requirements for Tier Capital Instruments

- 6. Tier Capital Instruments must fulfil the criteria described in these capital standards, including additional requirements described hereunder.

Point of Non Viability (PONV)

- i. The terms and conditions of Additional Tier 1 and Tier 2 instruments must have a provision that requires the principal amount of such instruments to be written-down upon the occurrence of a trigger event.
- ii. Banks will be informed in writing upon the occurrence of the bank's financial position reaching a PONV in the view of the Central Bank.
- iii. When a PONV occurs on or after the issue date of the instrument, the instrument will be cancelled and all and any rights of any holder of the instrument for payment of any amounts under or in respect of the instrument (including, without limitation, any amounts that may be due and payable) shall be cancelled and not restored under any circumstances.
- iv. The write-down at the PONV will occur in full and be permanent in nature. A partial write-down may be considered only in exceptional cases as decided by the Central Bank.
- v. There must not be any impression to the holders that a write-down notice will be sent before the issuer can write-down the principal amount of the instrument.
- vi. If a bank issues Tier Capital out of a subsidiary and with the intention that such capital is eligible in the consolidated group's capital, the terms and conditions must specify an additional trigger event. The trigger is the earlier of: (1) a decision that a write-down is required, without which the subsidiary would become non-viable, is necessary, as determined by the regulator of the subsidiary in the home jurisdiction, and (2) Central Bank has determined a Point of Non-Viability for the consolidated bank.

Subordination

- 7. To ensure subordination of Tier Capital instruments, Tier Capital instruments must be fully written-down upon liquidation or bankruptcy.

Solvency Conditions

8. Capital issuances must define Solvency Conditions in the terms and conditions of the instrument. Solvency Conditions must contain at least the following:

- i. The issuer must be solvent at all times.
- ii. Ability of the issuer to make payments on the obligations and any payments required to be made, on the relevant date, with respect to all senior obligations and *pari passu* obligations.
- iii. The total share capital of the issuer must be greater than zero at all times from the first day of the relevant coupon period to the time of payment of obligations.

Capital Event

9. If the instrument ceases to count as Tier Capital (for example due to a change in the Capital Regulation), the Central Bank will inform the bank in writing of such event accordingly.

10. A capital event may occur at any time, due to its unforeseen nature, on or after the issue date. Any attempt to redeem must be subject to the Central Bank's prior written consent.

Redemption

11. To ensure that Tier Capital instruments comply with the capital requirements as defined in this Standard, any redemption of the instrument requires prior written consent of Central Bank, satisfaction of the solvency conditions and satisfaction of the requirements set out in the Capital Regulations, Standards, and Guidance.

12. The issuer may redeem all, but not some part, of the instrument. Only in certain exceptional cases would the Central Bank consider approving partial redemption.

13. The terms and conditions of the instrument must not include terms that in any way indicate that the repurchase or redemption of the instrument may occur at any time.

Redemption Notices

14. All notices are revocable before the relevant redemption date.

Special Purpose Vehicle (SPV)

15. Only Islamic banks may use a SPV for capital issuances. The requirements for these issuances are as follows:

- i. The Mudaraba contract between the issuer and the SPV:
 - a. Must be subordinated.
 - b. No such contract will be given on the cancelled coupons so that flexibility of payments is given at any time.
- ii. The contract must be specific enough and its scope is restricted to a change affecting the issuer, such as a restructure or a merger. The Central Bank will reassess the eligibility of the instrument.
- iii. Each capital instrument requires a separate SPV that should not engage in any other business or activity.

Currencies

16. Only instruments denominated in UAE Dirhams (AED) or US Dollars (USD) will be accepted for banks incorporated in the UAE. This also applies to instruments issued through a SPV by Islamic banks.

17. For issuances by subsidiaries, the respective local currency will be acceptable only in exceptional circumstances with the written approval of the Central Bank.

Specific Requirements for Additional Tier 1

Coupon Cancellation

18. In the event of a coupon cancellation (as stated in the terms and conditions of the instrument), the issuer (as bank or SPV) will not pay the coupon and the following events should be covered as a minimum (Non-Payment Event):

- i. The coupon payable, when aggregated with any distributions or amounts payable by the issuer as bank or SPV, on any *pari passu* obligations having:
 - a. the same dates in respect of payment of such distributions or amounts as, or;
 - b. otherwise due and payable on the dates for payment of the coupon, exceeds the Distributable Items (on the relevant date for payment of such coupon);
- ii. The issuer is, on that coupon date:
 - a. in breach of the Capital Regulations and Standards including any payment restrictions due to breach of capital buffers imposed on the issuer by the Central Bank, as appropriate;
 - b. or payment of the relevant coupon would cause it to be in breach thereof;
- iii. The Central Bank requires that the coupon due on the coupon date will not be paid (for any reason the Central Bank may deem necessary);
- iv. The Solvency Conditions are not satisfied or would no longer be satisfied if the relevant coupon was paid; or
- v. The issuer, in its sole discretion, has elected that coupon shall not be paid to holders of the capital securities on any coupon date, for example but not limited to, due to a net loss for that period. Other than in respect of any amounts due on any date on which the capital securities are to be redeemed in full, unless the redemption notice is revoked.

Therefore, cancellation of the distributions can be discretionary (v) or mandatory (i)-(iv). Any distributions on the instrument so cancelled, must be cancelled definitively and must not accumulate or be payable at any time thereafter.

Non-Payment Event Notice

19. All notices are revocable before a non-payment event is exercised.

20. Any failure to provide a notice of a non-payment event will not invalidate the right to cancel the payment of the coupon.

Enforcement Event

21. The right to institute winding-up proceedings is limited to circumstances where payment has become due. Solvency Conditions have to be met in order for the principal, coupon, or any other amount to be due on the relevant payment date. Payments on the instrument can be cancelled after which it will not be due on the relevant payment date. Upon the occurrence of an enforcement event, any holder of the instrument may give written notice to the issuer of the instrument. An enforcement event is related to a non-payment when due and to insolvency.

Maximum Distributable Amount (MDA):

22. Distributions are restricted if the bank does not have sufficient capital to fulfill the effective capital conservation buffer. Banks are hence prohibited from making a distribution if their CET1 is below the Combined Buffer Requirement (CBR). The distributions have to be lower than the maximum distributable amount which is calculated as follows:

MDA is calculated as the sum of:

- i. Interim profits not included in CET1 capital and
- ii. Year-end profits not included in CET1 capital minus
- iii. Amounts that would be payable by tax if i) and ii) were to be retained, multiplied by a factor set at:
 - a. Zero if the CET1 ratio not used to meet the own funds requirement is within the first quartile (i.e. the lowest) of the CBR;

- b. 0.2 if the CET1 is in the second quartile;
- c. 0.4 if the CET1 is in the third quartile; and
- d. 0.6 if the CET1 is in the fourth quartile

MDA should be reduced by:

- i. A distribution in connection with CET1 capital;
- ii. Variable remuneration pay or discretionary pension benefits, or variable remuneration pay if the obligation to pay was created at a time when the institution failed to meet the CBR; and
- iii. Payments on additional tier 1 instruments.

Specific Requirements for Tier 2 instruments

23. Banks have to follow the Tier 2 criteria in the Tier Capital Supply Standard as well as the following additional requirements of this Standard:

Amortisation of Tier 2 Instruments

24. Recognition of the instrument as Tier 2 Capital in its final 5 years to maturity is amortised on a straight-line basis by 20% per annum.

25. If the instrument is repayable in separate tranches, each tranche shall be amortised individually, as if it were a separate loan.

Transition Period

Grandfathering Rules for Additional Tier 1 and Tier 2

26. The below two grandfathering rules apply only to instruments that were issued before the effective date of the Capital Regulation (being 1 February 2017).

- i. Instruments that are fully Basel III compliant will be grandfathered at 100% eligibility for 10 years starting from Jan 1, 2018 until 31 Dec 2027.
- ii. Instruments that are not Basel III compliant do no longer qualify as non-common equity Tier 1 capital or Tier 2 capital and will be phased out beginning 1st January 2018.

27. Fixing the base at the nominal amount of such instruments outstanding on 1 January 2018, their recognition is/was capped at 90% from 1 January 2018, with the cap reducing by 10 percentage points in each subsequent year.

28. This cap is applied to Additional Tier 1 and Tier 2 Instruments on an individual instrument base and refers to the amount of that instrument outstanding that no longer meets the relevant entry criteria.

29. If an instrument is repaid in separate tranches, the cap is applied to the reduced amount in all circumstances.

Appendix A: Application Process:

The application process for banks issuing Additional Tier 1 or Tier 2 is a two-stage process:

1. Initial information to be provided to the Central Bank:

The bank shall inform the Central Bank prior to making an official application for approval of any and every issuance. The bank must provide to the Central Bank the following information:

1. Reason(s) for the issuance of the instrument.
2. Main features of the planned instrument: Section 1, 2 and 3 of the Capital Notification form (signature not required).
3. Capital planning for 5 years including balance sheet growth and business performance:
 - i. assuming approval of the proposed instrument
 - ii. without the proposed instrument
4. Stress Testing with a stress scenario of the top 2 credit customers are defaulting with the proposed instrument
5. The Central Bank – Financial Stability Stress Department Test results

The intention of such instrument request will be reviewed by the Central Bank and a Non-objection may be granted, so that the bank can proceed with the second stage of the approval process.

2. Actual application to the Central Bank:

To start the approval process, the bank must submit all of the following documents:

- i. Legal Opinion of an independent appropriately qualified and experienced lawyer that the terms and conditions are compliant with the requirements detailed in the Capital Regulations, Standards and Guidance.
- ii. Legal opinion of an independent appropriately qualified and experienced lawyer that the obligations contained in terms and conditions will constitute legal, valid, binding and enforceable obligations.
- iii. Legal opinion of an independent appropriately qualified and experienced lawyer that the Self-Assessment of the issuing bank meets the Conditions and the Capital Regulations.
- iv. Written confirmation from the bank's external auditor on the accounting treatment of the Instrument.
- v. Fully completed Application form (CN1-form), signed by the CEO, CFO, Head of Internal Audit, Head of Compliance and Head of Risk.
- vi. Detailed terms and conditions of the Instrument that will be part of the prospectus/ contract
 - a. Note that the CN-1 form must contain details of any new, unusual or different features of the instrument
 - b. Comparison of the intended terms and conditions with a version that is already publicly available and approved by the Central Bank. (Black-lined version)
- vii. Key SPV-related incorporation documents and underlying mudaraba agreement, if applicable:
- viii. Market Conformity Analysis (if the instrument will be privately placed).
- ix. Any other documents requested by the Central Bank, if deemed necessary.

Appendix B: Central Bank of UAE – Processes and Requirements Form for Financial Institutions operating in UAE

Summary checklist notification to the Central Bank in relation to a regulatory_capital instrument. In addition, kindly supply the following specific information: the CN1-form and the draft terms and conditions of the instrument. Please note that a submission is incomplete unless all requested information has been supplied.

Documentation	Enter
Stage 1:	
Initial Information to the Central Bank	
Name of the bank	
Reasons for the issuance of the instrument	
Bank to inform the Central Bank from the beginning of the instrument and main features of the capital increase	
Main features of the planned capital Instrument (section 1, 2 and 3 of the Capital Notification Form 1- CN1 Form which is uploaded on the online Central Bank's portal under Basel tab)	
Capital Planning for 5 years under: <ul style="list-style-type: none"> i. Business as usual conditions ii. Without the Instrument 	
Stress testing results, including results for one scenario in which top 2 credit customers default	
Central Bank- Financial Stability Department stress test results	
Stage 2:	Check
Application Content	
The bank must submit the following documents to start the approval process:	
a. A legal opinion of an independent appropriately qualified and experienced lawyer that the terms and conditions are in compliance with the requirements detailed in the Capital Regulations, Standards and Guidance.	
b. Legal opinion of an independent appropriately qualified and experienced lawyer that the obligations contained in terms and conditions will constitute legal, valid, binding and enforceable obligations.	
c. Legal opinion of an independent appropriately qualified and experienced lawyer that the Self-Assessment of the issuing bank meets the Conditions and the Capital Regulations.	
d. Written confirmation from the bank's external auditor on the accounting treatment of the Instrument	
e. Fully completed CN1-form signed by the CEO, CFO, Head of Internal Audit, Head of Compliance and Head of Risk	
f. Detailed terms and conditions that will be part of the prospectus (Note that a comparison of the terms and conditions need to be black-lined if any changes occur)	
g. Key SPV-related incorporation documents and underlying mudaraba agreement, if applicable.	
h. Market Conformity Analysis (if the instrument will be privately placed)	
i. Any other documents requested by the Central Bank, if deemed necessary.	

Appendix C: Process of the Eligibility of Capital Instruments

Banks will adhere to the following process when an application for the eligibility of a current capital instrument is submitted to the Central Bank:

- i) The bank has to determine if the current capital instrument has the following features:
 - a) A conditional Point of Non-Viability (PONV) that;
 - b) Needs to be activated by the Central Bank.
- ii) Once (i) has been met as:
 - a) Yes: A letter from the Central Bank, the bank should request a letter from the Central Bank, which activates the PONV.
 - b) No: The bank may directly go to (iii) without approaching the Central Bank for a letter to activate the PONV.
- iii) The bank will need to follow the Stage 2 process in Appendix B then approach its appointed external lawyers who will certify if the capital instrument conforms to the requirements of the Central Bank for grandfathering purposes. This certification will have to accompany the eligibility application to the Central Bank.
- iv) The Central Bank will determine if the application fulfills the necessary requirements as approved by the Board of the Central Bank.
- v) The final application will be submitted to the Central Bank. The Central Bank will decide as to which grandfathering clause to apply to the capital instrument.

It should be noted that a separate eligibility application for each current capital instrument is required by the Central Bank.

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IV. Credit Risk

I. Introduction and Scope

1. All banks operating in the UAE must use the Standardised Approach to calculate their capital requirements for credit risk with effect from 31st March 2021.
2. The requirements of the standardised approach for risk weighting of banking book exposures set out in the below sections with regards to exposures related to securitization are risk weighted based on the *Standards on Capital for Securitisation Exposures*.
3. Exposures related to banks' equity investments in funds are risk weighted based on the requirements of the below Standard on *Equity Investments in Funds*. The credit equivalent amount of over-the-counter (OTC) derivatives that expose a bank to counterparty credit risk is calculated under the requirements set forth in the below Standard on *Counterparty Credit Risk Capital*. Risk-weighted asset amounts for Credit Valuation Adjustment (CVA) risk are calculated based on the provisions set out below in the Standard, *Credit Valuation Adjustment*.
4. In determining the risk weights in the standardised approach, banks must use assessments by external credit assessment institutions recognised as eligible for capital purposes by the Central Bank in accordance with the criteria defined in the *Guidance on Recognition of External Credit Assessment Institutions (ECAI)*. Exposures must be risk-weighted net of specific provisions.
5. The Standards follow the calibration developed by the Basel Committee, which includes a maximum risk weight of 1250%, calibrated on a total capital adequacy requirement of 8%. The UAE instituted a higher minimum capital requirement of 10.5% (excluding capital buffers), applicable to all licensed banks. Consequently, the maximum capital charge for a single exposure will be the lesser of the value of the exposure after applying valid credit risk mitigation, netting and haircuts, and the capital resulting from applying a risk weight of 952% (reciprocal of 10.5%) to this exposure.

II. Definitions

In general, terms in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In addition, the following terms have the meanings defined in this Standard.

- a. **Credit conversion factors (CCF):** factors used to convert off-balance-sheet items into credit exposure equivalents. Counterparty risk weightings for OTC derivative transactions will not be subject to any specific ceiling.
- b. **Credit risk mitigation (CRM):** technique used by a credit institution to reduce the credit risk associated with an exposure it holds.
- c. **Non-Commercial PSEs:** Administrative bodies accountable to UAE Federal Government and Emirates Governments or to Local Authorities and other non-commercial undertakings owned by the UAE Federal Government and Emirates Governments or Local Authorities.
- d. **Delivery versus payment (DvP):** a securities delivery arrangement in which there is simultaneous exchanges of securities for cash.
- e. **LTV Ratio:** The LTV ratio is the amount of the loan divided by the value of the property. The value of the property must be maintained at the value measured at origination unless the Central Bank requires banks to revise the property value downward. The value must be adjusted if an extraordinary, idiosyncratic event occurs resulting in a

permanent reduction of the property value. Modifications made to the property that unequivocally increase its value could also be considered in the LTV.

- f. **Multilateral Development Bank (MDB):** an international financial institution chartered by two or more countries for the purpose of encouraging economic development.
- g. **Over-the-counter (OTC) derivatives:** contracts that are traded (and privately negotiated) directly between two parties, without going through an exchange or other intermediary.
- h. **Payment versus payment (PvP):** a mechanism in a foreign exchange settlement system to ensure that a final transfer of one currency occurs only if a final transfer of the other currency or currencies also takes place.
- i. **Specific provisions:** the specific provision requirements as set out in the Regulation for Classification of Loans and their Provisions (Circular 28/2010) and the Clarification and Guidelines Manual for Circular No 28/2010.
- j. **Undertakings for collective investments in transferable securities (UCITS):** a regulatory framework of the European Commission that creates a harmonized regime throughout Europe for the management and sale of mutual funds. UCITS funds can be registered in Europe and sold to investors worldwide using unified regulatory and investor protection requirements.

III. Individual Exposures

A. Sovereigns and Central Banks

6. Exposure to the Federal Government and Emirates Government receives 0% risk weight, if such exposures are denominated and funded in AED or USD for a transition period of 7 years from the date of implementation of this Standard. After the transition period, 0% risk weights are only applied to exposures that are denominated and funded in AED.

7. A 0% risk weight may also be applied to exposures to other GCC sovereigns and their central banks only if these exposures are denominated and funded in the domestic currency of that sovereign and the Supervisory authority of that sovereign has adopted such preferential treatment for exposures to its own sovereign and central bank.

8. Exposure to the Federal Government and Emirates Government in currencies other than AED or USD and claims on other sovereigns and central banks that do not meet the criteria set out in paragraph 6, are risk weighted as follows:

Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	0%	20%	50%	100%	150%	100%

9. Exposure to the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Union, the European Stability Mechanism (ESM) and the European Financial Stability Facility (EFSF) receive a 0% risk weight.

B. Public Sector Entities (PSEs)

10. PSEs include the following categories:

- (i) Non-Commercial PSEs; and

- (ii) Other PSEs including commercial PSEs (Government Related Entity (GRE) i.e. commercial PSEs that are fully owned or more than 50% in ownership by the UAE government).

11. Non-Commercial PSEs that are acknowledged by the Central Bank may be treated in the same as Claims on Bank. However, the preferential treatment for short-term claims under Claims on Bank must not be applied to non-commercial PSE. The Central Bank issues a GRE list to banks on a regular basis that the Central Bank considers Non-Commercial PSEs that qualify for this treatment. The Central Bank may allow certain domestic Non-Commercial PSEs to be treated same manner as claims on UAE sovereign if these entities have specific revenue raising powers and have specific institutional arrangements the effect of which is to reduce their risks of default.

12. Exposure to all other PSEs that are not included on the Central Bank's list must be treated like exposures to corporates as per section III.F below.

C. Multilateral Development Banks (MDBs)

13. With the exception of the MDBs that meet the criteria specified at paragraph 14 below, the risk weights applied to exposures to MDBs must be based on external credit assessments as set out in the table below.

Credit assessment of MDBs	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk weight	20%	50%	50%	100%	150%	50%

14. A 0% risk weight will be applied to exposures to highly rated MDBs that meet the Basel Committee on Banking Supervision (BCBS) eligibility criteria for MDBs risk weighted at 0%.

- (i) The BCBS will continue to evaluate eligibility on a case-by-case basis so it is not possible to provide a definitive list of the MDBs that satisfy the BCBS's eligibility criteria. The up-to-date list of MDBs that meet the BCBS's eligibility criteria can be found on the BCBS's website www.bis.org.
- (ii) As a national discretion, exposures to the Arab Monetary Fund (AMF) receive 0% risk weight.

D. Banks

15. Claims on banks must be risk weighted based on the external credit assessment of the bank itself as set out in the table below. For the purposes of calculating capital requirements, a bank exposure is defined as a claim on any financial institution that is licensed to take deposits from the public and is subject to appropriate prudential standards and level of supervision.

16. Claims on unrated banks shall be risk-weighted at 50%. No claim on an unrated bank may receive a risk weight lower than that applied to claims on its sovereign of incorporation.

17. A preferential risk weight that is one category more favourable shall be applied to claims with an original maturity of three months or less, subject to a floor of 20%. This treatment shall be available to both rated and unrated banks, but not to banks risk weighted at 150%. Short-term claims in the table below are defined as having an original maturity of three months or less. However, claims with (contractual) original maturity under three months which are rolled over (i.e., where the effective maturity is longer than three months) shall not qualify as short-term claims and shall not enjoy the preferential risk weighting treatment.

Credit assessment of Banks	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	20%	50%	50%	100%	150%	50%
Risk Weight Short Term claims	20%	20%	20%	50%	150%	20%

E. Securities Firms

18. Claims on securities firms shall be treated as claims on banks provided the securities firms are authorized by a competent authority and subject to supervisory and regulatory arrangements that are the same or equivalent to those under this standards, including, in particular, risk-based capital requirements. Otherwise, such claims must follow the rules for claims on corporates as per section III F below.

F. Corporates

19. The table provided below in the next paragraph illustrates the risk weighting of rated corporate claims, including claims on insurance companies.

20. The standard risk weight for unrated claims on corporates shall be 100%. No claim on an unrated corporate may be given a risk weight that is lower than that assigned to its sovereign of incorporation. For unrated exposures to Small- and Medium-sized Entities (SME) that do not meet the criteria in paragraph 21, an 85% risk weight will be applied. The Central Bank may, at its sole discretion, require a higher risk weighting for some unrated corporates as advised to banks directly where appropriate.

Credit assessment	AAA to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
Risk Weight	20%	50%	100%	150%	100%

G. Regulatory Retail Portfolios

21. A 75% risk weighting may apply for exposures classified as “Retail” except as provided below for past due loans as per section III J below. For an exposure to be classified as “Retail” the Central Bank will need to be satisfied that the four criteria listed below are met:

- (i) Orientation criterion – Exposure to a natural person or persons, or Small- and Medium-sized Entities (SME);
- (ii) Product criterion – Eligible products included are credit cards, revolving credit, personal lending and small business credit facilities. Residential mortgage products are excluded as these are treated separately as “Claims Secured by Residential Property” as per section H below;
- (iii) Granularity criterion – No exposure to any one counterparty can exceed 0.20% of the total regulatory retail portfolio being evaluated (exposure is gross before any credit risk mitigation; and one counterparty includes connected persons);
- (iv) Value criterion –
 - (i) Maximum aggregated exposure to one counterparty must not exceed the value of AED 4,000,000 for exposures to SME,

- (ii) For all other exposures, the maximum aggregated exposure to one counterparty must not exceed the value of AED 2,000,000.

22. The Central Bank reserves the right to increase the 75% risk weight if this risk weight value is deemed to be too low based on the default experience for these types of exposures in the UAE. Exposures to SMEs that do not meet all of the above criteria set out in paragraph 21 are treated as under the corporate asset class and must follow the rules for claims on corporates as per Section III F above.

H. Claims Secured by Residential Property

23. A 35% risk weighting shall apply to exposures fully secured by eligible immovable residential property that is occupied by the owner or that is rented, and where the purpose of the facility is to fund the purchase of the property. This risk weight value shall be applied only where there exists a substantial margin of additional security over the amount of the loan.

24. Residential property shall be considered eligible immovable property if the following criteria are met:

- (i) A mortgage is enforceable in all jurisdictions which are relevant at the time of the conclusion of the credit agreement and shall be appropriately filed within a reasonable time;
- (ii) All legal requirements for establishing the mortgage have been fulfilled;
- (iii) The protection agreement and the legal process underpinning it enable the bank to realise the value of the property within a reasonable timeframe;
- (iv) Location of the property must be in the UAE; and
- (v) Banks shall have in place procedures to monitor that the property taken as credit protection is adequately insured against the risk of damage.

25. Banks shall be responsible to monitor on an ongoing basis that the criteria listed in paragraph 24 above are met. In case of failure to conduct such internal monitoring or if the results of such internal monitoring indicate that the criteria are not met, the residential property cannot be considered eligible immovable property for the application of the 35% risk weight.

26. Banks shall clearly document the types of residential immovable property they accept and their lending policies in this regard.

27. Exposures secured by eligible residential real estate, as specified by the eligibility criteria set out in paragraph 24 above, and for which the 35% risk weight applies must not exceed any of the two items below:

- (i) 85% of the market value of the property (i.e., the LTV ratio must be less than or equal to 85%); and
- (ii) AED 10 million;

28. If the two criteria listed above in paragraph 27 cannot be definitively established or met, then the 35% risk weight cannot be applied. If the exposure meets the criteria for regulatory retail claims as set out at paragraph 21 then a 75% risk weight applies, otherwise a 100% risk weighting must be used.

29. The Central Bank may increase the 35% risk weight if this risk weight is deemed to be too low based on the default experience for these types of exposures in the UAE.

I. Claims secured by commercial real estate

30. A 100% risk weighting shall apply to exposures secured by commercial real estate. For the purposes of this paragraph, a commercial real estate exposure is an exposure secured by immovable property that is not residential real estate as per section III H above.

J. Past Due Loans

31. The unsecured portion of any loan (other than a residential mortgage loan as per section H above) that is past due for more than 90 days, net of specific provisions (including partial write-offs), must be risk-weighted as follows:

- (i) 150% risk weight when specific provisions are less than 20% of the outstanding amount of the loan;
- (ii) 100% risk weight when specific provisions are 20% and above of the outstanding amount of the loan.

32. In the case of residential mortgage loans as per section H above, when such loans are past due for more than 90 days they shall be risk weighted at 100%, net of any specific provisions.

33. For the purpose of defining the secured portion of the past due loan, eligible collateral and guarantees shall be the same as for Credit Risk Mitigation set out below at section IV.

34. Past due retail loans are to be excluded from the overall regulatory retail portfolio when assessing the granularity criterion specified in Paragraph 21, for risk-weighting purposes.

K. Higher Risk Categories

35. The following claims shall be risk weighted at 150% or higher:

- (i) Claims on sovereigns, PSEs, banks, and securities firms rated below B-;
- (ii) Claims on corporates rated below BB-;
- (iii) Past due loans as set out in section J above; and
- (iv) Real estate acquired in settlement of debt and not liquidated within the statutory period (Article 93 of Federal Law).

36. The Central Bank may apply a 150% or higher risk weight reflecting the higher risks associated with the assets.

37. The risk weights applicable to securitisation and re-securitisation exposures are set out in the *Standards on Capital for Securitisation Exposures*.

L. Other Assets

38. Gold bullion held in own vaults or on an allocated basis to the extent backed by bullion liabilities shall be treated as cash and therefore risk-weighted at 0%.

39. Cash items in the process of collection are risk-weighted at 20%.

40. Investments in commercial entities shall be treated as per the Capital Supply standard.

41. Exposure to investments in the capital of banking, securities, financial and insurance entities, must be treated as per the Capital Supply standard.

42. The treatment of securitisation exposures is presented separately in line with *Securitisation* Standard below in these standards.

43. The standard risk weight for exposure to all other assets not specifically mentioned shall be 100%.

M. Off-balance sheet items

44. Off-balance sheet items must be converted into credit exposure equivalents through the use of CCF.

Credit Conversion Factor of 100%

45. The following items must be converted into credit exposure equivalents through the use of CCF of 100%:

- (i) All direct credit substitutes, including general guarantees of indebtedness (such as standby letters of credit serving as financial guarantees for loans and securities) and acceptances (such as endorsements with the character of acceptances);
- (ii) Sale and repurchase agreements and asset sales with recourse, where the credit risk remains with the bank;
- (iii) Forward asset purchases, forward deposits and commitments for the unpaid portion of partly-paid shares and securities which represent commitments with certain draw-downs, and which shall be risk-weighted according to the type of asset and not according to the type of counterparty with whom the transaction has been entered into;
- (iv) The lending of banks' securities or the posting of securities as collateral by banks, including instances where these arise out of repo-style transactions (i.e., repurchase/reverse repurchase and securities lending/securities borrowing transactions). Section IV on credit risk mitigation sets out the requirements for the calculation of risk-weighted assets where the credit converted exposure is secured by eligible collateral;
- (v) Off-balance sheet items that are credit substitutes not explicitly included in any other category (including credit derivatives such as credit default swaps).

Credit Conversion Factor of 50%

46. The following items must be converted into credit exposure equivalents through the use of CCF of 50%:

- (i) Transaction-related contingent items (e.g., performance bonds, bid bonds warranties, and standby letters of credit related to particular transactions);
- (ii) Underwriting commitments under note issuance and revolving underwriting facilities regardless of maturity of the underlying facility;
- (iii) Other commitments that are not unconditionally cancellable with an original maturity exceeding one year.

Credit Conversion Factor of 20%

47. The following items must be converted into credit exposure equivalents through the use of CCF of 20%:

- (i) Other commitments not unconditionally cancellable with an original maturity of one year or less; and

- (ii) Short-term self-liquidating trade letters of credit arising from the movement of goods (e.g., documentary credits collateralised by the underlying shipment), for both issuing and confirming banks.

Credit Conversion Factor of 0%

48. Any commitments that are unconditionally cancellable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness must be converted into credit exposure equivalents using CCF of 0%.

Other Principles

49. Where there is an undertaking to provide a commitment on an off-balance sheet item (i.e., commitment for a commitment), banks shall apply the lower of the two applicable CCFs.

50. The credit equivalent amount of OTC derivatives that expose a bank to counterparty credit risk shall be calculated under the rules set forth below in the *Counterparty Credit Risk* Standard below.

Failed Trades and Non-DvP Transactions

51. Banks shall closely monitor securities, commodities, and foreign exchange transactions that have failed or not been timely settled.

Principles for Failed Trades and Non-DvP Transactions

52. DvP also refers to PvP transactions for the purpose of this Standard. Transactions settled through a DvP system, providing simultaneous exchanges of securities for cash, expose firms to a risk of loss on the difference between the transaction valued at the agreed settlement price and the transaction valued at current market price (i.e., positive current exposure). Transactions where cash is paid without receipt of the corresponding receivable (securities, foreign currencies, gold, or commodities) or, conversely, deliverables were delivered without receipt of the corresponding cash payment (i.e., non-DvP, or free-delivery transactions) expose firms to a risk of loss on the full amount of cash paid or deliverables delivered. Specific capital charges address these two kinds of exposures.

53. The following capital treatment is applicable to all transactions on securities, foreign exchange instruments, and commodities that give rise to a risk of delayed settlement or delivery. This includes transactions through recognised clearing houses that are subject to daily mark-to-market and payment of daily variation margins and that involve a mismatched trade. Repurchase and reverse-repurchase agreements as well as securities lending and borrowing that have failed to settle are excluded from this capital treatment. (All repurchase and reverse-repurchase agreements as well as securities lending and borrowing, including those that have failed to settle, shall be treated in accordance with the sections on CRM below).

54. In cases of a system wide failure of a settlement or clearing system, the Central Bank may use its discretion to waive capital charges until the situation is rectified.

55. Failure of a counterparty to settle a trade in itself shall not be deemed a default for purposes of credit risk.

Capital Requirements for Failed Trades and Non-DvP Transactions

56. The capital requirement for failed trades and Non-DvP transactions shall be calculated as follows:

- (i) For DvP transactions, if the payments have not yet taken place five business days after the settlement date, firms must calculate a capital charge by multiplying the

positive current exposure of the transaction by the appropriate factor, according to the table below.

Number of working days after the agreed settlement date	Corresponding risk multiplier
From 5 to 15	8%
From 16 to 30	50%
From 31 to 45	75%
46 or more	100%

- (ii) For Non-DvP transactions (i.e., free deliveries), after the first contractual payment/delivery leg, the bank that has made the payment shall treat its exposure as a loan if the second leg has not been received by the end of the business day. This means that a bank shall use the risk weights set forth in the exposure classes set out in this Standard. However, when exposures are not material, banks may choose to apply a uniform 100% risk-weight to these exposures, in order to avoid the burden of a full credit assessment.
- (iii) If five business days after the second contractual payment/delivery date the second leg has not yet effectively taken place, the bank that has made the first payment leg shall deduct from capital the full amount of the value transferred plus replacement cost, if any. This treatment shall apply until the second payment/delivery leg is effectively made.

IV. Credit Risk Mitigation

A. Introduction and general requirements

Introduction

57. Banks may use a number of techniques to mitigate the credit risks to which they are exposed. For example, exposures may be collateralised by first priority claims, in whole or in part with cash or securities, a loan exposure may be guaranteed by a third party, or a bank may buy a credit derivative to offset various forms of credit risk. Additionally, banks may agree to net loans owed to them against deposits from the same counterparty.

58. In this Standard, "counterparty" is used to denote a party to whom a bank has an on or off-balance sheet credit exposure. That exposure may, for example, take the form of a loan of cash or securities (where the counterparty would traditionally be called the borrower), of securities posted as collateral, of a commitment or of exposure under an OTC derivatives contract

General Requirements for legal certainty

59. The Central Bank recognizes certain credit risk mitigation techniques for regulatory capital purposes, provided that all documentation used in collateralised transactions and for documenting on-balance sheet netting, guarantees and credit derivatives are binding on all parties and legally enforceable in all relevant jurisdictions, and that banks have conducted sufficient legal review to verify this and have a well-founded legal basis to reach this conclusion, and undertake such further review as necessary to ensure continuing enforceability.

60. Where a bank has a single exposure covered either by more than one type of credit risk mitigation, or by differing maturities of protection provided by the same credit protection provider, the bank shall:

- (i) Subdivide the exposure into parts covered by each type or maturity of credit risk mitigation tool; and
- (ii) Calculate the risk-weighted assets for each part obtained in point (i) above separately in accordance with the risk weights applicable to each exposure category as described in the relevant section.

61. The comprehensive approach for the treatment of collateral (described further below from paragraph 85) shall also be applied to calculate the counterparty risk charges for OTC derivatives and repo-style transactions booked in the trading book.

62. No transaction in which CRM techniques are used shall receive a higher capital requirement than an otherwise identical transaction where such techniques are not used.

63. The effects of CRM shall not be double counted. Therefore, no additional supervisory recognition of CRM for regulatory capital purposes shall be granted on claims for which an issue-specific rating is used that already reflects that CRM. Principal-only ratings shall also not be allowed within the framework of CRM to claims for which an external credit assessment can be conducted.

64. Considering that, while the use of CRM techniques reduces or transfers credit risk, it simultaneously may increase other risks (residual risks), and that residual risks include legal, operational, liquidity and market risks, banks shall employ robust procedures and processes to control these risks, including strategy, consideration of the underlying credit, valuation, policies and procedures, systems, control of roll-off risks, and management of concentration risk arising from the bank's use of CRM techniques and its interaction with the bank's overall credit risk profile. Where these risks are not adequately controlled, the Central Bank may impose additional capital charges or take other supervisory actions under Pillar 2.

65. The banks shall also observe the Central Bank's Pillar 3 requirements to obtain capital relief in respect of any CRM techniques.

B. Collateralised transactions

66. A collateralised transaction is one in which:

- (i) Banks have a credit exposure or potential credit exposure; and
- (ii) Credit exposure or potential credit exposure is hedged in whole or in part by collateral posted by a counterparty or by a third party on behalf of the counterparty.

67. Where banks take eligible financial collateral (e.g., cash or securities, more specifically as per section IV C (a)), they are allowed to reduce their credit exposure to a counterparty when calculating their capital requirements to take account of the risk mitigating effect of the collateral.

Overall framework

68. Banks may opt for either the simple approach (described further in Section IV C(c)), which substitutes the risk weighting of the collateral for the risk weighting of the counterparty for the collateralised portion of the exposure (generally subject to a 20% floor), or for the Comprehensive Approach (described further in Section IV C(b)), which allows fuller offset of collateral against exposures, by effectively reducing the exposure amount by the value ascribed to the collateral.

69. Partial collateralisation is recognised in both approaches.

70. Mismatches in the maturity of the underlying exposure and the collateral shall only be allowed under the comprehensive approach.

71. Banks shall operate under either the simple approach or comprehensive approach, but not both approaches, in the banking book, but only under the comprehensive approach in the trading book.

72. Banks that intend to apply the comprehensive approach require prior approval from the Central Bank.

Minimum Conditions

73. The minimum conditions set out below must be met before capital relief will be granted in respect of any form of collateral under either the simple approach or comprehensive approach.

74. In addition to the general requirements for legal certainty set out above at paragraph 59 to 65, the legal mechanism by which collateral is pledged or transferred shall ensure that the bank has the right to liquidate or take legal possession of it, in a timely manner, in the event of the default, insolvency or bankruptcy (or one or more otherwise-defined credit events set out in the transaction documentation) of the counterparty (and, where applicable, of the custodian holding the collateral). Furthermore, banks shall take all steps necessary to fulfil those requirements under the law applicable to the bank's interest in the collateral for obtaining and maintaining an enforceable security interest, e.g., by registering it with a registrar, or for exercising a right to net or set off in relation to title transfer collateral.

75. In order for collateral to provide protection, the credit quality of the counterparty and the value of the collateral must not have a material positive correlation (for example, securities issued by the counterparty - or by any related group entity - would provide little protection and so would be ineligible).

76. Banks shall have clear and robust procedures for the timely liquidation of collateral to ensure that any legal conditions required for declaring the default of the counterparty and liquidating the collateral are observed, and that collateral can be liquidated promptly.

77. Where the collateral is held by a custodian, banks shall take reasonable steps to ensure that the custodian segregates the collateral from its own assets.

78. A capital requirement shall be applied to a bank on either side of the collateralised transaction (for example, both repos and reverse repos shall be subject to capital requirements). Likewise, both sides of a securities lending and borrowing transaction shall be subject to explicit capital charges, as shall the posting of securities in connection with a derivative exposure or other borrowing.

79. Where a bank, acting as an agent, arranges a repo-style transaction (i.e., repurchase/reverse repurchase and securities lending/borrowing transactions) between a customer and a third party and provides a guarantee to the customer that the third party will perform on its obligations, then the risk to the bank shall be the same as if the bank had entered into the transaction as a principal. In such circumstances, a bank shall be required to calculate capital requirements as if it were itself the principal.

The simple approach

80. In the simple approach the risk weighting of the collateral instrument collateralising or partially collateralising the exposure shall be substituted for the risk weighting of the counterparty. Details of this framework are provided further below at section IV C (c).

The comprehensive approach

81. In the comprehensive approach, when taking collateral, banks shall calculate their adjusted exposure amount to a counterparty for capital adequacy purposes in order to take account of the effects of that collateral. Using haircuts, banks shall adjust both the amount of

the exposure to the counterparty and the value of any collateral received in support of that counterparty to take account of possible future fluctuations in the value of either, occasioned by market movements (exposure amounts may vary, for example where securities are being lent.) This will produce volatility-adjusted amounts for both exposure and collateral. Unless either side of the transaction is cash, the volatility-adjusted amount for the exposure shall be higher than the exposure and for the collateral, it shall be lower.

82. Where the exposure and collateral are held in different currencies an additional downwards adjustment shall be made to the volatility adjusted collateral amount to take account of possible future fluctuations in exchange rates.

83. Where the volatility-adjusted exposure amount is greater than the volatility-adjusted collateral amount (including any further adjustment for foreign exchange risk), banks shall calculate their risk-weighted assets as the difference between the two multiplied by the risk weight of the counterparty. The framework for performing these calculations is set out further below in paragraph 97 to 100.

84. Banks shall use the standard supervisory haircuts and the parameters therein as set by the Central Bank. The use of own-estimate haircuts that rely on banks own internal estimates of market price volatility is prohibited.

85. The size of the individual haircuts shall depend on the type of instrument, type of transaction and the frequency of marking-to-market and re-margining (for example, repo style transactions subject to daily marking-to-market and to daily re-margining will receive a haircut based on a 5-business day holding period and secured lending transactions with daily mark-to-market and no re-margining clauses will receive a haircut based on a 20-business day holding period. These haircut numbers will be scaled up using the square root of time formula depending on the frequency of re-margining or marking-to-market).

86. For certain types of repo-style transactions (broadly speaking government bond repos) banks are permitted in certain cases not to apply the standard supervisory haircuts in calculating the exposure amount after risk mitigation. Paragraph 108 lists cases where such treatment is allowed.

87. The effect of master netting agreements covering repo-style transactions can be recognised for the calculation of capital requirements subject to the conditions specified in Paragraph 110.

On-balance sheet netting

88. Where banks have legally enforceable netting arrangements for loans and deposits they may calculate capital requirements on the basis of net credit exposures subject to the conditions in paragraphs 120.

Guarantees and credit derivatives

89. Where guarantees or credit derivatives are direct, explicit, irrevocable and unconditional, and the Central Bank is satisfied that banks fulfil certain minimum operational conditions relating to risk management processes, banks are allowed to take account of such credit protection in calculating capital requirements.

90. A range of guarantors and protection providers are recognized by the Central Bank. A substitution approach shall be applied. Thus only guarantees issued by or protection provided by entities with a lower risk weight than the counterparty will lead to reduced capital charges since the protected portion of the counterparty exposure is assigned the risk weight of the guarantor or protection provider, whereas the uncovered portion retains the risk weight of the

underlying counterparty. Detailed operational requirements for the recognition of guarantees and credit derivatives are given below in paragraphs 122 to 128.

Maturity mismatch

91. Where the residual maturity of the CRM is less than that of the underlying credit exposure a maturity mismatch occurs.

92. Where there is a maturity mismatch and the CRM has an original maturity of less than one year, the CRM shall not be recognised for capital purposes. In other cases where there is a maturity mismatch, partial recognition shall be given to the CRM for regulatory capital purposes as detailed below in paragraphs 137 to 140.

93. Under the simple approach, such partial recognition is not allowed for collateral maturity mismatches.

Miscellaneous

94. The treatments for pools of credit risk mitigants and first- and second-to-default credit derivatives are given in paragraphs 141 to 145.

C. Collateral

a) Eligible financial collateral

95. The following collateral instruments are eligible for recognition in the simple approach:

- (i) Cash (as well as certificates of deposit or comparable instruments issued by the lending bank) on deposit with the bank which is incurring the counterparty exposure.

Note 1: Cash funded credit linked notes issued by the bank against exposures in the banking book which fulfil the criteria for credit derivatives will be treated as cash collateralised transactions.

Note 2: When cash on deposit, certificates of deposit or comparable instruments issued by the lending bank are held as collateral at a third-party bank in a non-custodial arrangement, if they are openly pledged/assigned to the lending bank and if the pledge/assignment is unconditional and irrevocable, the exposure amount covered by the collateral (after any necessary haircuts for currency risk) will receive the risk weight of the third-party bank);

- (ii) Gold;
- (iii) Debt securities rated by a recognised external credit assessment institution where these are either:
 - Rated at least BB- when issued by sovereigns or PSEs that are treated as sovereigns by the Central Bank; or
 - At least BBB- when issued by other entities (including banks and securities firms); or
 - At least A-3/P-3 for short-term debt instruments.
- (iv) Debt securities not rated by a recognised external credit assessment institution where these are:
 - Issued by a bank; and
 - Listed on a recognised exchange; and
 - Classified as senior debt; and

- All rated issues of the same seniority by the issuing bank must be rated at least BBB- or A-3/P-3 by a recognised external credit assessment institution; and
 - The bank holding the securities as collateral has no information to suggest that the issue justifies a rating below BBB- or A-3/P-3 (as applicable); and
 - The Central Bank is sufficiently confident about the market liquidity of the security.
- (v) Equities (including convertible bonds) that are included in a main index (a widely accepted index that ensures adequate liquidity, depth of market, and size of bid-ask spread).
- (vi) UCITS and mutual funds where:
- A price for the units is publicly quoted daily; and
 - The UCITS/mutual fund is limited to investing in the instruments listed in this paragraph. However, the use or potential use by a UCITS/mutual fund of derivative instruments solely to hedge investments listed in this paragraph and the next paragraph shall not prevent units in that UCITS/mutual fund from being eligible financial collateral.

96. The following collateral instruments are eligible for recognition in the comprehensive approach:

- (i) All of the collateral instruments that are eligible for recognition in the Simple Approach, as outlined in the above at paragraph 95;
- (ii) Equities (including convertible bonds) which are not included in a main index but which are listed on a recognised exchange;
- (iii) UCITS/mutual funds which include such equities.

b) The Comprehensive Approach

Calculation of Adjusted exposure

97. For a collateralised transaction, the exposure amount after risk mitigation is calculated as follows:

$$E^* = \max \{0, [E \times (1 + H_e) - C \times (1 - H_c - H_{fx})]\}$$

where:

- E^* = The exposure value after risk mitigation;
- E = Current value of the exposure;
- H_e = Haircut appropriate to the exposure;
- C = The current value of the collateral received;
- H_c = Haircut appropriate to the collateral; and
- H_{fx} = Haircut appropriate for currency mismatch between the collateral and exposure.

98. The exposure amount after risk mitigation shall be multiplied by the risk weight of the counterparty to obtain the risk-weighted asset amount for the collateralised transaction.

99. The treatment for transactions where there is a mismatch between the maturity of the counterparty exposure and the collateral is given in paragraphs 137 to 140.

100. Where the collateral is a basket of assets, the haircut on the basket will be

$$H = \sum_i a_i H_i$$

where:

a_i = The weight of the asset (as measured by units of currency) in the basket;

H_i = The haircut applicable to that asset.

Standard supervisory haircuts

101. The following table sets the standard supervisory haircuts (assuming daily mark-to-market, daily re-margining and a 10-business day holding period), expressed as percentages:

Issue rating for debt securities	Residual Maturity	Sovereigns ^(a)	Other issuers
AAA to AA-/A-1	≤ 1 year	0.5	1
	>1 year, ≤ 5 years	2	4
	> 5 years	4	8
A+ to BBB-/A-2/A-3/P-3 and unrated securities bank	≤ 1 year	1	2
	>1 year, ≤ 5 years	3	6
	> 5 years	6	12
BB+ to BB-	All	15	
Gold		15	
Equities (including convertible bonds) listed on a recognized exchange, including main index equities		25	
UCITS/Mutual funds		Highest haircut applicable to any security in which the fund can invest	
Cash in the same currency ^(b)		0	

(a) includes multilateral development banks receiving a 0% risk weight.

(b) represents eligible cash collateral specified as 'Cash' as per item (i), in Paragraph 95.

102. The standard supervisory haircut for currency risk where exposure and collateral are denominated in different currencies is 8% (also based on a 10-business day holding period and daily mark-to-market).

103. For transactions in which the bank lends non-eligible instruments (e.g., noninvestment grade corporate debt securities), the haircut to be applied on the exposure must be the same as the one for equity traded on a recognised exchange.

Adjustment for different holding periods and non-daily mark-to-market or re-margining

104. For some transactions, depending on the nature and frequency of the revaluation and re-margining provisions, different holding periods are appropriate. The framework for collateral haircuts distinguishes between repo-style transactions (i.e., repo/reverse repos and securities lending/borrowing), "other capital-market-driven transactions" (i.e., OTC derivatives transactions and margin lending) and secured lending. In capital-market-driven transactions and repo-style transactions, the documentation contains re-margining clauses; in secured lending transactions, it generally does not.

105. The minimum holding period for various products or transactions is summarised in the table below:

Transaction type	Minimum holding period	Condition
Repo-style transaction	Five business days	Daily re-margining
Other capital market transactions	Ten business days	Daily re-margining

Secured lending	Twenty business days	Daily re-margining
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106. When the frequency of re-margining or revaluation is longer than the minimum, the minimum haircut numbers shall be scaled up depending on the actual number of business days between re-margining or revaluation using the square root of time formula below:

$$H = H_M \sqrt{\frac{N_R + (T_M - 1)}{T_M}}$$

where:

- H = Haircut;
 H_M = Haircut under the minimum holding period;
 T_M = Minimum holding period for the type of transaction; and
 N_R = Actual number of business days between re-margining for capital market transactions or revaluation for secured transactions.

107. When a bank calculates the volatility on a T_N day holding period which is different from the specified minimum holding period T_M , the H_M will be calculated using the square root of time formula:

$$H_M = H_N \sqrt{\frac{T_M}{T_N}}$$

where:

- T_N = Holding period used by the bank for deriving H_N ; and
 H_N = Haircut based on the holding period T_N

For example, the 10-business day haircuts provided in the table under Paragraph 101 shall be the basis and this haircut shall be scaled up or down depending on the type of transaction and the frequency of re-margining or revaluation using the formula below:

$$H = H_{10} \sqrt{\frac{N_R + (T_M - 1)}{10}}$$

where:

- H = Haircut;
 H_{10} = 10-business day standard supervisory haircut for instrument;
 N_R = Actual number of business days between re-margining for capital market transactions or revaluation for secured transactions; and
 T_M = Minimum holding period for the type of transaction.

Conditions for zero Haircut on repo-style transactions with a core market participant

108. For repo-style transactions where the following conditions are satisfied, and the counterparty is a Core Market Participant (see definition in the next paragraph), banks may choose not to apply the haircuts specified in the Comprehensive Approach and may instead apply a haircut of zero. However, counterparties specified in 109 (iii), (iv), (v) and (vi) require prior approval from the Central Bank.

- (i) Both the exposure and the collateral are cash or a sovereign security or PSE security qualifying for a 0% risk weight in the standardised approach;

- (ii) Both the exposure and the collateral are denominated in the same currency;
- (iii) Either the transaction is overnight or both the exposure and the collateral are marked-to-market daily and are subject to daily re-margining;
- (iv) Following a counterparty's failure to re-margin, the time that is required between the last mark-to-market before the failure to re-margin and the liquidation of the collateral is considered to be no more than four (4) business days. It is noted this does not require the bank to always liquidate the collateral but rather to have the capability to do so within the given time frame;
- (v) The transaction is settled across a settlement system proven for that type of transaction;
- (vi) The documentation covering the agreement is standard market documentation for repo-style transactions in the securities concerned;
- (vii) The transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities or to deliver margin or otherwise defaults, then the transaction is immediately terminable; and
- (viii) Upon any default event, regardless of whether the counterparty is insolvent or bankrupt, the bank has the unfettered, legally enforceable right to immediately seize and liquidate the collateral for its benefit.

109. Core Market Participants are the following entities:

- (i) Sovereigns, central banks and Non-commercial PSEs;
- (ii) Banks and securities firms;
- (iii) Other financial companies (including insurance companies) eligible for a 20% risk weight in the standardised approach;
- (iv) Regulated mutual funds that are subject to capital or leverage requirements;
- (v) Regulated pension funds; and
- (vi) Recognised clearing organisations.

Treatment of repo-style transactions covered under master netting agreements

110. The effects of bilateral netting agreements covering repo-style transactions will be recognised on a counterparty-by-counterparty basis if the agreements are legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of whether the counterparty is insolvent or bankrupt. In addition, netting agreements must:

- (i) Provide the non-defaulting party the right to terminate and close-out in a timely manner all transactions under the agreement upon an event of default, including in the event of insolvency or bankruptcy of the counterparty; and
- (ii) Provide for the netting of gains and losses on transactions (including the value of any collateral) terminated and closed out under it so that a single net amount is owed by one party to the other; and
- (iii) Allow for the prompt liquidation or setoff of collateral upon the event of default; and

- (iv) Be, together with the rights arising from the provisions required in (i) to (iii) above, legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of the counterparty's insolvency or bankruptcy.

111. Netting across positions in the banking and trading book will only be recognized when the netted transactions fulfil both of the following two conditions:

- (i) All transactions are marked to market daily. It is noted that the holding period for the haircuts will depend as in other repo-style transactions on the frequency of margining; and
- (ii) The collateral instruments used in the transactions are recognised as eligible financial collateral in the banking book.

112. The formula in paragraphs 97 will be adapted to calculate the capital requirements for transactions with netting agreements.

113. For banks using the standard supervisory haircuts, the framework below will apply to take into account the impact of master netting agreements.

$$E^* = \max \{0, [(\Sigma(E) - \Sigma(C)) + \Sigma (E_s \times H_s) + \Sigma (E_{fx} \times H_{fx})]\}$$

where:

- E^* = The exposure value after risk mitigation;
- E = Current value of the exposure;
- C = The value of the collateral received;
- E_s = Absolute value of the net position in a given security;
- H_s = Haircut appropriate to E_s ;
- E_{fx} = Absolute value of the net position in a currency different from the settlement currency; and
- H_{fx} = Haircut appropriate for currency mismatch.

114. The intention here is to obtain a net exposure amount after netting of the exposures and collateral and have an add-on amount reflecting possible price changes for the securities involved in the transactions and for foreign exchange risk if any. The net long or short position of each security included in the netting agreement will be multiplied by the appropriate haircut. All other rules regarding the calculation of haircuts stated in paragraphs under the comprehensive approach equivalently apply for banks using bilateral netting agreements for repo-style transactions.

c) The Simple Approach

Minimum conditions

115. For collateral to be recognised in the simple approach the collateral must be pledged for at least the life of the exposure and it must be marked to market and revalued with a minimum frequency of six months. Those portions of claims collateralised by the market value of recognised collateral receive the risk weight applicable to the collateral instrument. The risk weight on the collateralised portion will be subject to a floor of 20% except under the conditions specified in paragraphs 116 to 118. The remainder of the claim must be assigned to the risk weight appropriate to the counterparty. A capital requirement will be applied to banks on either side of the collateralised transaction: for example, both repos and reverse repos will be subject to capital requirements.

Exceptions to the risk weight floor

116. Transactions that fulfil the criteria outlined in paragraph 108 and are with a core market participant, as defined in paragraph 109; receive a risk weight of 0%. If the counterparty to the

transactions is not a core market participant, the transaction must receive a risk weight of 10%.

117. OTC derivative transactions subject to daily mark-to-market, collateralised by cash and where there is no currency mismatch must receive a 0% risk weight. Such transactions collateralised by sovereign can receive a 10% risk weight.

118. The 20% floor for the risk weight on a collateralised transaction will not be applied and a 0% risk weight can be applied where the exposure and the collateral are denominated in the same currency, and either:

- (i) The collateral is cash on deposit as defined in item (i), namely Cash, in paragraph 95; or
- (ii) The collateral is in the form of sovereign and its market value has been discounted by 20%.

d) Collateralised OTC derivatives transactions

119. Under the SA-CCR Standard, the calculation of risk weighted assets for counterparty credit risk depends on replacement cost and an add-on for potential future exposure, and takes into account collateral in the manner specified in that Standard. The haircut for currency risk (H_{fx}) must be applied when there is a mismatch between the collateral currency and the settlement currency. Even in the case where there are more than two currencies involved in the exposure, collateral and settlement currency, a single haircut assuming a 10-business day holding period scaled up as necessary depending on the frequency of mark-to-market will be applied.

D. On-balance sheet netting

120. A bank may use the net exposure of loans and deposits as the basis for its capital adequacy calculation in accordance with the formula in Paragraph 97, where the bank:

- (i) Has a well-founded legal basis for concluding that the netting or offsetting agreement is enforceable in each relevant jurisdiction regardless of whether the counterparty is insolvent or bankrupt;
- (ii) Is able at any time to determine those assets and liabilities with the same counterparty that are subject to the netting agreement;
- (iii) Monitors and controls its roll-off risks; and
- (iv) Monitors and controls the relevant exposures on a net basis.

121. Assets (loans) are treated as exposure and liabilities (deposits) as collateral. The haircuts will be zero except when a currency mismatch exists. A 10-business day holding period will apply when daily mark-to-market is conducted and all the requirements stipulated under paragraphs 101, 107, and 137 to 140 will apply.

E. Guarantees and Credit Derivatives

a) Operational requirements

Operational requirements common to guarantees and credit derivatives

122. A guarantee (counter-guarantee) or credit derivative must represent a direct claim on the protection provider and must be explicitly referenced to specific exposures or a pool of exposures, so that the extent of the cover is clearly defined and incontrovertible. Other than non-payment by a protection purchaser of money due in respect of the credit protection contract it must be irrevocable; there must be no clause in the contract that would allow the protection provider unilaterally to cancel the credit cover or that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure (Note that the irrevocability condition does not require that the credit protection and the exposure be maturity matched; rather that the maturity agreed ex ante may not be reduced ex post by the protection provider. Paragraph 138 sets forth the treatment of call options in determining remaining maturity for credit protection). It must also be unconditional; there must be no clause in the protection contract outside the direct control of the bank that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the payment(s) due.

Additional operational requirements for guarantees

123. In addition to the legal certainty requirements described in paragraph 59, in order for a guarantee to be recognised, the following conditions must be satisfied:

- (i) On the qualifying default/non-payment of the counterparty, the bank may pursue the guarantor for any monies outstanding under the documentation governing the transaction within a reasonable time period. The guarantor may make one lump sum payment of all monies under such documentation to the bank, or the guarantor may assume the future payment obligations of the counterparty covered by the guarantee. The bank must have the right to receive any such payments from the guarantor without first having to take legal actions in order to pursue the counterparty for payment;
- (ii) The guarantee is an explicitly documented obligation assumed by the guarantor; and
- (iii) Except as noted in the following sentence, the guarantee covers all types of payments the underlying obligor is expected to make under the documentation governing the transaction, for example notional amount, margin payments etc. Where a guarantee covers payment of principal only, interests and other uncovered payments must be treated as an unsecured amount in accordance with paragraph 136.

Additional operational requirements for credit derivatives

124. In order for a credit derivative contract to be recognised, the following conditions must be satisfied:

- (i) The credit events specified by the contracting parties must at a minimum cover:
 - Failure to pay the amounts due under terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with the grace period in the underlying obligation);
 - Bankruptcy, insolvency or inability of the obligor to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and analogous events; and
 - Restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (i.e., charge-off, specific provision or other similar debit to the profit and loss account). When restructuring is not specified as a credit event, refer to the next paragraph;
- (ii) If the credit derivative covers obligations that do not include the underlying obligation, item (vii) below governs whether the asset mismatch is permissible;

- (iii) The credit derivative shall not terminate prior to expiration of any grace period required for a default on the underlying obligation to occur as a result of a failure to pay, subject to the provisions of paragraph 137;
- (iv) Credit derivatives allowing for cash settlement are recognised for capital purposes insofar as a robust valuation process is in place in order to estimate loss reliably. There must be a clearly specified period for obtaining post-credit event valuations of the underlying obligation. If the reference obligation specified in the credit derivative for purposes of cash settlement is different than the underlying obligation, item (vii) below governs whether the asset mismatch is permissible;
- (v) If the protection purchaser's right/ability to transfer the underlying obligation to the protection provider is required for settlement, the terms of the underlying obligation must provide that any required consent to such transfer may not be unreasonably withheld;
- (vi) The identity of the parties responsible for determining whether a credit event has occurred must be clearly defined. This determination must not be the sole responsibility of the protection seller. The protection buyer must have the right/ability to inform the protection provider of the occurrence of a credit event;
- (vii) A mismatch between the underlying obligation and the reference obligation under the credit derivative (i.e. the obligation used for purposes of determining cash settlement value or the deliverable obligation) is permissible if (i) the reference obligation ranks pari passu with or is junior to the underlying obligation, and (ii) the underlying obligation and reference obligation share the same obligor (i.e., the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place; and
- (viii) A mismatch between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible if (i) the latter obligation ranks pari passu with or is junior to the underlying obligation, and (ii) the underlying obligation and reference obligation share the same obligor (i.e., the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.

125. When the restructuring of the underlying obligation is not covered by the credit derivative, but the other requirements in the previous paragraph are met, partial recognition of the credit derivative will be allowed. If the amount of the credit derivative is less than or equal to the amount of the underlying obligation, 60% of the amount of the hedge can be recognized as covered. If the amount of the credit derivative is larger than that of the underlying obligation, then the amount of eligible hedge is capped at 60% of the amount of the underlying obligation.

126. Only credit default swaps and total return swaps that provide credit protection equivalent to guarantees will be eligible for recognition. The exception stated in paragraph 127 below applies.

127. Where a bank buys credit protection through a total return swap and records the net payments received on the swap as net income, but does not record offsetting deterioration in the value of the asset that is protected (either through reductions in fair value or by an addition to reserves), the credit protection will not be recognised. The treatment of first-to-default and second-to-default products is covered separately in paragraphs 142 to 145.

128. Other types of credit derivatives will not be eligible for recognition at this time. Note that cash funded credit linked notes issued by the bank against exposures in the banking book which fulfil the criteria for credit derivatives will be treated as cash collateralised transactions.

b) Range of eligible guarantors (counter-guarantors)/protection providers

129. Credit protection given by the following entities will be recognised:

- (i) Sovereign entities (including the Bank for International Settlements, the International Monetary Fund, the European Central Bank and the European Community, as well as those MDBs eligible for 0% risk weight listed in paragraph 14), PSEs, banks (including other MDBs) and Securities Firms with a lower risk weight than the counterparty;
- (ii) Other entities rated A- or better by an eligible credit assessment institution. This would include credit protection provided by parent, subsidiary and affiliate companies when they have a lower risk weight than the obligor.

c) Risk weights

130. The protected portion is assigned the risk weight of the protection provider. The uncovered portion of the exposure is assigned the risk weight of the underlying counterparty.

131. Materiality thresholds on payments below which no payment is made in the event of loss are equivalent to retained first loss positions and must be deducted in full from the capital of the bank purchasing the credit protection.

Proportional cover

132. Where the amount guaranteed, or against which credit protection is held, is less than the amount of the exposure, and the secured and unsecured portions are of equal seniority, i.e., the bank and the guarantor share losses on a pro-rata basis capital relief will be afforded on a proportional basis: i.e., the protected portion of the exposure will receive the treatment applicable to eligible guarantees/credit derivatives, with the remainder treated as unsecured.

Tranched cover

133. Where the bank transfers a portion of the risk of an exposure in one or more tranches to a protection seller or sellers and retains some level of risk of the loan and the risk transferred and the risk retained are of different seniority, banks may obtain credit protection for either the senior tranches (e.g., second loss portion) or the junior tranche (e.g., first loss portion). In this case, the rules as set out in the Securitisation chapter below will apply.

d) Currency mismatches

134. Where the credit protection is denominated in a currency different from that in which the exposure is denominated — i.e., there is a currency mismatch — the amount of the exposure deemed to be protected will be reduced by the application of a haircut H_{FX} , i.e.

$$G_A = G \times (1 - H_{FX})$$

where:

G = Nominal amount of the credit protection;

H_{FX} = Haircut appropriate for currency mismatch between the credit protection and underlying obligation.

135. The appropriate haircut based on a 10-business day holding period (assuming daily marking-to-market) will be applied. Banks using the supervisory haircuts shall apply 8%. The haircut value of 8% must be scaled up using the square root of time formula, depending on the frequency of revaluation of the credit protection as described in paragraphs 106.

e) Sovereign guarantees and counter-guarantees

136. Portions of claims guaranteed by the UAE sovereign, where the guarantee is denominated in AED and the exposure is funded in AED are risk weighted at 0%. A claim may be covered by a guarantee that is indirectly counter-guaranteed by a sovereign. Such a claim may be treated as covered by a sovereign guarantee provided that:

- (i) The sovereign counter-guarantee covers all credit risk elements of the claim;
- (ii) Both the original guarantee and the counter-guarantee meet all operational requirements for guarantees, except that the counter-guarantee need not be direct and explicit to the original claim; and
- (iii) The Central Bank is satisfied that the cover is robust and that no historical evidence suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct sovereign guarantee.

F. Maturity mismatches

137. For the purposes of calculating risk-weighted assets, a maturity mismatch occurs when the residual maturity of a hedge is less than that of the underlying exposure.

a) Definition of maturity

138. The maturity of the underlying exposure and the maturity of the hedge must both be defined conservatively. The effective maturity of the underlying must be gauged as the longest possible remaining time before the counterparty is scheduled to fulfil its obligation, taking into account any applicable grace period. For the hedge, embedded options which may reduce the term of the hedge must be taken into account so that the shortest possible effective maturity is used. Where a call is at the discretion of the protection seller, the maturity will always be at the first call date. If the call is at the discretion of the protection buying bank but the terms of the arrangement at origination of the hedge contain a positive incentive for the bank to call the transaction before contractual maturity, the remaining time to the first call date will be deemed to be the effective maturity (For example, where there is a step-up in cost in conjunction with a call feature or where the effective cost of cover increases over time even if credit quality remains the same or increases, the effective maturity will be the remaining time to the first call).

b) Risk weights for maturity mismatches

139. As outlined in paragraph 95, hedges with maturity mismatches are only recognized when their original maturities are greater than or equal to one year. As a result, the maturity of hedges for exposures with original maturities of less than one year must be matched to be recognised. In all cases, hedges with maturity mismatches will no longer be recognised when they have a residual maturity of three months or less.

140. When there is a maturity mismatch with recognised credit risk mitigants (collateral, on-balance sheet netting, guarantees and credit derivatives) the following adjustment will be applied.

$$Pa = P \times (t - 0.25) / (T - 0.25)$$

where:

Pa = Value of the credit protection adjusted for maturity mismatch;

P = Credit protection (e.g., collateral amount, guarantee amount) adjusted for any haircuts;

t = min (T, residual maturity of the credit protection arrangement) expressed in years; and

$T = \min(5, \text{residual maturity of the exposure})$ expressed in years.

G. Other items related to the treatment of CRM techniques

a) Treatment of pools of CRM techniques

141. In the case where a bank has multiple CRM techniques covering a single exposure (e.g. a bank has both collateral and guarantee partially covering an exposure), the bank will be required to subdivide the exposure into portions covered by each type of CRM technique (e.g. portion covered by collateral, portion covered by guarantee) and the risk-weighted assets of each portion must be calculated separately. When credit protection provided by a single protection provider has differing maturities, they must be subdivided into separate protection as well.

b) First-to-default credit derivatives

142. There are cases where a bank obtains credit protection for a basket of reference names and where the first default among the reference names triggers the credit protection and the credit event also terminates the contract. In this case, the bank may recognize regulatory capital relief for the asset within the basket with the lowest risk-weighted amount, but only if the notional amount is less than or equal to the notional amount of the credit derivative.

143. With regard to the bank providing credit protection through such an instrument, if the product has an external credit assessment from an eligible credit assessment institution, the risk weight applied to securitisation tranches will be specified in the Securitisation Standard. If the product is not rated by an eligible external credit assessment institution, the risk weights of the assets included in the basket will be aggregated up to a maximum of 1250% and multiplied by the nominal amount of the protection provided by the credit derivative to obtain the risk-weighted asset amount.

c) Second-to-default credit derivatives

144. In the case where the second default among the assets within the basket triggers the credit protection, the bank obtaining credit protection through such a product will only be able to recognise any capital relief if first-default-protection has also been obtained or when one of the assets within the basket has already defaulted.

145. For banks providing credit protection through such a product, the capital treatment is the same as in paragraph 143, with one exception. The exception is that, in aggregating the risk weights, the asset with the lowest risk weighted amount can be excluded from the calculation.

V. Review Requirements

146. Bank calculations under this Standard and associated bank processes must be subject to appropriate levels of independent review and challenge. Reviews must cover material aspects of the calculations under this Standard, including but not limited to the measurement of on-balance-sheet and off-balance-sheet exposures, the use of credit conversion factors, the application of CRM, and the accuracy for all components of the credit risk capital calculation reported to the Central Bank as part of regulatory reporting.

VI. Shari'ah Implementation

Banks providing Islamic financial services must comply with the requirements and provisions of this Standard for their Shari'ah compliant transactions that are alternative to transactions referred to in this Standard, provided it is acceptable by Islamic Shari'ah. This is applicable until relevant Standards and/or guidelines are issued specifically for the transactions of banks offering Islamic financial services.

V. Counterparty Credit Risk

I. Introduction and Scope

1. This Standard articulates specific requirements for the calculation of risk-weighted assets (RWA) to recognize exposure amounts for Counterparty Credit Risk (CCR) for banks in the UAE. It replaces any and all previous approaches to assessment of counterparty credit risk for purposes of regulatory capital calculations. The Standard is based closely on requirements of the framework for capital adequacy developed by the Basel Committee on Banking Supervision, specifically the Standardized Approach for CCR as articulated in *The standardized approach for measuring counterparty credit risk exposures, March 2014 (rev. April 2014)*, and subsequent clarifications thereto by the Basel Committee.
2. This Standard applies to all derivatives transactions, whether exchange-traded or over-the-counter, and also applies to long-settlement transactions (the “in-scope” transactions). In this Standard, references to “derivatives” should be understood to apply to all in-scope transactions.
3. This Standard formulates capital adequacy requirements that needs to be applied to all banks in UAE on a consolidated basis.
4. The Standards follow the calibration developed by the Basel Committee, which includes a maximum risk weight of 1250%, calibrated on a total capital adequacy requirement of 8%. The UAE instituted a higher minimum capital requirement of 10.5% (excluding capital buffers), applicable to all licensed banks. Consequently, the maximum capital charge for a single exposure will be the lesser of the value of the exposure after applying valid credit risk mitigation, netting and haircuts, and the capital resulting from applying a risk weight of 952% (reciprocal of 10.5%) to this exposure.

II. Definitions

In general, terms in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In addition, for this Standard, the following terms have the meanings defined in this section.

- A **basis transaction** is a non-foreign-exchange (that is, denominated in a single currency) transaction in which the cash flows due to one counterparty depend on a risk factor that differs from the risk factor (from the same asset class) that determines payments due to the other counterparty.
- A **central counterparty** (CCP) is an entity that interposes itself between counterparties to contracts traded within one or more financial markets, becoming the legal counterparty such that it is the buyer to every seller and the seller to every buyer.
- A **centrally cleared derivative transaction** is a derivatives transaction that is cleared through a central counterparty.
- A **clearing member** is an entity that conducts transactions through a central counterparty as a member of that central counterparty.
- A **commodity type** is a set of commodities that have broadly similar risk drivers, such that the prices or volatilities of commodities of the same commodity type may reasonably be expected to move with similar direction and timing and to bear predictable relationships to one another.
- **Counterparty credit risk** is the risk of loss due to a failure by a counterparty to an in-scope transaction to deliver to the bank according to contractual terms at settlement.

- A **hedging set** is a set of transactions within a single netting set exposed to similar risk factors, and for which partial or full offsetting may be recognized in the calculation of the potential future exposure add-on.
- The **independent collateral amount** (ICA) is collateral posted by a counterparty that the bank may seize upon default of the counterparty. ICA may be defined by the Independent Amount parameter in standard industry documentation. ICA may change in response to factors such as the value of the collateral or a change in the number of transactions in the netting set, but (unlike variation margin) not in response to the value of the transactions it secures.
- A **long settlement transaction** is one in which a counterparty undertakes to deliver a security, commodity, or foreign exchange amount against cash, other financial instruments, or commodities at a contractually specified settlement or delivery date that exceeds the market standards for settlement or delivery of the particular instrument, or if that settlement date is more than five business days from the date the transaction is initiated.
- The **margin period of risk** for a derivatives contract is the length of time from the last exchange of collateral covering a netting set until transactions with a defaulting counterparty can be closed out and the resulting risk re-hedged.
- **Margined transactions** are those in which variation margin is exchanged between counterparties; other transactions are **un-margined**.
- **Net Current Value** (NCV) for a netting set is the total current market value of all transactions (which may be negative) minus the net value of any collateral held by a bank, after application of any collateral haircuts.
- The **net independent collateral amount** (NICA) is the difference between the ICA posted by a counterparty and any ICA posted by the bank for that counterparty, excluding any collateral that the bank has posted to a segregated, bankruptcy remote account.
- **Netting by novation** refers to a netting arrangement in which any obligation between two counterparties to deliver a given currency on a given value date is automatically combined with all other obligations for the same currency and value date, legally substituting one single amount for the previous gross obligations.
- A **netting set** is a group of contracts with a single counterparty subject to a legally enforceable agreement for net settlement, and satisfying all of the conditions for netting sets specified in this Standard.
- **Potential Future Exposure** (PFE) is an estimate of the potential increase in exposure to counterparty credit risk against which regulatory capital must be held.
- A **Qualifying Central Counterparty** (QCCP) is a CCP that meets certain qualification requirements articulated in this Standard.
- The **remaining maturity** of a derivative transaction is the time remaining until the latest date at which the contract may still be active. If a derivative contract has another derivative contract as its underlying (for example, a swaption) and may be physically exercised into the underlying contract (that is, a bank would assume a position in the underlying contract in the event of exercise), then the remaining maturity of the contract is the time until the final settlement date of the underlying derivative contract. For a derivative contract that is structured such that any outstanding exposure is settled on specified dates and the terms are reset so that the fair value of the contract is zero, the remaining maturity equals the time until the next reset date.

- **Variation margin (VM)** means margin in the form of cash or financial assets exchanged on a periodic basis between counterparties to recognize changes in contract value due to changes in market factors.
- A **volatility transaction** is one in which the settlement amount of the contract depends on the level of volatility of a risk factor.
- A bank's position in a particular trade or transaction is **long** or **long in the primary risk factor** if the market value of the transaction increases when the value of the primary risk factor increases; alternatively, the position is **short** or **short in the primary risk factor** if the market value of the transaction decreases when the value of the primary risk factor increases.

III. Requirements for Counterparty Credit Risk (CCR)

Netting Sets

5. Banks must calculate RWA for CCR at the level of nettings sets for derivatives. Accordingly, a bank must group all exposures for each counterparty into one or more netting sets. In every such case where netting is applied, a bank must satisfy the Central Bank that it has:

- A contract with the counterparty or other agreement that creates a single legal obligation, covering all included transactions, such that the bank would have either a claim to receive or obligation to pay only the net sum of the positive and negative mark-to-market values of included individual transactions in the event a counterparty fails to perform due to default, bankruptcy, liquidation, or similar circumstances.
- Written and reasoned legal reviews that in the event of a legal challenge, the relevant courts and administrative authorities would find the bank's exposure to be such a net amount under:
 - The law of the jurisdiction in which the counterparty is chartered and, if the foreign branch of a counterparty is involved, then also under the law of the jurisdiction in which the branch is located;
 - The law that governs the individual transactions; and
 - The law that governs any contract or agreement necessary to affect the netting.
- Procedures in place to ensure that the legal characteristics of netting arrangements are kept under review in light of the possible changes in relevant law.

6. The Central Bank, after consultation when necessary with other relevant supervisors, must be satisfied that the netting is enforceable under the laws of each of the relevant jurisdictions.

Exposure at Default and Risk-Weighted Assets

7. A bank must calculate RWA for CCR by (i) calculating the Exposure At Default (EAD) for each netting set associated with a counterparty, (ii) summing EAD across netting sets for that counterparty, (iii) calculating risk-weighted EAD by multiplying the total EAD for a counterparty by the risk-weight corresponding to the exposure class to which that counterparty belongs under general risk-based capital requirements, (iv) summing the resulting risk-weighted EAD across all counterparties within a given exposure class and (v) summing across exposure classes.

8. Banks must calculate EAD separately for each netting set, as the sum of the Replacement Cost (RC) of the netting set plus the calculated Potential Future Exposure (PFE) for the netting set, with the sum of the two multiplied by a factor of 1.4:

$$\text{EAD} = (\text{RC} + \text{PFE}) \times 1.4$$

9. Margined and un-margined netting sets require different calculation methods for RC and PFE. The EAD for a margined netting set is capped at the EAD of the same netting set calculated on an un-margined basis. That is, for a netting set covered by a margin agreement, the bank may calculate EAD as if the netting set is un-margined, and may use that value as the EAD if it is lower than the EAD calculation considering margin.

10. The time-period for the haircut applicable to non-cash collateral for the RC calculation should be one year for un-margined trades, and the relevant margin period of risk for margined trades.

Replacement Cost

11. Banks must calculate replacement cost at the netting set level. Calculations for margined and un-margined transactions differ.

12. Banks first must calculate the total current market value of the derivative contracts in the netting set. Banks may net transactions within a netting set that are subject to any legally valid form of bilateral netting, including netting by novation. Banks must then subtract from that total current market value the net value of collateral (after application of collateral haircuts) held by the bank for the netting set. The result is the Net Current Value (NCV) of the transactions in the netting set.

13. For un-margined transactions, RC for a netting set is equal to the NCV, provided the NCV is greater than zero. If that value is not greater than zero, RC equals zero.

14. For margined transactions, RC depends on the greatest exposure that would not trigger a call for variation margin, taking into account the mechanics of collateral exchanges in the margining agreements. That critical exposure level is equal to the threshold level of variation that would require a transfer of collateral, plus the minimum transfer amount of the collateral. The bank should subtract from that exposure amount the NICA, if any, to calculate the RC for margined transactions. However, the resulting RC may be no less than the RC if the netting set were un-margined. That is, for a margined netting set the RC is equal to the larger of the amount calculated according to this paragraph, or the RC for the same netting set if un-margined.

15. Bilateral transactions with a one-way margining agreement in favor of the bank's counterparty (that is, where the bank posts margin but the counterparty does not) must be treated as un-margined transactions.

16. If multiple margin agreements apply to a single netting set, the bank must divide the netting set into sub-netting sets that align with each respective margin agreement, and calculate RC for each sub-netting set separately.

Potential Future Exposure

17. Calculation of PFE relies on computation of various "add-on" amounts, which are intermediate measures of exposure that are combined in various ways to compute PFE. The bank must calculate PFE for each netting set as a simple summation of the add-ons computed for each of the various asset classes within that netting set, multiplied by a multiplier that allows for recognition of excess collateral or negative mark-to-market value for the transactions. Requirements for calculation of the multiplier and the add-ons for each asset class are described below in this Standard.

18. The bank must allocate all derivatives transactions to one or more of the following asset classes based on the primary risk driver of the transaction:

- Interest Rate Derivatives
- Foreign Exchange Derivatives
- Credit Derivatives
- Equity Derivatives
- Commodity Derivatives

19. As described in more detail below in this Standard, trades within each of these asset classes are further divided into hedging sets, and an aggregation method is applied to aggregate trade-level inputs at the hedging set level and finally at the asset class level. For derivative transactions within the credit, equity, and commodity asset classes, this aggregation involves a supervisory correlation parameter to capture important aspects of basis risk and diversification.

20. For trades that may have more than one risk driver (e.g. multi-asset or hybrid derivatives), banks must apply an analysis based on risk-driver sensitivities and volatility of the underlying reference price or rate to determine the existence of a dominant risk driver, and make the asset class allocation accordingly. When a derivative is materially exposed to risk drivers spanning more than one asset class, a bank must assign the position to each relevant asset class rather than to a single asset class, with appropriate delta adjustment. The Central Bank may direct banks to assign complex derivatives to multiple asset classes, regardless of analysis that the bank may or may not have conducted.

21. As is the case with Replacement Cost, if multiple margin agreements apply to a single netting set, the bank must divide the netting set into sub-netting sets that align with each respective margin agreement, and calculate the PFE for each sub-netting set separately.

Adjusted Notional Amount

22. Banks must calculate adjusted notional amounts from trade-level notional amounts for each transaction as described in this Standard.

23. For foreign exchange derivatives, the adjusted notional is defined as the notional of the foreign currency leg of the contract, converted to the domestic currency. If both legs of a foreign exchange derivative are denominated in currencies other than the domestic currency, the notional amount of each leg should be converted to the domestic currency, and the adjusted notional amount is equal to the value of the leg with the larger domestic currency value.

24. For equity and commodity derivatives, the adjusted notional is equal to the product of the current price of one unit of the stock or commodity and the number of units referenced by the trade. For equity and commodity volatility transactions, adjusted notional is equal to the product of the underlying volatility and the notional value of the transaction.

25. For interest rate derivatives and credit derivatives, the trade-level adjusted notional in units of domestic currency must be multiplied by a supervisory duration (SD) measure as follows:

- a) First, the bank must determine the start date of the time period referenced by the interest rate or credit contract, and time that remains until that start date, measured in years; this is "S." If the derivative references the value of another interest rate or credit instrument (as with a swaption or bond option), the time period is that of the underlying instrument. If the time-period referenced by the derivative has already started, the bank must set S to zero.

- b) Next, the bank must determine the end date of the time period referenced by the interest rate or credit contract, and the time remaining until that end date, measured in years; this is “E.” If the derivative references the value of another interest rate or credit instrument (as with a swaption or bond option), the time period is that of the underlying instrument.
- c) The bank then must compute SD for the transaction using the following formula, with the identified values of S and E based on the terms of the contract (where “exp” denotes the exponential function):

$$SD = \frac{\exp(-.05 \times S) - \exp(-.05 \times E)}{.05}$$

- d) Finally, the bank calculates the adjusted notional amount for the transaction by multiplying the trade notional amount by the supervisory duration SD.
26. Banks also must apply the following rules when determining trade notional amounts, for transaction covered by the cases noted below:
- a) For transactions with payoffs that are state contingent such as digital options or target redemption forwards, a bank must calculate the trade notional amount for each state, and use the largest resulting calculation.
 - b) If the notional is based on a formula that depends on market values, the bank must enter the current market values to determine the trade notional amount to be used in computing adjusted notional amount.
 - c) For variable notional swaps such as amortizing and accreting swaps, banks must use the average notional over the remaining life of the swap as the trade notional amount.
 - d) For leveraged swaps in which rates are multiplied by a factor, the bank must multiply the stated notional by the same factor to determine the trade notional amount.
 - e) For a derivative contract with multiple exchanges of principle, the bank must multiply the notional by the number of exchanges of principle in the derivative contract to determine the trade notional amount.

Supervisory Delta Adjustment and Effective Notional Amount

27. Banks must determine a supervisory delta adjustment for each transaction for use in calculations of effective notional amounts. Banks must apply supervisory delta adjustments at the trade level that reflect the direction of the transaction – that is, whether the position is long or short in the primary risk driver – and on whether the transaction is an option, CDO tranche, or neither. Supervisory delta adjustments are provided in Table 1.

Table 1: Supervisory Delta Adjustments

Type of Derivative Transaction	Supervisory Delta Adjustment
Purchased Call Option	F
Purchased Put Option	F-1
Sold Call Option	-F
Sold Put Option	1-F
Purchased CDO Tranche (Long Protection)	G
Sold CDO Tranche (Short Protection)	-G
Any Other Derivative Type, Long in the Primary Risk Factor	+1
Any Other Derivative Type, Short in the Primary Risk Factor	-1

Definitions for Table 1**For options:**

$$F = \Phi \left(\frac{\ln(P/K) + 0.5 \times \sigma^2 T}{\sigma \sqrt{T}} \right)$$

In this expression, P is the current forward value of the underlying price or rate, K is the exercise or strike price of the option, T is the time to the latest contractual exercise date of the option, σ is the appropriate supervisory volatility from Table 2, and Φ is the standard normal cumulative density function. A supervisory volatility of 50% should be used on swaptions for all currencies.

For CDO tranches:

$$G = \frac{15}{(1 + 14A)(1 + 14D)}$$

In this expression, A is the attachment point of the CDO tranche and D is the detachment point of the CDO tranche.

Maturity Factor

28. Banks must determine a maturity factor (MF) for each transaction for use in calculations of effective notional amounts, with the specific calculation method for MF depending on whether the derivative transaction is margined or un-margined.

29. For un-margined transactions, the maturity factor must be set equal to 1.0, unless the remaining maturity of the derivative transaction is less than one year. If the remaining maturity is less than one year, the maturity factor for an un-margined transaction is computed as the square root of the remaining maturity expressed in years, on a business-day-count basis, as follows:

$$MF = \sqrt{\frac{\text{Remaining Maturity in Business Days}}{250}}$$

30. If an un-margined transaction has a remaining maturity of 10 business days or less, the bank must set the maturity factor equal to the square root of (10/250).

31. For margined transactions, the maturity factor MF must be based on the margin period of risk (MPOR) appropriate for the margining agreement containing the transaction, measured in days, and computed as follows:

$$MF = 1.5 \times \sqrt{\frac{MPOR}{250}}$$

32. The bank must determine MPOR based on the terms of the margined transaction, subject to the following minimums:

- a) At least ten business days for non-centrally-cleared derivative transactions subject to daily margin agreements.
- b) At least five business days for centrally cleared derivative transactions subject to daily margin agreements that clearing members have with their clients.
- c) At least twenty business days for netting sets consisting of 5000 or more transactions that are not centrally cleared.

33. The bank must double the MPOR for netting sets that have experienced more than two margin call disputes over the previous two calendar quarters if those disputes were not resolved within a period corresponding to the MPOR that would otherwise be applicable.

Allocation of Transactions to Hedging Sets

34. Banks must allocate every transaction within each netting set to a hedging set according to the following rules for each asset class:

- a) *Interest Rate Derivatives*: A hedging set must be created for each set of interest rate derivatives that reference interest rates of the same currency. Interest rate derivative hedging sets are further subdivided into maturity categories, as described below. In interest rate hedging sets, full offset is recognized between long and short positions within one maturity category, and partial offset across maturity categories. Note that the number of interest rate hedging sets may differ between different netting sets, depending on the number of distinct currencies.
- b) *Foreign Exchange Derivatives*: A hedging set consists of derivatives that reference the same currency pair. Full offset is recognized between long and short positions in any currency pair. Note that the number of foreign exchange hedging sets may vary between different netting sets.
- c) *Credit Derivatives*: All credit derivatives should be allocated to a single hedging set. Full offset is recognized between long and short positions referencing the same entity (name or index) within the hedging set.
- d) *Equity Derivatives*: All equity derivatives should be allocated to a single hedging set. Full offset is recognized between long and short positions referencing the same entity (name or index) within the hedging set.
- e) *Commodity Derivatives*: In the commodity asset class, separate hedging sets are used for energy, metals, agriculture, and other commodities. Full offset of long and short positions is recognized between derivatives referencing the same commodity type, while PFE add-on calculations provide partial offset between different commodity types within the same commodity hedging set.

35. Basis transactions and volatility transactions must form separate hedging sets within their respective asset classes.

- a) All basis transactions in a netting set that belong to the same asset class and reference the same pair of risk factors form a single hedging set, and follow the hedging set aggregation rules for the relevant asset class. The bank must treat each pair of risk factors as a separate hedging set.
- b) The bank must place all volatility transactions in a netting set into a distinct hedging set within the corresponding asset class, according to the rules of that asset class. For example, all equity volatility transactions within a netting set form a single volatility hedging set within that netting set.

Add-on for Interest Rate Derivatives

36. For interest rate derivatives, banks must assign each contract to one of three maturity categories based on the remaining life of the contract:

- Maturity Category 1: Less than one year
- Maturity Category 2: From one year to five years
- Maturity Category 3: Greater than five years

37. The bank must then calculate the effective notional amount for each interest rate derivative hedging set (that is, for the set of interest rate derivatives in any single currency) by summing across transactions within a maturity category the product of the adjusted notional amount of the transaction, the maturity factor for the transaction, and the supervisory delta adjustment. That is, for each individual interest rate derivative within a maturity category in a single hedging set, the bank must calculate:

$$\text{Adjusted Notional Amount} \times \text{Supervisory Delta Adjustment} \times \text{MF}$$

and then sum that product across all interest rate derivatives in one maturity category in that hedging set to get the effective notional amount.

38. For each interest rate hedging set, the result will be three effective notional amounts, one for each maturity category: D1 for Category 1, D2 for Category 2, and D3 for Category 3. The bank may then combine these effective notional amounts from each maturity category using the following formula:

$$\sqrt{D1^2 + D2^2 + D3^2 + 1.4 \times (D1 \times D2) + 1.4 \times (D2 \times D3) + 0.6 \times (D1 \times D3)}$$

39. As an alternative, the bank may choose to combine the effective notional values as the simple sum of the absolute values for each of the three maturity categories within a hedging set, which has the effect of ignoring potential offsets. That is, as an alternative to the calculation above, the bank may calculate:

$$|D1| + |D2| + |D3|$$

40. Regardless of the approach used to combine the effective notional amounts, the bank must multiply the result of the calculation by the supervisory factor for the interest rate asset class from Table 2, and sum across all interest rate hedging sets to calculate the aggregate add-on for the interest rate asset class.

Add-on for Foreign Exchange Derivatives

41. For foreign exchange derivatives, banks must calculate the effective notional amount for each hedging set (that is, for the set of foreign exchange derivatives referencing a single currency pair) by summing across transactions within a hedging set the product of the adjusted notional amount of the transaction, the maturity factor for the transaction, and the supervisory delta adjustment. That is, for each individual foreign exchange derivative in a single hedging set (that is, referencing a single currency pair), the bank must calculate:

$$\text{Adjusted Notional Amount} \times \text{Supervisory Delta Adjustment} \times \text{MF}$$

and then sum that product across all foreign exchange derivatives in that hedging set to get the effective notional amount for the hedging set.

42. The bank must multiply the absolute value of the resulting effective notional amount for each hedging set (each currency pair) by the supervisory factor for the foreign exchange asset class from Table 2, and sum across all foreign exchange hedging sets to calculate the aggregate add-on for the foreign exchange asset class.

Add-on for Credit Derivatives

43. For credit derivatives, banks must calculate the effective notional amount for each entity (that is, for each set of credit derivatives referencing a single name or credit index) by summing, across all credit derivative transactions that reference that entity, the product of the adjusted notional amount of the transaction, the maturity factor for the transaction, and the supervisory delta adjustment. That is, for each individual credit derivative referencing any single entity, the bank must calculate:

$$\text{Adjusted Notional Amount} \times \text{Supervisory Delta Adjustment} \times \text{MF}$$

for each transaction and then sum that product across all credit derivatives that reference that entity to get the effective notional amount for the entity.

44. The bank must calculate the entity-level add-on by multiplying the result of this calculation by the appropriate supervisory factor from Table 2, depending on the rating of the entity (for single-name derivatives) or depending on whether the index is investment grade or speculative grade (for index derivatives).

45. For credit derivatives that reference unrated single-name entities, the bank should use the Supervisory Factor corresponding to BBB rated entities. However, where the entity has an elevated risk of default, banks should use the Supervisory Factor corresponding to BB rated entities. For credit index entities, the classification into investment grade or speculative grade should be determined based on the credit quality of the majority of the individual components of the index.

46. The bank must use the entity-level add-ons to calculate the add-on for the credit derivative hedging set. This is done through a calculation based on the use of supervisory correlation factors from Table 2. Specifically, the bank must calculate the add-on for the credit derivative hedging set by calculating:

$$\text{Credit Hedging Set AddOn} = \sqrt{\left(\sum_i \rho_i \times A_i\right)^2 + \sum_i \left((1 - \rho_i^2) \times A_i^2\right)}$$

where A_i is the entity-level add-on for one entity (each “i” is a different entity, either single-name or index), and

ρ_i is the supervisory correlation (either 0.5 or 0.8) for that entity.

47. Note that credit derivatives that are basis or volatility transactions must be treated in separate hedging sets within the credit derivatives asset class, with adjustments to supervisory factors as required under this Standard. In that case, the add-on for the credit derivatives asset class is the sum of the hedging set add-on calculated above, plus add-ons for any basis or volatility hedging sets.

Add-on for Equity Derivatives

48. For equity derivatives, banks must calculate the effective notional amount for each entity (that is, for each set of equity derivatives referencing a single name or equity index) by summing, across all equity derivatives transactions that reference that entity, the product of the adjusted notional amount of the transaction, the maturity factor for the transaction, and the supervisory delta adjustment. That is, for each individual equity derivative referencing any single entity, the bank must calculate:

$$\text{Adjusted Notional Amount} \times \text{Supervisory Delta Adjustment} \times \text{MF}$$

for each transaction and then sum that product across all equity derivatives that reference that entity to get the effective notional amount for the entity.

49. The bank must calculate the entity-level add-on by multiplying the result of this calculation by the appropriate supervisory factor from Table 2.

50. The bank must use the entity-level add-ons to calculate the add-on for the equity derivative hedging set. This is done through a calculation based on the use of supervisory correlation factors from Table 2 for single-name equities and equity indexes. Specifically, the bank must calculate the add-on for the equity derivative hedging set by calculating:

$$\text{Equity Hedging Set AddOn} = \sqrt{\left(\sum_i \rho_i \times A_i\right)^2 + \sum_i \left((1 - \rho_i^2) \times A_i^2\right)}$$

where,

A_i is the entity-level add-on for one entity (each “i” is a different entity, either single-name or index), and

ρ_i is the supervisory correlation for that entity from Table 2.

51. Note that equity derivatives that are basis or volatility transactions must be treated in separate hedging sets within the equity derivatives asset class, with adjustments to supervisory factors as required under this Standard. In that case, the add-on for the equity derivatives asset class is the sum of the hedging set add-on calculated above, plus add-ons for any basis or volatility hedging sets.

Add-on for Commodity Derivatives

52. For the commodity asset class, a bank must assign each commodity derivative to one of the four hedging sets: energy, metals, agriculture, or other. The bank should also define one or more commodity types within each hedging set, and assign each derivative transaction to one of those commodity types. Long and short trades within a single commodity type can be fully offset.

53. The bank must establish appropriate governance processes for the creation and maintenance of the list of defined commodity types that are used for CCR calculations. These types should have clear definitions stated in written policies, and independent internal review or validation processes should ensure that the commodity types are applied properly. Internal review and validation processes also should determine that commodities grouped as a single type are in fact reasonably similar. Only commodity types established through adequately controlled internal processes may be used.

54. Banks must calculate the effective notional amount for each commodity type (that is, for each set of commodity derivatives that reference commodities of the same type) by summing, across all transactions that reference that commodity type, the product of the adjusted notional amount of the transaction, the maturity factor for the transaction, and the supervisory delta adjustment. That is, for each individual commodity derivative referencing any single commodity type, the bank must calculate:

Adjusted Notional Amount × Supervisory Delta Adjustment × MF

for each transaction and then sum that product across all commodity derivatives that reference that commodity type to get the effective notional amount for the commodity type.

55. The bank must calculate the add-on for each commodity type by multiplying the result of this calculation by the appropriate supervisory factor from Table 2.

56. The bank must use the add-ons for each commodity type to calculate the add-on for each hedging set (energy, metals, agriculture, and other). This is done through a calculation using the supervisory correlation factor for commodity derivatives. Specifically, the bank must calculate the add-on for each of the four commodity derivative hedging sets by calculating:

$$Hedging\ Set\ AddOn = \sqrt{\left(\sum_i \rho \times A_i\right)^2 + \sum_i ((1 - \rho^2) \times A_i^2)}$$

where ρ is the supervisory correlation factor for commodity derivatives,

and A_i is the add-on for one commodity type within the hedging set (each “i” is a different commodity type within a given hedging set).

57. Note that commodity derivatives that are basis or volatility transactions must be treated in separate hedging sets within the commodity derivatives asset class, with adjustments to supervisory factors as required under this Standard.

58. The add-on for the commodity derivatives asset class is the sum of the four hedging set add-ons as calculated above (some of which may be zero if the bank has no derivatives within one of the four hedging sets), plus corresponding add-ons for any basis or volatility hedging sets.

59. Commodity hedging sets have been defined in this Standard without regard to other potentially important characteristics of commodities, such as location and quality. For example, the energy hedging set contains commodity types such as crude oil, electricity, natural gas, and coal. The Central Bank may require a bank to use more refined definitions of commodity types if the Central Bank determines that the bank is significantly exposed to the basis risk of different products within any bank-defined commodity type.

Supervisory Factors, Correlations, and Volatilities

60. Table 2 provides the values of Supervisory Factors, correlations, and supervisory option volatilities for use with each asset class and subclass.

61. For any basis transaction hedging set, the Supervisory Factor applicable to its relevant asset class or sub-class must be multiplied by 0.5.

62. For any volatility transaction hedging set, the Supervisory Factor applicable to its relevant asset class or sub-class must be multiplied by 5.0.

Table 2: Supervisory Factors, Correlations, and Volatilities

Asset Class	Hedging Sets	Subclass	Supervisory Factor	Correlation	Supervisory Option Volatility
Interest Rate	One hedging set for each currency		0.50%	N/A	50%
Foreign Exchange	One hedging set for each currency pair		4.00%	N/A	15%
Credit, Single Name	One hedging set for all credit derivatives	AAA	0.38%	50%	100%
		AA	0.38%		
		A	0.42%		
		BBB	0.54%		
		BB	1.06%		
		B	1.60%		
		CCC	6.00%		
Credit, Index		Investment Grade	0.38%	80%	80%
		Speculative Grade	1.06%		
Equity, Single Name	One hedging set for all equity derivatives	Single Name	32.00%	50%	120%
Equity, Index		Index	20.00%	80%	75%
Commodity	Energy	Electricity	40.00%	40%	150%
		Other Energy	18.00%		70%
	Metals	Metals	18.00%		70%
	Agriculture	Agriculture	18.00%		70%
	All other	Other	18.00%		70%

PFE Multiplier

63. For each netting set, the bank must compute a PFE multiplier and multiply the sum of the asset class add-ons for the netting set by that multiplier. The bank must calculate the PFE multiplier using the NCV and the aggregate add-on for the netting set ($AddOn_{agg}$) according to the following formula (where “exp” denotes the exponential function):

$$PFE\ multiplier = Floor + (1 - Floor) \times \exp\left(\frac{NCV}{2 \times (1 - Floor) \times AddOn_{agg}}\right)$$

64. Consistent with international regulatory standards, the Floor for this calculation is established at the level of 0.05 (5%) under this Standard.

65. If the PFE multiplier for a netting set is greater than 1.0 when calculated according to the formula above (which generally occurs when $NCV > 0$), the bank should set the PFE multiplier equal to 1.0 when calculating PFE. Note that NCV is the same as the calculation of RC for un-margined transactions, but without the limitation of a lower bound of zero (that is, NCV can be negative).

Margin Agreements Covering Multiple Netting Sets

66. If a single margin agreement applies to several netting sets, so that collateral is exchanged based on mark-to-market values that are netted across all transactions covered under the margin agreement irrespective of netting sets, calculations of both RC and PFE are

affected as described in this Standard. Special treatment is necessary because it is problematic to allocate the common collateral to individual netting sets.

67. A bank must compute a single combined RC for all netting sets covered by the margin agreement. Combined RC is the sum of two elements, each of which must be no less than zero. The first element is equal to the un-margined current exposure the bank has to the counterparty, aggregated across all netting sets covered by the margin agreement, less the cash equivalent value of any collateral available to the bank at the time (including both VM and NICA) if the bank is a net holder of collateral. The second term is added only when the bank is a net provider of collateral, and is equal to the current net value of the posted collateral, reduced by the un-margined current exposure of the counterparty to the bank aggregated across all netting sets covered by the margin agreement.

68. The bank must calculate PFE for transactions subject to a single margin agreement covering multiple netting sets as if those transactions were un-margined, with the resulting calculations of PFE for each netting set then aggregated through summation. Both the multiplier and the PFE add-on should be calculated as if the transactions were un-margined.

IV. Requirements for Bank Exposures to Central Counterparties

69. The Financial Stability Board has determined that central clearing of over-the-counter derivatives reduces global systemic risk. Accordingly, the Central Bank assigns lower risk weights to bank exposures to central counterparties (CCPs) that meet certain standards for qualification, as described below for Qualifying Central Counterparties (QCCPs).

70. Banks must treat exposures to non-qualifying CCPs as they would treat exposures to any other non-qualifying counterparty. If a CCP being treated as a QCCP ceases to qualify as a QCCP, exposures to that former QCCP may continue to be treated as though they were QCCP exposures for a period of three months, unless the Central Bank requires otherwise. After the three-month period, the bank's exposures to such a CCP must be treated as bilateral counterparty credit exposures.

Qualifying Central Counterparties

71. For a counterparty entity to be considered a QCCP for purposes of this Standard, the entity must meet the following conditions:

- Be licensed to operate as a CCP and permitted to operate as such by the appropriate regulator or overseer with respect to the products that are centrally cleared.
- Provide UAE banks with the information required to calculate RWA for any default fund exposures to the CCP according to the requirements stated in this Standard.
- Be based and prudentially supervised in a jurisdiction where the relevant regulator or overseer has established and publicly indicated that domestic rules and regulations consistent with the CPMI-IOSCO Principles for Financial Market Infrastructures apply to the CCP on an ongoing basis. For CCPs in jurisdictions that do not have a CCP regulator applying the Principles to the CCP, the Central Bank may make a determination regarding whether the CCP meets the requirements for treatment as a QCCP.

72. A bank must have robust internal procedures to identify specific CCPs that qualify for treatment as QCCPs under this Standard. The internal identification process should reflect the conditions stated above in this Standard, and produce evidence the bank then provides to the Central Bank to demonstrate that a specific CCP meets the conditions for qualification. A bank may not treat any CCP as a QCCP for capital purposes unless and until the Central Bank reviews the bank's determination and indicates no objection.

Exposures to QCCPs

73. A bank must calculate RWA for exposures to QCCPs to reflect credit risk due to trade exposures (either as a clearing member of the QCCP or as a client of a clearing member), posted collateral, and default fund contributions. If a bank's combined RWA for trade exposures to a QCCP and default fund contribution for that QCCP is higher than would apply for those same exposures if the QCCP were a non-qualifying CCP, the bank may treat the exposures as if the QCCP was non-qualifying.

Trade exposures to the QCCP

74. A risk weight of 2% applies to a bank's trade exposure to the QCCP where the bank as a clearing member of the QCCP trades for its own account. The risk weight of 2% also applies to trade exposures to the QCCP arising from clearing services the bank provides to clients where the bank is obligated to reimburse those clients for losses in the event that the QCCP defaults.

75. In general, a bank must calculate exposure amounts for trade exposures to QCCPs as for other derivatives exposure under this Standard. Banks must use a minimum MPOR of 10 days for the calculation of trade exposures to QCCPs on over-the-counter derivatives. Where QCCPs retain variation margin against certain trades and the member collateral is not protected against the insolvency of the QCCP, the minimum horizon applied to the bank's QCCP trade exposures must be the lesser of one year and the remaining maturity of the transaction, with a floor of 10 business days.

Treatment of posted collateral

76. Any assets or collateral posted to the QCCP by the bank must receive the banking book or trading book treatment it would receive under the capital adequacy framework, regardless of the fact that such assets have been posted as collateral. Where the entity holding such assets or collateral is the QCCP, a risk-weight of 2% applies to collateral included in the definition of trade exposures. The relevant risk-weight of the QCCP will apply to assets or collateral posted for other purposes.

77. A risk weight of zero applies to all collateral (including cash, securities, other pledged assets, and excess initial or variation margin) posted by the clearing member that is held by a custodian and is bankruptcy remote from the QCCP. Collateral posted by a client that is held by a custodian and is bankruptcy remote from the QCCP, the bank, and other clients of the bank is not subject to a CCR capital requirement.

78. Where a bank posts assets or collateral (either as a clearing member or on behalf of a client) with a QCCP or a clearing member, and the assets or collateral is not held in a bankruptcy remote manner, the bank must recognize credit risk based upon the creditworthiness of the entity holding such assets or collateral. Posted collateral not held in a bankruptcy remote manner must be accounted for in the NICA term for CCR calculations.

Default fund exposures

79. A bank's default fund contributions as a clearing member of a QCCP must be included in the bank's calculation of risk-weighted assets. Certain inputs required for the RWA calculation must be provided to the bank by the QCCP, its supervisor, or some other body with access to the required data, as described below. Provision of the necessary inputs is a condition for CCP qualification.

80. Risk-weighted assets for the bank's default fund contributions should be calculated as:

$$RWA = EAD \times RW \times \left(\frac{DF_M}{DF} \right)$$

where

- RW is a risk weight of 20% unless the Central Bank determines that banks must apply a higher risk weight, for example to reflect a QCCP membership composed of relatively high-risk members;
- DF_M is the bank's total pre-funded contributions to the QCCP's default fund;
- DF is the total value of the QCCP's default fund, including its own funds and the pre-funded contributions from members; and
- EAD is the sum of the QCCP's exposure to all clearing members accounts, including clearing members' own transactions, client transactions guaranteed by clearing members, and the value of all collateral held by the QCCP against those transactions (including clearing members' prefunded default fund contributions) prior to exchange of margin in the final margin call on the date of the calculation. This exposure should include the exposure arising from client sub-accounts to the clearing member's proprietary business where clearing members provide client-clearing services and the client transactions and collateral are held in separate (individual or omnibus) sub-accounts.

81. However, if the RWA from the calculation above is less than 2% of the amount of the bank's pre-funded contributions to the default fund, then the bank must set RWA equal to 2% of its pre-funded contributions to the default fund, which is $2\% \times DFM$.

82. Exposure to each clearing member for the QCCP's EAD calculation is the bilateral CCR trade exposure the QCCP has to the clearing member as calculated under this Standard, using MPOR of 10 days. All collateral held by a QCCP to which that QCCP has a legal claim in the event of the default of the member or client, including default fund contributions of that member, is used to offset the QCCP's exposure to that member or client for the PFE multiplier. If the default fund contributions of the member are not split with regard to client and sub-accounts, they must be allocated to sub-accounts according to the initial margin of that sub-account as a fraction of the total initial margin posted by or for the account of the clearing member.

83. If clearing member default fund contributions are segregated by product types and only accessible for specific product types, the RWA calculation must be performed for each specific product giving rise to counterparty credit risk. Any contributions by the bank to prepaid default funds covering settlement-risk-only products should be risk-weighted at 0%. If the QCCP's own prefunded resources cover multiple product types, the QCCP must allocate those funds to each of the calculations, in proportion to the respective product-specific EAD.

84. However, where a default fund is shared between products or types of business with settlement risk only (such as equities and bonds) and products or types of business which give rise to counterparty credit risk, all of the default fund contributions receive the risk weight determined above, without apportioning to different classes or types of business or products.

85. Banks must apply a risk weight of 1250% to default fund contributions to a non-qualifying CCP. For the purposes of this paragraph, the default fund contributions of such banks will include both the funded contributions and any unfunded contributions for which the bank could be liable upon demand by the CCP.

86. As a requirement for QCCP qualification, the CCP, its supervisor, or another body with access to the required data must calculate and provide values for EAD, DF_M , and DF in such a way to permit the supervisor of the CCP to oversee those calculations, and must share sufficient information about the calculation results to permit banks to calculate capital requirements for their exposures to the default fund, as well as to permit the Central Bank to review and confirm such calculations. The information must be provided at least quarterly, although the Central Bank may require more frequent calculations in the event of material changes, such as material changes to the number or size of cleared transactions, material

changes to the financial resources of the QCCP, or initiation by the QCCP of clearing of a new product.

Clearing member exposures to clients

87. A bank as a clearing member of a QCCP must treat its exposure to clients as bilateral trades, irrespective of whether the bank as clearing member guarantees the trade or acts as an intermediary between the client and the QCCP.

88. If a bank as a clearing member of a QCCP collects collateral from a client and passes this collateral on to the QCCP, the bank may recognize this collateral for both the exposure to the QCCP and the exposure to the client.

89. If a bank as a clearing member conducts an exchange-traded derivatives transaction on a bilateral basis with a client, it is treated as a bilateral counterparty credit risk exposure rather than a QCCP exposure. In this case, the bank can compute the exposure to the client using a margin period of risk, subject to a minimum MPOR of at least five days.

90. These requirements also apply to transactions between lower-level clients and higher-level clients in a multi-level client structure. (A multi-level client structure is one in which banks can centrally clear as an indirect client of a clearing member; that is, when clearing services are provided to the bank by an institution that is not a direct clearing member, but is itself a client of a clearing member or another clearing client.)

Bank exposures as a client of clearing members

91. Where a bank is a client of a clearing member, and enters into a transaction with a clearing member who completes an offsetting transaction with the QCCP, or if a clearing member guarantees QCCP performance to the bank as a client, the bank's exposures to the clearing member may be treated as trade exposures to the QCCP with a risk weight of 2% if the conditions below are met. (This also applies to exposures of lower-level clients to higher-level clients in a multi-level client structure, provided that for all intermediate client levels the two conditions below are met.)

- **Condition 1:** Relevant laws, regulation, rules, contractual, or administrative arrangements make it highly likely that, in the event that the clearing member defaults or becomes insolvent, the offsetting transactions with the defaulted or insolvent clearing member would continue to be indirectly transacted through or by the QCCP, and that client positions and collateral with the QCCP would be transferred or closed out at market value.
- **Condition 2:** Offsetting transactions are identified by the QCCP as client transactions, and collateral to support them is held by the QCCP and/or the clearing member under arrangements that prevent any losses to the client due to the default or insolvency of either the clearing member or other clients of the clearing member, or of a joint default or insolvency of the clearing member and any of its other clients.

92. Where a bank is a client of the clearing member and the two conditions above are not met, the bank must treat its exposures to the clearing member as an ordinary bilateral exposure under this Standard, not a QCCP exposure. If the two conditions above are met with the exception of the requirement regarding joint default or insolvency of the clearing member and any of its other clients, a 4% risk weight must be applied instead of 2%.

93. A bank must have conducted sufficient legal review (and undertake such further review as necessary to ensure continuing enforceability) and have a well-founded basis to conclude that, in the event of legal challenge, the relevant courts and administrative authorities would find that such arrangements mentioned above would be legal, valid, binding and enforceable under the relevant laws of the relevant jurisdictions. Upon the insolvency of the clearing member, there should be no legal impediment (other than the need to obtain an appropriate

court order) to the transfer of the bank's collateral to one or more surviving clearing members or to the bank or the bank's nominee.

94. The treatment described here also applies to exposures resulting from posting of collateral by the bank as a client of a clearing member that is held by the QCCP on the bank's behalf but not on a bankruptcy remote basis.

95. If a bank conducts an exchange-traded derivatives transaction on a bilateral basis with a clearing member as a client of that clearing member, the transaction is treated as a bilateral counterparty credit risk exposure, not a QCCP exposure. The same applies to transactions between lower-level clients and higher-level clients in a multi-level client structure.

Requirements for Bank Risk Management Related to QCCPs

96. The fact that a CCP qualifies as a QCCP does not relieve a bank of the responsibility to ensure that it maintains adequate capital to cover the risk of its exposures. Where the bank is acting as a clearing member, the bank should assess whether the level of capital held against exposures to a QCCP adequately addresses the inherent risks of those transactions through appropriate scenario analysis and stress testing.

97. A bank must monitor and report to its senior management and Board, or an appropriate committee of the Board, on a regular basis all of its exposures to QCCPs, including exposures arising from trading through a QCCP and exposures arising from QCCP membership obligations such as default fund contributions.

V. Review Requirements

98. Bank calculations for Counterparty Credit Risk under this Standard and associated bank processes must be subject to appropriate levels of independent review and challenge. Reviews must cover material aspects of the calculations under this Standard, including but not limited to the determination of netting sets, the assignment of individual transactions to asset classes and hedging sets, the application of supervisory parameters, the definition of commodity types, the treatment of complex derivatives transactions, and the identification of QCCPs.

VI. Shari'ah Implementation

99. Banks offering Islamic financial services that use Shari'ah Compliant alternatives to derivatives approved by their internal Shari'ah control committees should calculate the risk weighted asset (RWA) to recognize the exposure amounts for counterparty credit risk (CCR) as a result of obligations arising from terms and conditions of contracts and documents of those Shari'ah compliant alternatives in accordance with provisions set out in this standard/guidance and in the manner acceptable by Shari'ah. This is applicable until relevant standards and/or guidance in respect of these transactions are issued specifically for banks offering Islamic financial services.

VI. Credit Valuation Adjustment (CVA)

I. Introduction

1. This Standard articulates specific requirements for the calculation of the risk-weighted assets (RWA) for Credit Valuation Adjustment (CVA) risk for banks in the UAE. It is based closely on requirements of the framework for capital adequacy developed by the Basel Committee on Banking Supervision, specifically the Standardized Approach for CVA as articulated in *Basel III: A global regulatory framework for more resilient banks and banking systems, December 2010 (rev June 2011)*, and subsequent clarifications thereto by the Basel Committee.
2. This Standard covers all derivative transactions except those transacted directly with a central counterparty. In addition, it covers all securities financing transactions (SFTs) that are subject to fair-value accounting, unless the Central Bank concludes that the bank's CVA loss exposures arising from fair-valued SFTs are not material. The CVA capital calculation encompasses a bank's CVA portfolio, which includes the bank's entire portfolio of covered transactions as well as eligible CVA hedges.
3. This Standard formulates capital adequacy requirements that needs to be applied to all banks in UAE on a consolidated basis.

II. Definitions

In general, terms in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In addition, for this Standard, the following terms have the meanings defined in this section.

- (a) **Credit Default Swap (CDS):** A financial swap agreement in which the seller of the CDS agrees to compensate the buyer in the event of a default or other credit event by the reference obligor in exchange for a series of payments during the life of the CDS.
- (b) **Contingent CDS:** A CDS in which one or more aspects of the payout are contingent on both the occurrence of a credit event and some other event specified in the contract, such as the level of or change in a particular market variable.
- (c) **Credit Valuation Adjustment (CVA):** Reflects the adjustment of default risk-free prices of derivatives due to a potential default of the counterparty. Regulatory CVA may differ from CVA used for accounting purposes. Unless explicitly specified otherwise, the term CVA in this document means regulatory CVA.
- (d) **CVA portfolio:** Includes all CVA hedges that meet the eligibility requirements stated in these Standards, as well as all covered transactions.
- (e) **CVA Risk:** Defined as the risk of losses arising from changing CVA values in response to changes in counterparty credit spreads and market risk factors that drive prices of derivative transactions.
- (f) **Derivatives Transactions:** Transactions concerning financial contracts that are traded in the Market, their values are dependent on the value of the financial assets underlying such contracts - such as commodities, indexes, currencies or any other financial products considered as such by the Central Bank.
- (g) **Qualified Financial Contract:** Any financial agreement, contract or transaction, including any terms and conditions incorporated by reference in any such financial agreement, contract or transaction, pursuant to which payment or delivery obligations are due to be performed at a certain time or within a certain period of time and whether

or not subject to any condition or contingency excluding securities and commodities or any other agreement, contract or transaction as notified by the Central Bank at any time.

- (h) **Securities Financing Transactions (SFTs):** Transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on market valuations and the transactions are often subject to margin agreements.

III. Requirements

Banks are required to calculate RWA for CVA as a multiple of capital for CVA risk calculated as specified in these Standards. The calculation relies on regulatory measures of counterparty credit risk exposure, and recognizes the impact of differences in maturity, as well as adjustments to reflect certain common hedging activities that banks use to manage CVA risk. The relevant requirements are described in this Standard.

A. Counterparty Exposure for CVA Calculations

4. A bank must use a measure of exposure at default (EAD) for each counterparty to calculate CVA capital for the CVA portfolio. For derivatives exposures, the bank must use the EAD for each counterparty as calculated under the Central Bank's Counterparty Credit Risk Standard (the CCR Standard), including any effects of collateral or offsets per that Standards.

5. For SFTs, the bank must use the measure of counterparty exposure as calculated for the leverage ratio exposure measure. For that measure, the EAD for SFTs is calculated as current exposure without an add-on for potential future exposure, with current exposure calculated as follows:

- (a) *Where a qualifying master netting agreement (MNA) is in place, the current exposure (E^*) is the greater of zero and the total fair value of securities and cash lent to a counterparty for all transactions included in the qualifying MNA ($\sum E_i$), less the total fair value of cash and securities received from the counterparty for those transactions ($\sum C_i$). This is illustrated in the following formula:*

$$E^* = \max \{0, [\sum E_i - \sum C_i]\}$$

where E^* = current exposure,

$\sum E_i$ = total fair value of securities and cash lent to counterparty "i" and

$\sum C_i$ = total fair value of securities and cash received from "i".

- (b) *Where no qualifying MNA is in place, the current exposure for transactions with a counterparty must be calculated on a transaction-by-transaction basis – that is, each transaction is treated as its own netting set, as shown in the following formula:*

$$E^* = \max \{0, [E - C]\}$$

where E^* = current exposure,

E = total fair value of securities and cash lent in the transaction, and

C = total fair value of securities and cash received in the transaction.

B. CVA Hedges

6. To qualify as an eligible CVA hedge for purposes of the CVA capital calculation, hedge transactions must meet the eligibility requirements stated here:

- (a) The hedge instrument must be an index CDS, or a single-name CDS, single-name contingent CDS, or equivalent hedging instrument that directly references the counterparty being hedged; and
- (b) The transaction must be a component of the bank's CVA risk management program, entered into with the intent to mitigate the counterparty credit spread component of CVA risk and managed by the bank in a manner consistent with that intent.

7. Eligible hedges that are included in the CVA calculation as CVA hedges are excluded from a bank's market risk capital calculations. A bank must treat transactions that are not eligible as CVA hedges as they would any other similar instrument for regulatory capital purposes.

C. CVA Capital Calculation

8. The bank must calculate the discounted counterparty exposure for each counterparty by multiplying the total EAD for the counterparty as calculated under these Standards by a supervisory discount factor (DF) for each netting set that reflects notional weighted-average maturity of the counterparty exposures:

$$EAD_i^{Total} \times DF_i$$

where

EAD_i^{Total} is the sum of the EADs for all of the exposures to counterparty "i" within the netting set,

$$DF_i = \frac{(1 - e^{-0.05M_i})}{0.05}, \text{ and}$$

M_i is the weighted average maturity for the netting set for counterparty "i", using notional values for the weighting.

If the bank has more than one netting set with a counterparty, the bank should perform this calculation for each netting set with that counterparty separately, and sum across the netting sets.

9. For any eligible single-name hedges for the counterparty, the bank computes the discounted value of the hedges, again using a supervisory discount factor that depends on the maturity of the hedge:

$$H_i \times DF_H$$

where

H_i is the notional value of a purchased eligible single-name hedge referencing counterparty "i" and used to hedge the CVA risk,

$$DF_H = \frac{(1 - e^{-0.05M_h})}{0.05}, \text{ and}$$

M_h is the maturity of that hedge instrument.

If the bank has more than one instrument hedging single-name CVA risk for the counterparty, the bank should sum the discounted values of the individual hedges within each netting set.

10. For each counterparty, the bank should calculate single-name exposure (SNE) as the discounted counterparty exposure minus the discounted value of eligible single-name CVA hedges. With a single netting set and single hedge instrument, this calculation is:

$$SNE_i = EAD_i^{Total} \times DF_i - H_i \times DF_H$$

11. With multiple netting sets for the counterparty (for EAD) or multiple-single name hedge instruments (for H), the corresponding terms in the SNE calculation would be the summations for the given counterparty as required above.

12. If the bank uses single-name hedging only, the bank must use SNE for its counterparties to calculate CVA capital using the following formula:

$$K = 2.33 \sqrt{\left(\sum_i 0.5 W_i SNE_i \right)^2 + \sum_i 0.75 (W_i SNE_i)^2}$$

where W_i is the risk weight applicable to counterparty "i" from Table 1.

13. Each counterparty must be assigned to one of the seven rating categories in Table 1, based on the external credit rating of the counterparty. When a counterparty does not have an external rating, the bank should follow the approach used in the CCR Standard for credit derivatives that reference unrated entities. A bank should map alternative rating scales to the ratings in Table 1 based on an analysis of historical loss experience for each rating grade.

Table 1: Risk Weights for CVA Capital Calculation

Rating	Risk Weight
AAA	0.7%
AA	0.7%
A	0.8%
BBB	1.0%
BB	2.0%
B	3.0%
CCC	10.0%

14. If the bank also uses index hedges for CVA risk management, the CVA capital calculation is modified to include an additional reduction in systematic risk according to the following formula:

$$K = 2.33 \sqrt{\left(\sum_i 0.5 W_i SNE_i - \sum_{ind} W_{ind} H_{ind} DF_{ind} \right)^2 + \sum_i 0.75 (W_i SNE_i)^2}$$

where

H_{ind} is the notional of an eligible index hedge instrument used to hedge CVA risk,

$$DF_{ind} = \frac{(1 - e^{-0.05 M_{ind}})}{0.05},$$

M_{ind} is the maturity of that index hedge, and

other variables are as defined above in this Standard.

The summation is taken across all index hedges. To determine the applicable risk weight for any index hedge, the bank should determine the risk weight from Table 1 that would apply to each component of the index, and use the weighted-average of these risk weights as W_{ind} , with weights based on the notional composition of the index.

15. An alternative version of the full calculation (including index hedges) that gives the same result, but without the intermediate step of calculating SNE, is the following:

$$K = 2.33 \sqrt{\left(\sum_i 0.5 W_i (EAD_i^{Total} \times DF_i - H_i \times DF_H) - \sum_{ind} W_{ind} H_{ind} DF_{ind} \right)^2 + \sum_i 0.75 (W_i (EAD_i^{Total} \times DF_i - H_i \times DF_H))^2}$$

16. For any counterparty that is also a constituent of an index referenced by a CDS used for hedging CVA risk, the bank may, with supervisory approval, subtract the notional amount attributable to that single name within the index CDS (as based on its reference entity weight) from the index CDS notional amount (H_{ind}), and treat that amount within the CVA capital calculation as a single-name hedge (H_i) of the individual counterparty with maturity equal to the maturity of the index.

D. Risk-Weighted Assets

17. A bank must determine the RWA for CVA by multiplying K as calculated above by the factor 12.5:

$$CVA\ RWA = K \times 12.5$$

E. Simple Alternative Approach

18. Any bank with aggregate notional amount of covered transactions less than or equal to AED 400 billion may choose to set the bank's CVA RWA equal to its RWA for counterparty credit risk as computed under the CCR Standard. If the bank chooses this approach, it must be applied to all of the bank's covered transactions. In addition, a bank adopting this simple approach may not recognize the risk-reducing effects of CVA hedges. A bank meeting the requirements for using the Simple Alternative may choose to use either the Simple Alternative or the general CVA requirements, and may change that choice at any time with the approval of the Central Bank.

IV. Review Requirements

19. Bank calculations for CVA risk under these Standard and associated bank processes must be subject to appropriate levels of independent review and challenge. Reviews must cover material aspects of the calculations under these Standards, including but not limited to

determination of eligible hedges, determination of maturities and amounts, mapping of counterparties to risk weights based on credit rating, and the CVA capital calculation.

V. Shari'ah Implementation

20. Banks offering Islamic financial services that use Shari'ah Compliant alternatives to derivatives and Securities financing transactions (SFTs) approved by their internal Shari'ah control committees should calculate the risk weighted asset (RWA) for Credit Valuation Adjustment (CVA) of these Shari'ah compliant alternatives in accordance with provisions set out in this standard/guidance and in the manner acceptable by Shari'ah. This is applicable until relevant standards and/or guidance in respect of these transactions are issued specifically for banks offering Islamic financial services

VII. Equity Investments in Funds

I. Introduction

1. This Standard articulates specific capital requirements for equity investments in funds held in the banking book by UAE Banks. It is based closely on requirements of the framework for capital adequacy developed by the Basel Committee on Banking Supervision (BCBS), specifically as articulated in *Capital requirements for banks' equity investments in funds*, (BCBS 266, published December 2013).

2. This Standard formulates capital adequacy requirements that needs to be applied to all banks in UAE on a consolidated basis.

The requirements apply to all equity investments by banks in all types of funds that are held in the banking book (in-scope equity positions), including off-balance sheet exposures such as unfunded commitments to subscribe to a fund's future capital calls. The requirements do not apply to exposures, including underlying exposures held by the fund, that would be deducted from capital under the Central Bank's Guidance re Capital Supply.

3. This Standard requires banks to calculate risk-weighted assets (RWA) for any fund in which the bank has an in-scope equity position, with RWA calculated as if the bank held the fund's exposures directly rather than indirectly through investment in the fund. Banks are required to use a hierarchy of three successive approaches with varying degrees of risk sensitivity and conservatism, as described below in these Standards. This Standard also incorporates a leverage adjustment to RWA to reflect a fund's leverage appropriately. These requirements are discussed below in these Standards.

4. The Standards follow the calibration developed by the Basel Committee, which includes a maximum risk weight of 1250%, calibrated on a total capital adequacy requirement of 8%. The UAE instituted a higher minimum capital requirement of 10.5% (excluding capital buffers), applicable to all licensed banks. Consequently, the maximum capital charge for a single exposure will be the lesser of the value of the exposure after applying valid credit risk mitigation, netting and haircuts, and the capital resulting from applying a risk weight of 952% (reciprocal of 10.5%) to this exposure.

II. Definitions

In general, terms used in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In particular, for this Standard, the following terms have the meanings defined in this section.

- a. **Credit Valuation Adjustment (CVA)** reflects the adjustment of default risk-free prices of derivatives due to a potential default of the counterparty. Regulatory CVA may differ from CVA used for accounting purposes. Unless explicitly specified otherwise, the term CVA in this document means regulatory CVA.
- b. **CVA Risk** is defined as the risk of losses arising from changing CVA values in response to changes in counterparty credit spreads and market risk factors that drive prices of derivative transactions.
- c. **Fund** is a financial vehicle, whether established inside or outside the UAE, engaged in the activity of receiving investors' money for the purpose of investment against the issue of fund units of equal value and rights. This includes, but is not limited to, mutual funds, private equity funds and hedge funds, open-end funds, closed-end funds, debt funds and hedge funds.
- d. **Mandate** means instruction to manage a pool of capital, or a particular pile of funds, using a specific strategy and within certain risk parameters.

- e. **Potential Future Exposure (PFE)** is an estimate of the potential increase in exposure to counterparty credit risk against which a bank must hold regulatory capital.

III. Requirements

A. Approaches

5. Banks must treat in-scope equity positions in a manner consistent with one or more of the following three approaches: the “look-through approach”, the “mandate-based approach” and the “fall-back approach”.

1. *Look-through approach (LTA)*

6. The look-through approach (LTA) requires a bank to risk weight the underlying exposures of a fund as if the bank held the exposures directly. LTA must be used by a bank when:

- (iii) there is sufficient and frequent information provided to the bank regarding the underlying exposures of the fund to determine the applicable risk weights and exposure amounts; and
- (iv) such information is subject to verification by an independent third party.

7. To satisfy condition (i) above, the frequency of financial reporting of the fund must be the same as, or more frequent than, the financial reporting obligation of the bank, and the granularity of the financial information must be sufficient to calculate the corresponding risk weights and exposure amounts without requiring an external audit. To satisfy condition (ii) above, there must be verification of the underlying exposures by an independent third party, such as a depository or custodian bank or, where applicable, a fund management company.

8. Under the LTA, a bank must risk weight all underlying exposures of a fund as if the bank held those exposures directly. This includes, for example, any underlying exposure arising from the fund’s derivatives activities and the counterparty credit risk (CCR) exposure associated with those derivatives. However, instead of determining the applicable credit valuation adjustment (CVA) capital associated with the fund’s derivatives exposures, a bank should instead increase the CCR exposure by 50 percent (that is, multiply the CCR exposure by a factor of 1.5) before applying the risk weight associated with the counterparty. Banks are not required to apply the 1.5 factor to transactions for which the CVA capital charge would not otherwise be applicable, such as those conducted directly with central counterparties.

9. Banks may rely on third-party calculations to determine the risk weights associated with equity investments in funds (that is, the underlying risk weights of the exposures of the fund) if they cannot obtain adequate data or information themselves to perform the calculations. In such cases, however, the bank must increase the resulting risk weight by 20 percent (that is, multiplied by a factor of 1.2) relative to the risk weight that would be applicable if the bank held the exposure directly.

10. Banks should use the risk weights from the LTA to compute RWA for the fund. After calculating the RWA for a fund according to the LTA, banks must calculate the average risk weight for that fund ($\text{Avg RW}_{\text{fund}}$) by dividing the total RWA of the fund by the total (unweighted) assets of the fund.

2. *Mandate-based approach (MBA)*

11. Banks should use the second approach, the mandate-based approach (MBA), only when the conditions for applying the LTA are not met. Banks should use the information contained in a fund’s mandate or in the relevant regulations governing such investment funds to perform a conservative calculation of the applicable risk weights for the assets of the fund.

12. Under the MBA, on-balance-sheet exposures (that is, the fund's assets) are risk weighted assuming that the underlying portfolios are invested to the maximum extent allowed under the fund's mandate in assets that would attract the highest risk weights, and then progressively in other assets that attract lower risk weights. If more than one risk weight could be applied to a given exposure, the bank should use the highest applicable risk weight.

13. The notional amount of derivative exposures and off-balance-sheet items should be risk-weighted according to the requirements of the risk-based capital standards.

14. Banks should calculate the CCR exposure associated with a fund's derivative positions in accordance with the Central Bank's Standard for Counterparty Credit Risk Capital. If replacement cost cannot be determined, the bank should use the notional amount of the derivative as the replacement cost. If the Potential Future Exposure (PFE) cannot be determined, the bank should use an amount equal to 15 percent of the notional value as the PFE.

15. As with the LTA, banks should account for CVA Risk on derivatives by increasing the CCR exposure by 50 percent (that is, multiply the CCR exposure by a factor of 1.5) before applying the risk weight associated with the counterparty. Banks are not required to apply the 1.5 factor for transactions to which the CVA capital charge would not otherwise be applicable, such as those conducted directly with central counterparties.

16. As with the LTA, after calculating the RWA for a fund according to the MBA, banks must calculate the average risk weight for that fund ($\text{Avg RW}_{\text{fund}}$) by dividing the RWA of the fund by the total (unweighted) assets of the fund.

3. *Fall-back approach (FBA)*

17. When the conditions for applying either the LTA or the MBA are not met, banks are required to apply the FBA, under which $\text{Avg RW}_{\text{fund}}$ for a bank's investment in the fund is set equal to 1250 percent.

B. Partial use of the approaches

18. A bank may use a combination of the three approaches when determining the capital requirements for an equity investment in an individual fund, with one approach applied to a portion of the fund's exposures and one or more other approaches applied to the fund's other exposures. The requirements for each approach as articulated under this Standard must be met for any portions of the fund to which the LTA or MBA are applied. RWA calculations from each applied approach should be added together with the sum then divided by the total fund assets to compute $\text{Avg RW}_{\text{fund}}$.

C. Treatment of Funds that invest in other Funds

19. When a bank has an investment in one fund (e.g., Fund A) that itself has an investment in another fund (e.g., Fund B), the risk weight applied to the investment holding of the first fund (that is, Fund A's investment in Fund B) should be determined by using the same three approaches set out above (LTA, MBA, and FBA). If fund investments are further layered (for example, if Fund B has investments in a Fund C), the risk weights applied to the additional layers of investment (that is, Fund B's investment in Fund C) can be determined using the LTA, but only if the LTA was also used for determining the risk weight for the investment in the fund at the previous layer (Fund A's investment in Fund B). Otherwise, the bank must apply the FBA to the additional investment layers.

D. Exclusions to the LTA, MBA and FBA

20. Equity holdings in entities whose debt obligations qualify for a zero risk weight can be excluded from the LTA, MBA and FBA approaches (including government sponsored entities

where a zero risk weight can be applied), at the discretion of the UAE Central Bank. If the UAE Central Bank makes such exclusion, this will be available to all banks.

21. The UAE Central Bank may, in its absolute discretion, change the risk weighting of debt obligations from time to time as it finds necessary.

E. Leverage adjustment

22. When determining the risk weight for a bank's equity investment in a fund, a bank must apply a leverage adjustment to the average risk weight of the fund as calculated above.

23. Leverage for a fund is calculated as the ratio of total fund assets (not risk weighted) to total fund equity. Under the LTA, this ratio should be calculated from the information obtained on the fund's asset holdings and financing. Under the MBA, banks should assume the maximum financial leverage permitted in the fund's mandate, or the maximum permitted under the regulations governing the fund.

F. RWA for Equity Investments in Funds

24. Banks must calculate the risk weight to be applied to their equity investments in any fund as the product of the fund's average risk weight and the fund's leverage:

$$\text{Risk Weight} = \text{Avg RW}_{\text{fund}} \times \text{Leverage}$$

where $\text{Avg RW}_{\text{fund}}$ = the average risk-weight for the fund's assets as calculated under this Standard, and

Leverage = the fund's leverage as measured by the fund's ratio of assets to equity as calculated under this Standard.

25. The risk weight for a bank's equity investment in any fund is subject to a cap of 1250 percent. If the calculation described in the paragraph above produces a result in excess of 1250 percent, the bank should use the maximum risk weight of 1250 percent instead.

26. Banks should compute the RWA for their investments in funds by multiplying the amount of the equity investment in a given fund by the risk weight calculated as described in this Standard, based on $\text{Avg RW}_{\text{fund}}$ and the leverage of the fund determined according to this Standard.

IV. Review Requirements

27. Bank calculations of risk-weighted assets for equity investments in funds under this Standard must be subject to appropriate levels of independent review by third parties and challenge. Reviews must cover associated bank processes including the identification of in-scope equity positions, determination of the appropriate approach under the hierarchy of approaches, and the processes for collection of information about the funds' exposures or mandates, as well as material aspects of the calculations under this Standard, including but not limited to the risk weights applied to the underlying exposures (including on-balance-sheet, off-balance-sheet and derivative exposures as well as PFE), the average risk weights for funds and the calculation of fund leverage.

V. Shari'ah Implementation

28. Banks offering Islamic financial services that use Shari'ah-Compliant Equity Investment in Funds held in the banking book which is approved by their internal Shari'ah control committees should calculate the relevant risk weighted asset (RWA) in line with this standard and guidelines, to accordingly maintain the appropriate amount of capital, in accordance with the provisions set out in this standard and guidance in a manner acceptable

by Shari'ah. This is applicable until relevant standards and/or guidelines in respect of these transactions are issued specifically for banks offering Islamic financial services.

VIII. Securitisation

I. Introduction

1. This Standard provides requirements for risk-based capital for securitisation-related exposures in the banking book for banks in the UAE. It is based closely on requirements of the securitisation framework for capital adequacy developed by the Basel Committee on Banking Supervision (BCBS), specifically as articulated in *Revisions to the securitisation framework, (BCBS 374, published December 2014, revised July 2016)*.
2. The Central Bank securitisation framework aims to ensure that banks in the UAE adopt practices to manage the risks associated with securitisation, and to ensure that banks hold sufficient regulatory capital against the associated credit risk.
3. Regulatory capital is required for banks' securitisation exposures, including those arising from the provision of credit risk mitigants to a securitisation transaction, investments in asset-backed securities, retention of subordinate tranches, and extension of liquidity facilities or credit enhancements, as set forth below.
4. This Standard formulates capital adequacy requirements that needs to be applied to all banks in UAE on a consolidated basis. Banks must apply the Central Bank securitisation framework for determining regulatory capital requirements on banking book exposures arising from traditional and synthetic securitisations or similar structures. Banks should consult with Central Bank when there is uncertainty about whether a given transaction should be considered a securitisation.
5. The Standards follow the calibration developed by the Basel Committee, which includes a maximum risk weight of 1250%, calibrated on a total capital adequacy requirement of 8%. The UAE instituted a higher minimum capital requirement of 10.5% (excluding capital buffers), applicable to all licensed banks. Consequently, the maximum capital charge for a single exposure will be the lesser of the value of the exposure after applying valid credit risk mitigation, netting and haircuts, and the capital resulting from applying a risk weight of 952% (reciprocal of 10.5%) to this exposure.

II. Definitions

In general, terms in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In addition, for this Standard, the following terms have the meanings defined in this section.

- a) **asset-backed commercial paper (ABCP) program** is a structure that issues commercial paper to third-party investors and is backed by assets or other exposures held in a bankruptcy-remote, special purpose entity;
- b) **Clean-up call** is an option that permits securitisation exposures to be called before all of the underlying exposures or have been repaid. In the case of a traditional securitisation, this generally is accomplished by repurchasing the remaining securitisation exposures once the pool balance or outstanding securities have fallen below some specified level. In the case of a synthetic transaction, a clean-up call may take the form of a clause that extinguishes the credit protection;
- c) **credit enhancement** is a contractual arrangement in which a bank or other entity retains or assumes a securitisation exposure and, in substance, provides some degree of added protection to other parties to the transaction;
- d) **credit-enhancing interest-only strip** is an on-balance sheet asset that (i) represents a valuation of cash flows related to excess spread, and (ii) is subordinated;

- e) **early amortization provision** is a mechanism that, once triggered, accelerates the reduction of the investor's interest in the underlying exposures of a securitisation of revolving credit facilities and allows investors to receive pay-outs prior to the originally stated maturity of the securities issued;
- f) **excess spread (or future margin income)** is total gross finance charge collections and other income received by the trust or special purpose entity (SPE) minus certificate interest, servicing fees, charge-offs, and other senior trust or SPE expenses;
- g) **implicit support** is support provided by a bank to a securitisation in excess of its explicit contractual obligations;
- h) **originating bank** is a bank that meets either of the following conditions with regard to a particular securitisation:
 - a. the bank originates directly or indirectly underlying exposures included in the securitisation; or
 - b. the bank serves as a sponsor of an asset-backed commercial paper conduit or similar program that acquires exposures from third-party entities; in the context of such programs, a bank would generally be considered a sponsor and, in turn, an originator if it, in fact or in substance, manages or advises the program, places securities into the market, or provides liquidity and/or credit enhancements;
- i) **pool** is the underlying exposure or group of exposures that are the underlying instruments being securitized; these may include but are not restricted to the following: loans, commitments, asset-backed and mortgage-backed securities, corporate bonds, equity securities, and private equity investments;
- j) **resecuritisation exposure** is a securitisation exposure in which the risk associated with an underlying pool of exposures is tranching and at least one of the underlying exposures is a securitisation exposure. In addition, an exposure to one or more resecuritisation exposures is a resecuritisation exposure. An exposure resulting from re-tranching of a securitisation exposure is not a resecuritisation exposure if the bank is able to demonstrate that the cash flows to and from the bank could be replicated in all circumstances and conditions by an exposure to the securitisation of a pool of assets that contains no securitisation exposures;
- k) **securitisation** is the creation of a contractual structure under which the cash flow from an underlying pool of exposures is used to service at least two different stratified risk positions or tranches reflecting different degrees of credit risk;
- l) **securitisation exposure** is a bank exposure to a securitisation, which may include but are not restricted to the following: asset-backed securities, mortgage-backed securities, repurchased securitisation exposures, credit enhancements, liquidity facilities, interest rate or currency swaps, credit derivatives, tranching cover, and reserve accounts, such as cash collateral accounts, recorded as an asset by the originating bank;
- m) **securitisation of revolving credit facilities** is a securitisation in which one or more underlying exposures represent, directly or indirectly, current or future draws on a revolving credit facility, including but not limited to credit card exposures, home equity lines of credit, commercial lines of credit, and other lines of credit;
- n) **senior securitisation exposure** is a securitisation exposure (such as a tranche) that is effectively backed or secured by a first claim on the entire amount of the assets in the underlying securitized pool. Different maturities of several senior tranches that share pro rata loss allocation shall have no effect on the seniority of these tranches, since they benefit from the same level of credit enhancement;

- o) **Special purpose entity (SPE)** is corporation, trust, or other entity organized for a specific purpose, the activities of which are limited to those appropriate to accomplish the purpose of the SPE, and the structure of which is intended to isolate the SPE from the credit risk of an originator or seller of exposures in a securitisation. Exposures commonly are sold to an SPE in exchange for cash or other assets funded by debt that is issued by the SPE;
- p) **simple, transparent, and comparable (STC)** securitisations are less-complex securitisations that meet the requirements for simplicity, transparency, and comparability specified in the Appendix below in this Standard;
- q) **synthetic securitisation** is a structure with at least two different stratified risk positions or tranches that reflect different degrees of credit risk where credit risk of an underlying pool of exposures is transferred, in whole or in part, through the use of funded instruments (e.g., credit-linked notes) or unfunded credit derivatives or guarantees (e.g., credit default swaps) that serve to hedge the credit risk of the portfolio, such that the risk to investors depends on the performance of the underlying pool;
- r) **traditional securitisation** is a securitisation that is neither a synthetic securitisation nor a resecuritisation; and
- s) **Tranche** is a set of securities issued as part of a securitisation with a common priority claim on a common underlying pool of assets or exposures.

The Central Bank may modify these definitions pursuant to a circular or otherwise.

III. Operational Requirements for The Recognition Of Risk Transference

A. Operational requirements for traditional securitisations

6. An originating bank may exclude underlying exposures from the calculation of risk-weighted assets only if all of the following conditions for risk transference have been met.
 - a. Significant credit risk associated with the underlying exposures has been transferred to third parties.
 - b. Banks should obtain legal opinion that confirms true sale, that the transferor does not maintain effective or indirect control over the transferred exposures; that is, that the exposures are legally isolated from the transferor in such a way (e.g., through the sale of assets or through sub-participation) that the exposures are put beyond the reach of the transferor and its creditors, even in bankruptcy or receivership.
 - c. The transferor is not able to repurchase from the transferee the previously transferred exposures in order to realize their benefits and is not obligated to retain the risk of the transferred exposures.
 - d. The securities issued are not obligations of the transferor. Thus, investors who purchase the securities only have a claim on the underlying exposures.
 - e. The transferee is an SPE and the holders of the beneficial interests in that entity have the right to pledge or exchange them without restriction.
 - f. Clean-up calls satisfy the conditions set out in Section D below.
 - g. The securitisation does not contain clauses that (i) require the originating bank to alter the underlying exposures such that the pool's credit quality is improved unless

this is achieved by selling exposures to independent and unaffiliated third parties at market prices; (ii) allow for increases in a retained first-loss position or credit enhancement provided by the originating bank after the transaction's inception; or (iii) increase the yield payable to parties other than the originating bank, such as investors and third-party providers of credit enhancements, in response to a deterioration in the credit quality of the underlying pool.

- h. There are no termination options or triggers except eligible clean-up calls meeting the requirements of Section D below, termination for specific changes in tax and regulation, or early amortization provisions that result in the securitisation transaction failing the operational requirements set out in Section D below.
- i. Such other conditions as the Central Bank shall provide after notification to banks pursuant to a circular or otherwise.

Banks meeting these above conditions must still hold regulatory capital against any exposure they retain under the securitisation.

7. The transferor's retention of servicing rights to the exposures does not in itself constitute indirect control of the exposures.

B. Operational requirements for synthetic securitisations

8. For synthetic securitisations, the use of credit risk mitigation (CRM) techniques (i.e., collateral, guarantees and credit derivatives) for hedging the underlying exposure may be recognized for risk-based capital purposes only if the conditions outlined below are satisfied:

- a. Credit risk mitigants comply with the requirements set out for CRM in the Central Bank's *Standard for Credit Risk*.
- b. Eligible collateral is limited to that specified as eligible under in the Central Bank's *Standards for Credit Risk* (eligible collateral pledged by SPEs may be recognized).
- c. Eligible guarantors are as defined in the Central Bank's *Standard for Credit Risk* (SPEs are not considered to be eligible guarantors).
- d. Significant credit risk associated with the underlying exposures is transferred by the bank to third parties.
- e. Instruments used to transfer credit risk do not contain terms or conditions that limit the amount of credit risk transferred.
- f. The bank obtains a legal opinion that confirms the enforceability of the contract.
- g. Such other conditions as the Central Bank shall provide after notification to banks pursuant to a circular or otherwise.

9. Clean-up calls for synthetic securitisations also must satisfy the conditions set out in Section D below. If a synthetic securitisation incorporates a call (other than a clean-up call) that effectively terminates the transaction and the purchased credit protection on a specific date, the bank should treat this as required under the Central Bank's *Standard for Credit Risk* for CRM maturity mismatch. This requirement does not apply to synthetic securitisations that are assigned a risk weight of 1250%.

C. Operational requirements for securitisations containing early amortisation provisions

10. A transaction is deemed to fail the operational requirements for traditional or synthetic securitisations stated above in this Standard if the bank originates or sponsors a securitisation

transaction that includes one or more revolving credit facilities, and the securitisation transaction incorporates an early amortization or similar provision that, if triggered, would:

- i. Subordinate the bank's senior or pari passu interest in the underlying revolving credit facilities to the interest of other investors;
- ii. Subordinate the bank's subordinated interest to an even greater degree relative to the interests of other parties;
- iii. In other ways increases the bank's exposure to losses associated with the underlying revolving credit facilities; or
- iv. Not satisfy any conditions as set by the Central Bank after notification to banks pursuant to a circular or otherwise.

11. If a transaction contains one of the following examples of an early amortization provision but otherwise meets the operational requirements for traditional or synthetic securitisations stated above in this Standard, the originating bank may exclude the underlying exposures associated with such a transaction from the calculation of risk-weighted assets, but must still hold regulatory capital against any securitisation exposures they retain in connection with the transaction:

- a. Replenishment structures where the underlying exposures do not revolve and early amortization terminates the ability of the bank to add new exposures;
- b. Transactions with revolving credit facilities containing early amortization features that mimic term structures (i.e., where the risk on the underlying revolving credit facilities does not return to the originating bank) and where the early amortization provision does not effectively result in subordination of the originator's interest;
- c. Structures where a bank securitizes one or more revolving credit facilities and where investors remain fully exposed to future drawdowns by borrowers even after an early amortization event has occurred; or
- d. The early amortization provision is triggered solely by events not related to the performance of the underlying assets or the selling bank, such as material changes in tax laws or regulations.

D. Operational requirements and treatment of clean-up calls

12. For securitisation transactions that include a clean-up call, no capital shall be required due to the presence of a clean-up call if the following conditions are met:

- a. The exercise of the clean-up call is not mandatory, in form or in substance, but rather is at the discretion of the originating bank;
- b. The clean-up call is not structured to avoid allocating losses to credit enhancements or positions held by investors or otherwise structured to provide credit enhancement; and
- c. The clean-up call is exercisable only when 10% or less of the original underlying portfolio or securities issued remains, or, for synthetic securitisations, when 10% or less of the original reference portfolio value remains.
- d. Such other conditions as the Central Bank shall provide after notification to banks pursuant to a circular or otherwise.

13. Securitisation transactions that include a clean-up call that does not meet all of the criteria stated in the immediately preceding paragraph result in a capital requirement for the originating bank. For a traditional securitisation, the bank must treat the underlying exposures

as if they were not securitized. Additionally, banks must not recognize in regulatory capital any gain on sale. For synthetic securitisations, the bank purchasing protection must hold capital against the entire amount of the securitized exposures as if they did not benefit from any credit protection.

14. If a clean-up call, when exercised, is found to serve as a credit enhancement, the exercise of the clean-up call must be considered a form of implicit support provided by the bank, and must be treated as such in accordance with the requirements related to implicit support stated below in this Standard.

E. Operational requirement for UAE originating banks

15. The following types of securitisations, if the originating bank is UAE based, will only be permitted in specific instances and require the Central Bank's approval:

- a. securitisation of revolving credit facilities
- b. synthetic securitisation
- c. resecuritisation exposure

IV. Due Diligence Requirements

16. A bank must meet all the requirements listed below to use any of the approaches specified in the Standard. If a bank does not perform the level of due diligence as described in this section, it must then assign a 1250% risk weight to any securitisation (or re-securitisation) exposure.

17. On an ongoing basis, the bank must have a comprehensive understanding of the risk characteristics of its individual securitisation exposures, whether on- or off-balance sheet, as well as the risk characteristics of the pools underlying its securitisation exposures. The extent of a bank's due diligence should be appropriate to the nature and complexity of the bank's securitisation related exposures. The bank should have in place effective internal policies, processes, and systems to ensure that the necessary due diligence activities are performed and should be able to demonstrate to the Central Bank that the due diligence analysis conducted is appropriate and effective.

18. Banks must be able to obtain performance information on the underlying pools on an ongoing basis in a timely manner. Such information may include, as appropriate: exposure type; percentage of loans 30, 60 and 90 days past due; default rates; prepayment rates; loans in foreclosure; property type; occupancy; average credit score or other measures of creditworthiness; average loan-to-value ratio; and industry and geographical diversification. For resecuritisations, banks should have information not only on the underlying securitisation tranches, such as the issuer name and credit quality, but also on the characteristics and performance of the pools underlying those securitisation tranches.

19. A bank must have a thorough understanding of all structural features of a securitisation transaction that would materially affect the performance of the bank's exposures to the transaction, such as the contractual waterfall and waterfall-related triggers, credit enhancements, liquidity enhancements, market value triggers, and deal-specific definitions of default.

V. Treatment Of Securitisation Exposures

A. Calculation of exposure amounts and risk-weighted assets

20. For regulatory capital purposes, the exposure amount of a securitisation exposure shall be calculated as the sum of the on-balance sheet amount of the exposure, or carrying value – taking into account purchase discounts and write-downs or specific provisions the

bank took on this securitisation exposure – and any off-balance sheet exposure amount as applicable, in accordance with the requirements in the following paragraphs.

21. For credit risk mitigants sold or purchased by the bank, the exposure amount should be determined using the treatment of credit risk mitigation set out below in the section on treatment of credit risk mitigation in this Standard. For all off-balance-sheet facilities that are not credit risk mitigants, the bank should apply a credit conversion factor (CCF) of 100%.

22. For securitisation-related derivatives other than credit risk derivatives (such as interest rate or currency swaps sold or purchased as part of the securitisation), the Central Bank's Standard on Counterparty Credit Risk should be used to calculate the exposure amount.

23. Banks shall compute the risk-weighted asset amount for a securitisation exposure by multiplying the exposure amount as defined in this section by the appropriate risk weight determined under one of the approaches discussed below in this Standard. Risk weight caps may apply, as described in the this Standard on risk-weight caps for securitisation.

24. Banks may adjust risk weights for overlapping exposures. An exposure A overlaps another exposure B if in all circumstances the bank can avoid any loss on exposure B by fulfilling its obligations with respect to exposure A. A bank may also recognize overlap between relevant capital charges for exposures in the trading book and securitisation exposures in the banking book, provided that the bank is able to calculate and compare the capital charges for the relevant exposures.

25. Banks must deduct from Common Equity Tier 1 any increase in equity capital resulting from a securitisation transaction, such as a gain on a sale associated with expected future margin income.

B. Approaches for Risk-Weighted Assets

26. Securitisation exposures are risk-weighted under one of two available approaches for securitisation, the Securitisation External Ratings-Based Approach (SEC-ERBA) or the Standardized Approach (SEC-SA). A bank must use SEC-ERBA if the exposure has an external credit assessment that meets the operational requirements for an external credit assessment, or an inferred rating that meets the operational requirements for inferred ratings. If a bank cannot use the SEC-ERBA, the bank must use the SEC-SA. Banks that are unable to apply either approach a securitisation exposure must assign such an exposure a risk weight of 1250%.

1. Calculation of Attachment and Detachment Points

27. Both the SEC-ERBA and the SEC-SA rely on the identification of attachment and detachment points for each securitisation tranche, which are decimal values between zero and one that capture the pool-loss conditions under which a securitisation exposure would experience losses due to the credit performance of the underlying pool of exposures.

28. The attachment point (A) represents the threshold (as a fraction of the pool's total exposure) at which losses within the underlying pool would first be allocated to the securitisation exposure. The attachment point is calculated as:

(i) the outstanding balance of all underlying assets in the securitisation

minus

(ii) the outstanding balance of all tranches that rank senior or pari passu to the tranche that contains the securitisation exposure of the bank (including the exposure itself)

divided by

(ii) the outstanding balance of all underlying assets in the securitisation.

29. The detachment point (D) represents the threshold at which losses within the underlying pool result in a total loss of principal for the tranche in which a securitisation exposure resides. The detachment point is calculated as:

(i) the outstanding balance of all underlying assets in the securitisation

minus

(ii) the outstanding balance of all tranches that rank senior to the tranche that contains the securitisation exposure of the bank

divided by

(ii) the outstanding balance of all underlying assets in the securitisation.

30. Both A and D must be no less than zero.

31. For the calculation of A and D: (i) overcollateralization and funded reserve accounts must be recognized as tranches; and (ii) the assets forming these reserve accounts must be recognized as underlying assets. A bank can recognize only the loss-absorbing part of the funded reserve accounts that provide credit enhancement for this purpose. Unfunded reserve accounts, such as those to be funded from future receipts from the underlying exposures (e.g. unrealized excess spread) and assets that do not provide credit enhancement like pure liquidity support, currency or interest-rate swaps, or cash collateral accounts related to these instruments must not be included in the above calculation of A and D. Banks should take into consideration the economic substance of the transaction and apply these definitions conservatively.

2. External Ratings-Based Approach (SEC-ERBA)

32. For securitisation exposures that are externally rated, or for which a rating can be inferred as described below, risk-weighted assets under the SEC-ERBA will be determined by multiplying securitisation exposure amounts by the appropriate risk weights determined from Tables 1 and 2, provided that the following operational criteria for the use of external ratings are met:

- a. The external credit assessments must take into account and reflect the entire amount of credit risk exposure the bank has with regard to all payments owed to it.
- b. The external credit assessments must be from an eligible external credit assessment institution (ECAI) which is also approved by the Central Bank.
- c. The rating must be published in an accessible form, such as on a public website or in a periodically distributed paper publication. Loss and cash flow analysis as well as sensitivity of ratings to changes in the underlying rating assumptions should be publicly available.
- d. Eligible ECAIs must have a demonstrated expertise in assessing securitisations, which may be evidenced by strong market acceptance.

33. A bank may infer a rating for an unrated position from an externally rated "reference exposure" for purposes of the SEC-ERBA provided that the following operational requirements are satisfied:

- a. The reference securitisation exposure must rank pari passu or be subordinate in all respects to the unrated securitisation exposure. Credit enhancements, if any,

must be taken into account when assessing the relative subordination of the unrated exposure and the reference securitisation exposure.

- b. The maturity of the reference securitisation exposure must be equal to or longer than that of the unrated exposure.
- c. The inferred rating must be updated on an ongoing basis to reflect any subordination of the unrated position or changes in the external rating of the reference securitisation exposure.
- d. The external rating of the reference securitisation exposure must satisfy the general requirements for recognition of external ratings as defined in this Standard.

34. Where CRM is provided to specific underlying exposures or to the entire pool by an eligible guarantor and the CRM is reflected in the external credit assessment of a securitisation exposure, banks should use the risk weight associated with that external credit assessment. In order to avoid any double-counting, no additional capital recognition is permitted. If the CRM provider is not recognized as an eligible guarantor, banks should treat the covered securitisation exposures as unrated.

35. In the situation where a credit risk mitigant solely protects a specific securitisation exposure within a given structure (e.g., an asset-backed security tranche) and this protection is reflected in the external credit assessment, the bank must treat the exposure as if it is unrated and then apply the CRM treatment specified in the Central Bank's *Standard for Credit Risk*.

36. A bank is not permitted to use any external credit assessment for risk-weighting purposes where the assessment is based at least partly on unfunded support provided by the bank (such as a letter of credit provided by the bank that enhance the credit quality of the securitisation). If a bank buys ABCP where it provides an unfunded securitisation exposure extended to the ABCP program (e.g., liquidity facility or credit enhancement), and that exposure plays a role in determining the credit assessment on the ABCP, the bank must treat the ABCP as if it were not rated. The bank must continue to hold capital against the other securitisation exposures it provides (e.g., against the liquidity facility and/or credit enhancement).

37. For exposures with short-term ratings, or when an inferred rating based on a short-term rating is available, the risk weights in Table 1 apply unless otherwise notified by the Central Bank.

Table 1: SEC-ERBA risk weights for short-term ratings²

External credit assessment	A-1/P-1	A-2/P-2	A-3/P-3	All other ratings
Risk weight	15%	50%	100%	1250%

38. For exposures with long-term ratings, or with an inferred rating based on a long-term rating, risk weights are determined according to Table 2, after adjustment for tranche maturity

² The rating designations used in this and all other tables are for illustrative purposes only, and do not indicate any preference for, or endorsement of, any particular external assessment system.

as specified below and, for non-senior tranches, tranche thickness as specified below (unless otherwise notified by the Central Bank).

Table 2: SEC-ERBA risk weights for long-term ratings

(Subject to adjustment for tranche maturity and tranche thickness)

Rating	Senior		Non-senior (thin) tranche	
	<i>Tranche maturity (M_T)</i>		<i>Tranche maturity (M_T)</i>	
	<i>1 year</i>	<i>5 years</i>	<i>1 year</i>	<i>5 years</i>
AAA	15%	20%	15%	70%
AA+	15%	30%	15%	90%
AA	25%	40%	30%	120%
AA–	30%	45%	40%	140%
A+	40%	50%	60%	160%
A	50%	65%	80%	180%
A–	60%	70%	120%	210%
BBB+	75%	90%	170%	260%
BBB	90%	105%	220%	310%
BBB–	120%	140%	330%	420%
BB+	140%	160%	470%	580%
BB	160%	180%	620%	760%
BB–	200%	225%	750%	860%
B+	250%	280%	900%	950%
B	310%	340%	1050%	1050%
B–	380%	420%	1130%	1130%
CCC+/CCC/CCC–	460%	505%	1250%	1250%
Below CCC–	1250%	1250%	1250%	1250%

39. To account for tranche maturity, banks shall use tranche maturity (M_T) calculated as described below to derive the risk weight through linear interpolation between the risk weights for one year and five years from the table.

40. To account for tranche thickness, for non-senior tranches banks must multiply the risk weight derived from the table by a factor of $1-(D-A)$. However, the resulting risk weight must be no less than half the risk weight derived directly from the table based on maturity.

41. The risk weight is subject to a floor of 15%. In addition, the resulting risk weight should never be lower than the risk weight corresponding to a senior tranche of the same securitisation with the same rating and maturity.

Tranche maturity (M_T)

42. Tranche maturity is a tranche's remaining effective maturity in years, calculated in one of the following two ways, subject to a floor of one year and a cap of five years:

- (a) Weighted-average maturity, calculated as the weighted-average maturity of the contractual cash flows of the tranche:

$$M_T = \frac{\sum_t t \times CF_t}{\sum_t CF_t}$$

where:

CF_t denotes the cash flows (principal, interest payments and fees) contractually payable by the borrower in period t ; or

- (b) Legal maturity, based on final legal maturity of the tranche as follows:

$$M_T = 1 + (M_L - 1) \times 80\%$$

where M_L is the final legal maturity of the tranche in years.

43. Banks have discretion to choose either method to calculate tranche maturity. However, under the weighted-average maturity method, contractual payments must be unconditional and must not be dependent on the actual performance of the securitized assets. If such unconditional contractual payment dates are not available, the bank must use the legal maturity calculation.

44. When determining the maturity of a securitisation exposure, banks should take into account the maximum period of time they are exposed to potential losses from the securitized assets. In cases where a bank provides a commitment, the bank should calculate the maturity of the securitisation exposure resulting from this commitment as the sum of the contractual maturity of the commitment and the longest maturity of the assets to which the bank would be exposed after a draw has occurred. If those assets are revolving, banks should use the longest contractually possible remaining maturity of assets that might be added during the revolving period, rather than the longest maturity of the assets currently in the pool. An exception applies for credit protection instruments that are only exposed to losses that occur up to the maturity of that instrument. In such cases, a bank is allowed to apply the contractual maturity of the credit protection and is not required to look through to the protected position.

3. **Standardized Approach (SEC-SA)**

45. Under the SEC-SA, a bank calculates risk weights using a supervisory formula and the following bank-supplied inputs:

W : the ratio of delinquent underlying exposures to total underlying exposures in the securitisation pool;

K_{SA} : the capital charge that would apply to the underlying exposures had they not been securitized;

A : the tranche attachment point as defined above; and

D : the tranche detachment point as defined above.

46. K_{SA} is the weighted-average capital charge of the entire portfolio of underlying exposures, calculated as 8% multiplied by the average risk weight of the underlying pool exposures. The average risk weight is the total risk-weighted asset amount divided by the sum of the underlying exposure amounts. This calculation should take into account the effects of any credit risk mitigation applied to the underlying exposures (either individually or to the entire pool). K_{SA} is expressed as a decimal between zero and one; that is, a weighted-average risk weight of 100% means that K_{SA} would equal 0.08.

47. For structures involving an SPE, banks should treat all of the SPE's exposures related to the securitisation as exposures in the pool, including assets in which the SPE may have invested such as reserve accounts or cash collateral accounts, and claims against counterparties resulting from interest swaps or currency swaps. A bank can exclude exposures from the calculation if the bank can demonstrate to the Central Bank that the risk does not affect its particular securitisation exposure or that the risk is immaterial, for example because it has been mitigated.

48. In the case of funded synthetic securitisations, any proceeds of the issuances of credit-linked notes or other funded obligations of the SPE that serve as collateral for the repayment of the securitisation exposure in question, and which the bank cannot demonstrate to the Central Bank are immaterial, must be included in the calculation of K_{SA} if the default risk of the collateral is subject to the tranching loss allocation.

49. In cases where a bank has set aside a specific provision or has a non-refundable purchase price discount on an exposure in the pool, K_{SA} must be calculated using the gross amount of the exposure without the specific provision and/or non-refundable purchase price discount.

50. The variable W equals the ratio of the sum of the nominal amount of delinquent underlying exposures to the nominal amount of underlying exposures. Delinquent underlying exposures are defined as underlying exposures that are 90 days or more past due, subject to bankruptcy or insolvency proceedings, in the process of foreclosure, held as real estate owned, or in default, where default is defined within the securitisation deal documents.

51. The inputs K_{SA} and W are used as inputs to calculate K_A , as follows:

$$K_A = (1 - W) \times K_{SA} + (W \times 0.5)$$

52. If a bank does not know the delinquency status of the entire pool, the bank should adjust the calculation of K_A as follows, using the relevant nominal amounts of exposures in the pool (denoted EAD below):

$$K_A = \frac{EAD_{\text{Subpool 1 where } W \text{ known}}}{EAD \text{ Total}} \times K_A^{\text{Subpool 1 where } W \text{ known}} + \frac{EAD_{\text{Subpool 2 where } W \text{ unknown}}}{EAD \text{ Total}}$$

However, if the portion of the pool for which the bank does not know the delinquency status exceeds 5 percent of the total pool, the securitisation exposure must be risk weighted at 1250%.

53. The capital requirement per unit of the securitisation exposure under the SEC-SA is:

$$K = \frac{e^{a \cdot U} - e^{a \cdot L}}{a \times (U - L)}$$

where:

$$a = \frac{-1}{\rho \times K_A}$$

$$U = D - K_A$$

$$L = \max[(A - K_A), 0]$$

54. The supervisory parameter ρ is set equal to 1 for a securitisation exposure that is not a resecuritisation exposure. (See below for the case of resecuritisation exposures.)

55. The risk weight assigned to a securitisation exposure when applying the SEC-SA is calculated as follows:

- When D for a securitisation exposure is less than or equal to K_A , the exposure must be assigned a risk weight of 1250%.

- When A for a securitisation exposure is greater than or equal to K_A , the risk weight of the exposure, expressed as a percentage, is $12.5 \times K$.

When A is less than K_A and D is greater than K_A , the applicable risk weight is a weighted average of 1250% and $12.5 \times K$ according to the following formula:

$$RW = \left(\frac{K_A - A}{D - A} \right) \times 12.5 + \left(\frac{D - K_A}{D - A} \right) \times 12.5 \times K$$

56. The risk weight for market-risk hedges such as currency or interest rate swaps shall be inferred from a securitisation exposure that is *pari passu* to the swaps or, if such an exposure does not exist, from the next subordinated tranche.

57. The SEC-SA risk weights are subject to a floor risk weight of 15%. Moreover, when a bank applies the SEC-SA to an unrated junior exposure in a transaction where the more senior tranches (exposures) are rated and no rating can be inferred for the junior exposure, the resulting risk weight under SEC-SA for the junior unrated exposure shall not be lower than the risk weight for the next more senior rated exposure.

C. Risk weight caps for securitisation exposures

58. Banks may apply a “look-through” approach to senior securitisation exposures, whereby the risk weight for the senior securitisation exposure is at most equal to the exposure-weighted average risk weight applicable to the underlying pool exposures. To apply a maximum risk weight from this look-through approach, the bank must be able to know the composition of the underlying exposures at all times. For an originating or sponsor bank, capital requirements on securitisation exposures are capped at what the capital requirement would have been on the underlying exposures if they had not been securitized.

59. The maximum required capital ratio for the aggregate of a bank’s securitisation exposures to a given securitisation shall be computed as K_{SA} multiplied by P, where P is the largest proportion of interest the bank holds.

- For a bank that has one or more securitisation exposures that reside in a single tranche of a given pool, P equals the proportion (expressed as a percentage) of securitisation exposure that the bank holds in that given tranche (calculated as the bank’s total exposure in the tranche) divided by the total nominal amount of the tranche.
- For a bank that has securitisation exposures that reside in different tranches of a given securitisation, P equals the maximum proportion of interest across tranches, where the proportion of interest for each of the different tranches should be calculated as described above.

60. Where this risk-weight cap results in a lower risk weight than the floor risk weight of 15%, the bank should use the risk weight resulting from the cap.

61. In applying the capital charge cap, banks must deduct the entire amount of any gain on sale, and the amount of credit-enhancing interest-only strips arising from the securitisation transaction.

62. The caps described here do not apply to resecuritisation exposures.

VI. Treatment of Resecuritisation

For risk weighting of resecuritisation exposures, banks must apply only the SEC-SA as specified above (not the SEC-ERBA), with the following adjustments:

- The capital requirement (K_{SA}) of the underlying securitisation exposures is calculated using the securitisation framework;
- Delinquencies (W) are set to zero for any exposure to a securitisation tranche in the underlying pool; and
- The supervisory parameter p is set equal to 1.5, rather than 1 as for securitisation exposures.

63. The resulting risk weight for resecuritisation exposures is subject to a minimum risk weight of 100%.

64. If the underlying portfolio of a resecuritisation consists partly of a pool of exposures to securitisation tranches and partly of other assets, banks should separate the exposures to securitisation tranches from exposures to assets that are not securitisations. Banks should calculate the K_A parameter separately for each individual subset. Separate W parameters should be applied to each subset, set to zero where the exposures are to securitisation tranches, or calculated according to this Standard for the subsets where the exposures are to assets that are not securitisation tranches. The K_A for the resecuritisation exposure is then the exposure-weighted average of the calculated K_A values for the separate subsets.

VII. Implicit Support

65. The originator shall not provide any implicit support to investors in a securitisation transaction.

66. When a bank provides implicit support to a securitisation, it must hold capital against all of the underlying exposures associated with the securitisation transaction as if they had not been securitized. Additionally, the bank is not permitted to recognize in regulatory capital any gain on sale. Furthermore, the bank is required to disclose publicly (a) that it has provided non-contractual support and (b) the capital impact of doing so.

67. Where a securitisation transaction contains a clean-up call and the clean up call can be exercised by the originator in circumstances where exercise of the clean up call effectively provides credit enhancement, the clean up call shall be treated as implicit support and the concerned securitisation transaction will attract the above prescriptions.

VIII. Treatment of Credit Risk Mitigation for Securitisation Exposures

68. A bank may recognize the following forms of purchased credit protection in accordance with the CRM framework when calculating capital requirements:

- collateral eligible for CRM under the Central Bank's *Standard for Credit Risk*, including collateral pledged by SPEs;
- credit protection provided by eligible guarantors, but not including SPEs; and
- Guarantees or credit derivatives that fulfil the requirements for CRM under the Central Bank's *Standard for Credit Risk*.

69. When a bank provides full (or pro rata) credit protection to a securitisation exposure, the bank must calculate its capital requirements as if it directly holds the portion of the securitisation exposure on which it has provided credit protection, using the requirements of this Standard.

Tranched protection

70. With tranching credit protection, the original securitisation tranche is decomposed into protected and unprotected sub-tranches. A provider of tranching credit protection must calculate required capital as if directly exposed to the particular sub-tranche of the securitisation exposure on which it is providing protection, according to the capital requirements for securitisations under this Standard.

71. A buyer of tranching credit protection may recognize tranching protection on the guaranteed or protected portion according to the applicable CRM framework, provided that the conditions for recognition of credit risk mitigation are met.

72. For a bank using the SEC-SA for the original securitisation exposure, the parameters A and D should be calculated separately for each unprotected sub-tranche as if they were directly issued as separate tranches at the inception of the transaction.

73. For a bank using the SEC-ERBA for the original securitisation exposure, the relevant risk weights for the different sub-tranches are as follows:

- For the sub-tranche of highest priority, the bank should use the risk weight of the original securitisation exposure.
- For a sub-tranche of lower priority, if the bank can infer a rating from one of the subordinated tranches of the original transaction, the risk weight of the sub-tranche can be determined by applying the inferred rating for the SEC-ERBA, with the tranche thickness computed for the sub-tranche of lower priority only.
- For a sub-tranche of lower priority where the bank cannot infer a rating, the risk weight for the sub-tranche of lower priority is the larger of (a) the SEC-SA risk weight with the parameters A and D calculated separately for each of the sub-tranches as if they were directly issued as separate tranches at the inception of the transaction, or (b) the SEC-ERBA risk weight of the original securitisation exposure prior to recognition of protection.

74. Under all approaches, a lower-priority sub-tranche must be treated as a non-senior securitisation exposure even if the original securitisation exposure prior to protection qualified as senior.

Maturity mismatches

75. A maturity mismatch exists when the residual maturity of a hedge is less than that of the underlying exposure.

76. In the case of a maturity mismatch on protection provided for a securitisation exposure, the banks should follow the approach to maturity mismatches specified in the Central Bank's *Standard for Credit Risk*. When the exposures being hedged have different maturities, the longest maturity must be used.

77. Banks that synthetically securitize exposures held on their balance sheet by purchasing tranching credit protection must apply the maturity mismatch treatment specified in the Central Bank's *Standard for Credit Risk*. When the exposures being hedged have different maturities, banks must use the longest maturity. However, for securitisation exposures that are assigned a risk weight of 1250%, maturity mismatches are not taken into account.

IX. Capital Treatment for STC Securitisations

A. Scope and identification of STC securitisations

78. For regulatory capital purposes, only the following types of exposures can be STC-compliant:

- Exposures to non-ABCP, traditional securitisations that meet the criteria in Appendix 1 below.
- Exposures to ABCP conduits and/or transactions financed by ABCP conduits, where the conduit and/or the transactions financed meet the criteria in Appendix 2 below.

79. Synthetic securitisations, securitisation of revolving credit facilities and resecuritisations are not considered as STC-compliant.

80. STC treatment will not be applied if banks having investment in international securitisation

B. Compliance with the STC criteria and the additional criteria for capital purpose and oversight

81. The originator or sponsor must disclose to investors all necessary information at the transaction level to allow investors to determine whether the securitisation is STC-compliant. Based on the information provided by the originator or sponsor, the investor must make an assessment of the STC compliance status of the securitisation for regulatory capital purposes.

82. For retained positions where the originator has achieved significant risk transfer in accordance with the operational requirements of this Standard, the determination shall be made by the originator retaining the position.

83. STC criteria must be met at all times. Checking compliance with some of the criteria might only be necessary at origination (or at the time of initiating the exposure, in case of guarantees or liquidity facilities). Investors and holders of the securitisation positions are expected to take into account developments that may invalidate previous compliance assessments, for example deficiencies in the frequency and content of the investor reports, in the alignment of interest, or changes in the transaction documentation at variance with relevant STC criteria. For dynamic pools, the criteria should be checked every time assets are added to the pool.

C. Alternative capital treatment for STC-compliant securitisations

84. Securitisation transactions that are assessed as STC-compliant for capital purposes shall be subject to securitisation capital requirements as modified by this Standard. The resulting risk weights are subject to a floor risk weight of 10% for senior tranches, and 15% for non-senior tranches.

1. External Ratings-Based Approach for STC Securitisation Exposures

85. When the SEC-ERBA is used, for exposures with short-term ratings or an inferred rating based on a short-term rating, the risk weights in Table 3 apply.

Table 3: SEC-ERBA risk weights for STCs with short-term ratings

External credit assessment	A-1/P-1	A-2/P-2	A-3/P-3	All other ratings
Risk weight	10%	30%	60%	1250%

86. For STC exposures with long-term ratings, risk weights under SEC-ERBA are determined according to Table 4, with adjustments for tranche maturity and (for non-senior tranches) tranche thickness as discussed above in this Standard for non-STC exposures.

Table 4: SEC-ERBA risk weights for STCs with long-term ratings
(Subject to adjustment for tranche maturity and tranche thickness)

Rating	Senior		Non-senior (thin) tranche	
	<i>Tranche maturity (MT)</i>		<i>Tranche maturity (MT)</i>	
	<i>1 year</i>	<i>5 year</i>	<i>1 year</i>	<i>5 year</i>
AAA	10%	10%	15%	40%
AA+	10%	15%	15%	55%
AA	15%	20%	15%	70%
AA–	15%	25%	25%	80%
A+	20%	30%	35%	95%
A	30%	40%	60%	135%
A–	35%	40%	95%	170%
BBB+	45%	55%	150%	225%
BBB	55%	65%	180%	255%
BBB–	70%	85%	270%	345%
BB+	120%	135%	405%	500%
BB	135%	155%	535%	655%
BB–	170%	195%	645%	740%
B+	225%	250%	810%	855%
B	280%	305%	945%	945%
B–	340%	380%	1015%	1015%
CCC+/CCC/CC	415%	455%	1250%	1250%
Below CCC–	1250%	1250%	1250%	1250%

2. Standardized Approach for STC Securitisation Exposures

87. If a bank uses the SEC-SA for an STC securitisation exposure, the bank should set the supervisory parameter p equal to 0.5. The SEC-SA framework is otherwise unchanged for STC exposures.

X. Review Requirements

88. Bank calculations and associated bank processes related to capital requirements for securitisations under this Standard must be subject to appropriate levels of independent review and challenge. Reviews must cover material aspects of the calculations and processes under this Standard, including but not limited to the internal assessment and control process for the various operational requirements, calculation of exposure amounts for both on-balance-sheet and any off-balance-sheet securitisation-related exposures, calculation of tranche maturity and tranche thickness and the related risk-weight adjustments for the SEC-ERBA, and the calculation of all necessary parameters for the SEC-SA.

XI. Shari'ah Implementation

89. Banks offering Islamic financial services that use Shari'ah Compliant Securitisation Exposures held in the banking book which are approved by their internal Shari'ah control committees should manage the risks associated with securitisation and calculate the risk weighted asset (RWA) in line with this standard and guidance, to accordingly maintain the appropriate amount of capital, in accordance with the provisions set out in this standard and guidance in a manner acceptable by Shari'ah. This is applicable until relevant standards and/or guidance in respect of these transactions are issued specifically for banks offering Islamic financial service.

XII. Appendix

Appendix 1: Criteria for STC Exposures

This Appendix 1 provides criteria, as well as certain guidance and clarifications, for Simple, Transparent, and Comparable (STC) securitisation exposures, together with certain additional requirements that must be satisfied in order for a securitisation to receive alternative regulatory capital treatment. These criteria do not cover short-term securitisations such as ABCP conduits or similar programs; criteria for such short-term securitisations are covered in Appendix 2 below.

A. Asset risk

1. Nature of Assets

In simple, transparent and comparable securitisations, the assets underlying the securitisation should be credit claims or receivables that are homogeneous. In assessing homogeneity, consideration should be given to asset type, jurisdiction, legal system and currency.

As more exotic asset classes require more complex and deeper analysis, credit claims or receivables should have contractually identified periodic payment streams relating to rental,³ principal, interest, or principal and interest payments. Any referenced interest payments or discount rates should be based on commonly encountered market interest rates, but should not reference complex or complicated formulas or exotic derivatives as specified below.

Homogeneity

For capital purposes, the homogeneity of assets in the pool should be assessed taking into account the following principles:

- The nature of assets should be such that investors would not need to analyse and assess materially different legal and/or credit risk factors and risk profiles when carrying out risk analysis and due diligence checks.
- Homogeneity should be assessed on the basis of common risk drivers, including similar risk factors and risk profiles.
- Credit claims or receivables included in the securitisation should have standard obligations, in terms of rights to payments and/or income from assets and that result in a periodic and well-defined stream of payments to investors. Credit card facilities should be deemed to result in a periodic and well-defined stream of payments to investors for the purposes of this criterion.
- Repayment of noteholders should mainly rely on the principal and interest proceeds from the securitized assets. Partial reliance on refinancing or re-sale of the asset securing the exposure may occur provided that re-financing is sufficiently distributed within the pool and the residual values on which the transaction relies are sufficiently low and that the reliance on refinancing is thus not substantial.

Commonly encountered market interest rates

The term “commonly encountered market interest rates” should be understood to encompass rates reflective of a lender’s cost of funds, to the extent that sufficient data are provided to

³ Payments on operating and financing leases are typically considered to be rental payments rather than payments of principal and interest.

investors to allow them to assess their relation to other market rates. Examples of these would include:

- Interbank rates and rates set by monetary policy authorities, such as LIBOR, EURIBOR, EIBOR and the Fed funds rate; and
- Sectoral rates reflective of a lender's cost of funds, such as internal interest rates that directly reflect the market costs of a bank's funding or that of a subset of institutions.

Exotic derivatives

Determination of whether particular derivatives are "exotic" is inevitably somewhat subjective, but banks should apply a reasonable and conservative process to identifying exotic instruments. The Global Association of Risk Professionals (GARP) defines an exotic instrument as a financial asset or instrument with features making it more complex than simpler, plain vanilla, products. Interest rate caps and/or floors would not automatically be considered exotic derivatives.

2. *Asset performance history*

In order to provide investors with sufficient information on an asset class to conduct appropriate due diligence and access to a sufficiently rich data set to enable a more accurate calculation of expected loss in different stress scenarios, verifiable loss performance data, such as delinquency and default data, should be available for credit claims and receivables with substantially similar risk characteristics to those being securitized, for a time period long enough to permit meaningful evaluation by investors. Sources of and access to data, and the basis for claiming similarity to credit claims or receivables being securitized, should be clearly disclosed to all market participants.

In addition to the history of the asset class within a jurisdiction, investors should consider whether the originator, sponsor, servicer and other parties with fiduciary responsibilities to the securitisation have an established performance history for substantially similar credit claims or receivables to those being securitized and for an appropriately long period.

The originator or sponsor of the securitisation, as well as the original lender, who underwrites the assets, must have sufficient experience in originating exposures similar to those securitized.

When determining whether the performance history of the originator and the original lender for substantially similar claims or receivables to those being securitized has been established for an "appropriately long period of time," investors should consider a performance history no shorter than a period of seven years for non-retail exposures. For retail exposures, the minimum performance history is five years.

3. *Payment status*

Non-performing credit claims and receivables are likely to require more complex and heightened analysis. In order to ensure that only performing credit claims and receivables are assigned to a securitisation, credit claims or receivables being transferred to the securitisation may not, at the time of inclusion in the pool, include obligations that are in default or delinquent or obligations for which the transferor (e.g. the originator or sponsor) or parties to the securitisation (e.g. the servicer or a party with a fiduciary responsibility¹) are aware of evidence indicating a material increase in expected losses or of enforcement actions.

To prevent credit claims or receivables arising from credit-impaired borrowers from being transferred to the securitisation, the originator or sponsor should verify that the credit claims or receivables meet the following conditions:

- a. The obligor has not been the subject of an insolvency or debt restructuring process due to financial difficulties within three years prior to the date of origination;⁴
- b. The obligor is not recorded on a public credit registry of persons with an adverse credit history;
- c. The obligor does not have a credit assessment by an ECAI or a credit score indicating a significant risk of default; and
- d. The credit claim or receivable is not subject to a dispute between the obligor and the original lender.

The assessment of these conditions should be carried out by the originator or sponsor no earlier than 45 days prior to the closing date. Additionally, at the time of this assessment, there should be to the best knowledge of the originator or sponsor no evidence indicating likely deterioration in the performance status of the credit claim or receivable.

Additionally, at the time of their inclusion in the pool, at least one payment should have been made on the underlying exposures, except in the case of revolving asset trust structures such as those for credit card receivables, trade receivables, and other exposures payable in a single instalment at maturity.

4. Consistency of underwriting

Investor analysis generally is simpler and more straightforward where the securitisation is of credit claims or receivables that satisfy robust origination standards. To ensure that the quality of the securitized credit claims and receivables is not affected by changes in underwriting standards, the originator should demonstrate to investors that any credit claims or receivables being transferred to the securitisation have been originated in the ordinary course of the originator's business, without material deterioration in underwriting standards. Where underwriting standards change, the originator should disclose the timing and purpose of such changes. Underwriting standards should not be less stringent than those applied to credit claims and receivables retained on the balance sheet.

In all circumstances, all credit claims or receivables must be originated in accordance with sound and prudent underwriting criteria based on an assessment that the obligor has the "ability and volition to make timely payments" on its obligations, or in the case of granular pools of obligors, originated in the ordinary course of the originator's business with expected cash flows modelled to meet stated obligations of the securitisation under prudently stressed loan loss scenarios.

The originator or sponsor of the securitisation is expected, where underlying credit claims or receivables have been acquired from third parties, to review the underwriting standards of these third parties (i.e. to check their existence and assess their quality) and to ascertain that they have assessed the "ability and volition to make timely payments on obligations" for the obligors.

5. Asset selection and transfer

The performance of the securitisation should not rely upon the ongoing selection of assets through active management on a discretionary basis of the securitisation's underlying portfolio. Credit claims or receivables transferred to a securitisation should satisfy clearly defined eligibility criteria (such as criteria related to size of the obligation, age of the borrower, loan-to-value ratios, debt-to-income ratios, or debt service coverage ratios). Credit claims or receivables transferred to a securitisation after the closing date may not be actively selected,

⁴ This condition would not apply to borrowers that previously had credit incidents but were subsequently removed from credit registries as a result of the borrower cleaning their records. This is the case in jurisdictions in which borrowers have the "right to be forgotten."

actively managed or otherwise cherry-picked on a discretionary basis. Investors should be able to assess the credit risk of the asset pool prior to their investment decisions. Provided they are not actively selected or otherwise cherry-picked on a discretionary basis, the addition of credit claims or receivables during the revolving periods or their substitution or repurchasing due to the breach of representations and warranties do not represent active portfolio management.

In order to meet the principle of true sale, the securitisation should effect true sale such that the underlying credit claims or receivables:

- a. are enforceable against the obligor and their enforceability is included in the representations and warranties of the securitisation;
- b. Are beyond the reach of the seller, its creditors or liquidators and are not subject to material re-characterization or claw-back risks;
- c. are not effected through credit default swaps, derivatives or guarantees, but by a transfer⁵ of the credit claims or the receivables to the securitisation; and
- d. demonstrate effective recourse to the ultimate obligation for the underlying credit claims or receivables and are not a securitisation of other securitisations.

An independent third-party legal opinion must support the claim that the true sale and the transfer of assets under the applicable laws comply with points (a) through (d) above.

In applicable jurisdictions, securitisations employing transfers of credit claims or receivables by other means should demonstrate the existence of material obstacles preventing true sale at issuance (such as the immediate realization of transfer tax or the requirement to notify all obligors of the transfer) and should clearly demonstrate the method of recourse to ultimate obligors.⁶ In such jurisdictions, any conditions where the transfer of the credit claims or receivable is delayed or contingent upon specific events and any factors affecting timely perfection of claims by the securitisation should be clearly disclosed.

The originator should provide representations and warranties that the credit claims or receivables being transferred to the securitisation are not subject to any condition or encumbrance that can be foreseen to adversely affect enforceability in respect of collections due.

6. Initial and ongoing data

To assist investors in conducting appropriate due diligence prior to investing in a new offering, sufficient loan-level data in accordance with applicable laws or, in the case of granular pools, summary stratification data on the relevant risk characteristics of the underlying pool should be available to potential investors before pricing of a securitisation.

To assist investors in conducting appropriate and ongoing monitoring of performance and so that investors wishing to purchase a securitisation in the secondary market have sufficient information to conduct appropriate due diligence, timely loan-level data in accordance with applicable laws or granular pool stratification data on the risk characteristics of the underlying pool and standardized investor reports should be readily available to current and potential investors at least quarterly throughout the life of the securitisation. Cut-off dates for the loan-level or granular pool stratification data should be aligned with those used for investor reporting.

To provide a level of assurance that the reporting of the underlying credit claims or receivables is accurate and that the underlying credit claims or receivables meet the eligibility

⁵ The requirement should not affect jurisdictions whose legal frameworks provide for a true sale with the same effects as described above, but by means other than a transfer of the credit claims or receivables.

⁶ E.g., equitable assignment, perfected contingent transfer.

requirements, the initial portfolio should be reviewed⁷ for conformity with the eligibility requirements by an appropriate legally accountable and independent third party, such as an independent accounting practice or the calculation agent or management company for the securitisation. The review should confirm that the credit claims or receivables transferred to the securitisation meet the portfolio eligibility requirements. The review could, for example, be undertaken on a representative sample of the initial portfolio, with the application of a minimum confidence level. The verification report need not be provided but its results, including any material exceptions, should be disclosed in the initial offering documentation.

B. Structural risk

1. *Redemption cash flows*

Liabilities subject to the refinancing risk of the underlying credit claims or receivables are likely to require more complex and heightened analysis. To help ensure that the underlying credit claims or receivables do not need to be refinanced over a short period of time, there should not be a reliance on the sale or refinancing of the underlying credit claims or receivables in order to repay the liabilities, unless the underlying pool of credit claims or receivables is sufficiently granular and has sufficiently distributed repayment profiles. Rights to receive income from the assets specified to support redemption payments should be considered as eligible credit claims or receivables in this regard.⁸

2. *Currency and interest rate asset and liability mismatches*

To reduce the payment risk arising from the different interest rate and currency profiles of assets and liabilities and to improve investors' ability to model cash flows, interest rate and foreign currency risks should be appropriately mitigated at all times, and if any hedging transaction is executed the transaction should be documented according to industry-standard master agreements. Only derivatives used for genuine hedging of asset and liability mismatches of interest rate and / or currency should be allowed.

The term "appropriately mitigated" should be understood as not necessarily requiring a completely perfect hedge. The appropriateness of the mitigation of interest rate and foreign currency through the life of the transaction must be demonstrated by making available to potential investors, in a timely and regular manner, quantitative information including the fraction of notional amounts that are hedged, as well as sensitivity analysis that illustrates the effectiveness of the hedge under extreme but plausible scenarios.

If hedges are not performed through derivatives, then those risk-mitigating measures are only permitted if they are specifically created and used for the purpose of hedging an individual and specific risk, and not multiple risks at the same time (such as credit and interest rate risks). Non-derivative risk mitigation measures must be fully funded and available at all times.

3. *Payment priorities and observability*

To prevent investors being subjected to unexpected repayment profiles during the life of a securitisation, the priorities of payments for all liabilities in all circumstances should be clearly defined at the time of securitisation and appropriate legal comfort regarding their enforceability should be provided.

⁷ The review should confirm that the credit claims or receivables transferred to the securitisation meet the portfolio eligibility requirements. The review could, for example, be undertaken on a representative sample of the initial portfolio, with the application of a minimum confidence level. The verification report need not be provided but its results, including any material exceptions, should be disclosed in the initial offering documentation

⁸ For example, associated savings plans designed to repay principal at maturity.

Junior liabilities should not have payment preference over senior liabilities that are due and payable. The securitisation should not be structured as a “reverse” cash flow waterfall such that junior liabilities are paid where due and payable senior liabilities have not been paid.

To help provide investors with full transparency into any changes, all triggers affecting the cash flow waterfall, payment profile, or priority of payments of the securitisation should be clearly and fully disclosed both in offering documents and in investor reports, with information in the investor report that clearly identifies the breach status, the ability for the breach to be reversed and the consequences of the breach. Investor reports should contain information that allows investors to monitor the evolution of indicators that are subject to triggers. Any triggers breached between payment dates should be disclosed to investors on a timely basis in accordance with the terms and conditions of all underlying transaction documents.

Securitisations featuring a revolving period should include provisions for appropriate early amortization events and/or triggers of termination of the revolving period, including, notably: (i) deterioration in the credit quality of the underlying exposures; (ii) a failure to acquire sufficient new underlying exposures of similar credit quality; and (iii) the occurrence of an insolvency-related event with regard to the originator or the servicer.

Following the occurrence of a performance-related trigger, an event of default or an acceleration event, the securitisation positions should be repaid in accordance with a sequential amortization priority of payments, in order of tranche seniority, and there should not be provisions requiring immediate liquidation of the underlying assets at market value.

To assist investors in their ability to appropriately model the cash flow waterfall of the securitisation, the originator or sponsor should make available to investors, both before pricing of the securitisation and on an ongoing basis, a liability cash flow model or information on the cash flow provisions allowing appropriate modelling of the securitisation cash flow waterfall.

To ensure that debt forgiveness, forbearance, payment holidays and other asset performance remedies can be clearly identified, policies and procedures, definitions, remedies and actions relating to delinquency, default or restructuring of underlying debtors should be provided in clear and consistent terms so that investors can clearly identify debt forgiveness, forbearance, payment holidays, restructuring and other asset performance remedies on an ongoing basis.

4. *Voting and enforcement rights*

To help ensure clarity for securitisation note holders of their rights and ability to control and enforce on the underlying credit claims or receivables, upon insolvency of the originator or sponsor, all voting and enforcement rights related to the credit claims or receivables should be transferred to the securitisation. Investors’ rights in the securitisation should be clearly defined in all circumstances, including the rights of senior versus junior note holders.

5. *Documentation disclosure and legal review*

To help investors to fully understand the terms, conditions, legal and commercial information prior to investing in a new offering and to ensure that this information is set out in a clear and effective manner for all programs and offerings, sufficient initial offering⁹ and draft

underlying¹⁰ documentation should be made available to investors (and readily available to potential investors on a continuous basis) within a reasonably sufficient period of time prior to

⁹ E.g., draft offering circular, draft offering memorandum, draft offering document or draft prospectus, such as a “red herring”.

¹⁰ For example, asset sale agreement, assignment, novation or transfer agreement; servicing, backup servicing, administration and cash management agreements; trust/management deed, security deed, agency agreement,

pricing, or when legally permissible, such that the investor is provided with full disclosure of the legal and commercial information and comprehensive risk factors needed to make informed investment decisions. Any type of securitisation can fulfil these requirements once it meets its prescribed standards of disclosure and legal review. Final offering documents should be available from the closing date and all final underlying transaction documents shortly thereafter. These should be composed such that readers can readily find, understand, and use relevant information.

To ensure that all the securitisation's underlying documentation has been subject to appropriate review prior to publication, the terms and documentation of the securitisation should be subject to appropriate third-party legal review, such as experienced legal counsel already instructed by one of the transaction parties (for example, by the arranger or the trustee). Investors should be notified in a timely fashion of any changes in such documents that have an impact on the structural risks in the securitisation.

6. *Alignment of interest*

In order to align the interests of those responsible for the underwriting of the credit claims or receivables with those of investors, the originator or sponsor of the credit claims or receivables should retain a material net economic exposure and demonstrate a financial incentive in the performance of these assets following their securitisation.

C. Fiduciary and servicer risk

1. *Fiduciary and contractual responsibilities*

To help ensure that servicers have extensive workout expertise, thorough legal and collateral knowledge and a proven track record in loss mitigation, such parties should be able to demonstrate expertise in the servicing of the underlying credit claims or receivables, servicing should be supported by a management team with extensive industry experience. The servicer should at all times act in accordance with reasonable and prudent standards. Policies, procedures and risk management controls should be well documented and adhere to good market practices and relevant regulatory regimes. There should be strong systems and reporting capabilities in place. In assessing whether "strong systems and reporting capabilities" are in place for non-banking entities, well-documented policies, procedures and risk management controls, as well as strong systems and reporting capabilities, may be substantiated by an independent third-party review.

The party or parties with fiduciary responsibility should act on a timely basis in the best interests of the securitisation note holders, and both the initial offering and all underlying documentation should contain provisions facilitating the timely resolution of conflicts between different classes of note holders by the trustees, to the extent permitted by applicable law. The party or parties with fiduciary responsibility to the securitisation and to investors should be able to demonstrate sufficient skills and resources to comply with their duties of care in the administration of the securitisation vehicle.

To increase the likelihood that those identified as having a fiduciary responsibility towards investors as well as the servicer execute their duties in full on a timely basis, remuneration should be such that these parties are incentivized and able to meet their responsibilities in full and on a timely basis.

account bank agreement, guaranteed investment contract, incorporated terms or master trust framework or master definitions agreement as applicable; any relevant inter-creditor agreements, swap or derivative documentation, subordinated loan agreements, start-up loan agreements and liquidity facility agreements; and any other relevant underlying documentation, including legal opinions.

2. *Transparency to investors*

To help provide full transparency to investors, to assist investors in the conduct of their due diligence, and to prevent investors from being subject to unexpected disruptions in cash flow collections and servicing, the contractual obligations, duties, and responsibilities of all key parties to the securitisation, both those with a fiduciary responsibility and ancillary service providers, should be defined clearly both in the initial offering and all underlying documentation. Provisions should be documented for the replacement of servicers, bank account providers, derivatives counterparties and liquidity providers in the event of failure, non-performance, insolvency, or other deterioration of creditworthiness of any such counterparty to the securitisation.

To enhance transparency and visibility of all receipts, payments, and ledger entries at all times, the performance reports to investors should report the securitisation's income and disbursements, such as scheduled principal, redemption principal, scheduled interest, prepaid principal, past due interest and fees and charges, delinquent, defaulted and restructured amounts under debt forgiveness and payment holidays, and should include accurate accounting for amounts attributable to principal and interest deficiency ledgers. The term "income and disbursements" should also be understood as including deferment, forbearance, and repurchases.

D. Additional criteria for capital purposes

1. *Credit risk of underlying exposures*

At the cut-off date for addition of exposures to the pool, the underlying exposures must meet the conditions to be assigned a risk weight equal to or smaller than:

- 40% on a value-weighted average exposure basis for a portfolio where the exposures are loans secured by residential mortgages or fully guaranteed residential loans;
- 50% on an individual exposure basis where the exposure is a loan secured by a commercial mortgage;
- 75% on an individual exposure basis where the exposure is a retail exposure; or
- 100% on an individual exposure basis for any other exposure.

These risk weights should be after taking into account any eligible credit risk mitigation. The thresholds as set are based on the current Standardized Approach to credit risk, and may be revisited if the Standardized Approach for credit risk is subsequently revised.

2. *Granularity of the pool*

At the portfolio cut-off date, the aggregate value of all exposures to a single obligor shall not exceed 1% of the aggregated outstanding exposure value of all exposures in the portfolio.

Appendix 2: Criteria for Short-Term STC Exposures

This Appendix provides criteria, including certain guidance and clarifications, for *short-term* Simple, Transparent, and Comparable (STC) securitisation exposures, together with certain additional requirements that must be satisfied in order for a securitisation to receive alternative regulatory capital treatment.

For an ABCP conduit to be considered STC, the criteria in this Appendix need to be met at both the conduit level and the transaction level.

- For exposures at the conduit level (e.g. exposure arising from investing in the commercial paper issued by an ABCP program or sponsoring arrangements at the conduit/program level), compliance with the short-term STC capital criteria is achieved only if the criteria are satisfied at both the conduit level and the transaction level.
- In the case of exposures at the transaction level, compliance with the short-term STC capital criteria is considered to be achieved if the transaction-level criteria are satisfied for the transactions to which support is provided.

In each section, any requirements specific to either the *conduit level* or the *transaction level* are noted separately, together with more general requirements that apply to both levels.

A. Definitions

- Asset-backed commercial paper (ABCP) conduit** is a special purpose vehicle that can issue commercial paper against claims on underlying assets.
- ABCP program** is a program of commercial paper issued by an ABCP conduit.
- Assets or asset pool** means the credit claims and/or receivables underlying a transaction in which the ABCP conduit holds a beneficial interest.
- The **investor** is the holder of commercial paper issued under an ABCP program, or of any type of exposure to the conduit representing a financing liability of the conduit, such as loans.
- The **obligor** is the borrower or counterparty who is obliged to make payments on the underlying credit claim or a receivable that is part of an asset pool.
- The **seller** is the party that (i) concluded (in its capacity as original lender) the original agreement that created the obligations or potential obligations (under a credit claim or a receivable) of an obligor or purchased the obligations or potential obligations from the original lender(s), and (ii) transferred those assets through a transaction or passed on the interest to the ABCP conduit.
- The **sponsor** means the sponsor of an ABCP conduit; other relevant parties with a fiduciary responsibility in the management and administration of the ABCP conduit may bear some of the responsibilities of a sponsor.
- A **transaction** means an individual transaction in which the ABCP conduit holds a beneficial interest. A transaction may qualify as a securitisation, but may also be a direct asset purchase, the acquisition of undivided interest in a revolving pool of asset, a secured loan etc.

B. Asset risk

1. Nature of assets

<p>Conduit level</p> <p>The sponsor should make representations and warranties to investors that the criteria at the transaction level are met, and explain how this is the case on an overall basis. Only if specified should this be done for each transaction.</p> <p>Provided that each individual underlying transaction is homogeneous in terms of asset type, a conduit may be used to finance transactions of different asset types.</p> <p>Program-wide credit enhancement should not prevent a conduit from qualifying for STC, regardless of whether such enhancement technically creates a type of resecuritisation.</p>
<p>Transaction level</p> <p>The assets underlying a transaction in a conduit should be credit claims or receivables that are homogeneous, in terms of asset type. (This does not automatically exclude securitisations of equipment leases and securitisations of auto loans and leases from the short-term STC framework.)</p> <p>The assets underlying each individual transaction in a conduit should not be composed of “securitisation exposures” as defined in the Central Bank’s <i>Standard on Required Capital for Securitisation Exposures</i>. The transaction-level requirement is still met if the conduit does not purchase the underlying asset with a refundable purchase price discount but instead acquires a beneficial interest in the form of a note which itself might qualify as a securitisation exposure, as long as the securitisation exposure is not subject to any further tranching (i.e. has the same economic characteristic as the purchase of the underlying asset with a refundable purchase price discount).</p> <p>Credit claims or receivables underlying a transaction in a conduit should have contractually identified periodic payment streams relating to rental,¹¹ principal, interest, or principal and interest payments. Credit claims or receivables generating a single payment stream would equally qualify as eligible. Any referenced interest payments or discount rates should be based on commonly encountered market interest rates, but should not reference complex or complicated formulae or exotic derivatives.</p>

Homogeneity

For capital purposes, homogeneity should be assessed taking into account the following principles:

- The nature of assets should be such that there would be no need to analyse and assess materially different legal and/or credit risk factors and risk profiles when carrying out risk analysis and due diligence checks for the transaction.
- Homogeneity should be assessed based on common risk drivers, including similar risk factors and risk profiles.
- Credit claims or receivables included in the securitisation should have standards obligations, in terms of rights to payments and/or income from assets and that result in a periodic and well-defined stream of payments to investors. Credit card

¹¹ Payments on operating and financing lease are typically considered to be rental payments rather than payments of principal and interest.

facilities should be deemed to result in a periodic and well-defined stream of payments to investors for the purposes of this criterion.

- Repayment of the securitisation exposure should mainly rely on the principal and interest proceeds from the securitized assets. Partial reliance on refinancing or re-sale of the asset securing the exposure may occur provided that re-financing is sufficiently distributed within the pool and the residual values on which the transaction relies are sufficiently low and that the reliance on refinancing is thus not substantial.

Commonly encountered market interest rates

The term “commonly encountered market interest rates” should be understood to encompass rates reflective of a lender’s cost of funds, to the extent that sufficient data are provided to the sponsors to allow them to assess their relation to other market rates. Examples of these would include:

- Interbank rates and rates set by monetary policy authorities, such as LIBOR, EURIBOR, EIBOR, and the Federal funds rate; and
- Sectoral rates reflective of a lender’s cost of funds, such as internal interest rates that directly reflect the market costs of a bank’s funding or that of a subset of institutions.

Exotic derivatives

Determination of whether particular derivatives are “exotic” is inevitably somewhat subjective, but banks should apply a reasonable and conservative process to identifying exotic instruments. The Global Association of Risk Professionals (GARP) defines an exotic instrument as a financial asset or instrument with features making it more complex than simpler, plain vanilla, products. Interest rate caps and/or floors would not automatically be considered exotic derivatives.

2. Asset performance history

Conduit level
<p>In order to provide investors with sufficient information on the performance history of the asset types backing the transactions, the sponsor should make available to investors sufficient loss performance data on claims and receivables with substantially similar risk characteristics, such as delinquency and default data on similar claims, and for a time period long enough to permit meaningful evaluation. The sponsor should disclose to investors the sources of such data and the basis for claiming similarity to credit claims or receivables financed by the conduit.</p> <p>Such loss performance data may be provided on a stratified basis.</p> <p>Examples of such data might include:</p> <ul style="list-style-type: none">• all materially relevant data on the conduit’s composition (outstanding balances, industry sector, obligor concentrations, maturities etc) and conduit’s overview; and• all materially relevant data on the credit quality and performance of underlying transactions, allowing investors to identify collections, and, as applicable, debt restructuring, forgiveness, forbearance, payment holidays, repurchases, delinquencies and defaults.

Transaction level

In order to provide the sponsor with sufficient information on the performance history of each asset type backing the transactions and to conduct appropriate due diligence and to have access to a sufficiently rich data set to enable a more accurate calculation of expected loss in different stress scenarios, verifiable loss performance data, such as delinquency and default data, should be available for credit claims and receivables with risk characteristics substantially similar to those being financed by the conduit, for a time period long enough to permit meaningful evaluation by the sponsor.

The sponsor of the securitisation, as well as the original lender that underwrites the assets, must have sufficient experience in the risk analysis/underwriting of exposures or transactions with underlying exposures similar to those securitized. The sponsor should have well documented procedures and policies regarding the underwriting of transactions and the ongoing monitoring of the performance of the securitized exposures. The sponsor should ensure that the seller(s) and all other parties involved in the origination of the receivables have experience in originating same or similar assets, and are supported by a management with industry experience. For the purpose of meeting the short-term STC capital criteria, investors must request confirmation from the sponsor that the performance history of the originator and the original lender for claims or receivables substantially similar to those being securitized has been established for an "appropriately long period of time." This performance history must be no shorter than a period of five years for non-retail exposures. For retail exposures, the minimum performance history is three years.

3. Payment status**Conduit level**

The sponsor should, to the best of its knowledge and based on representations from sellers, make representations and warranties to investors that the STC criteria at the transaction level are met with respect to each transaction.

Transaction level

The sponsor should obtain representations from sellers that the credit claims or receivables underlying each individual transaction are not, at the time of acquisition of the interests to be financed by the conduit, in default or delinquent or subject to a material increase in expected losses or of enforcement actions.

To prevent credit claims or receivables arising from credit-impaired borrowers from being transferred to the securitisation, the original seller or sponsor should verify that the credit claims or receivables meet the following conditions for each transaction:

- The obligor has not been the subject of an insolvency or debt restructuring process due to financial difficulties in the three years prior to the date of origination;¹²
- The obligor is not recorded on a public credit registry of persons with an adverse credit history;
- The obligor does not have a credit assessment by an external credit assessment institution or a credit score indicating a significant risk of default; and

¹² This condition would not apply to borrowers that previously had credit incidents but were subsequently removed from credit registries as a result of the borrowers cleaning their records. This is the case in jurisdictions in which borrowers have the "right to be forgotten."

- The credit claim or receivable is not subject to a dispute between the obligor and the original lender.

The assessment of these conditions should be carried out by the original seller or sponsor no earlier than 45 days prior to acquisition of the transaction by the conduit or, in the case of replenishing transactions, no earlier than 45 days prior to new exposures being added to the transaction. In addition, at the time of the assessment, there should be, to the best knowledge of the original seller or sponsor, no evidence indicating likely deterioration in the performance status of the credit claim or receivable.

Further, at the time of their inclusion in the pool, at least one payment should have been made on the underlying exposures, except in the case of replenishing asset trust structures such as those for credit card receivables, trade receivables, and other exposures payable in a single instalment at maturity.

4. Consistency of underwriting

Conduit level
<p>The sponsor should make representations and warranties to investors that:</p> <ol style="list-style-type: none"> 1. It has taken steps to verify that, for the transactions in the conduit, any underlying credit claims and receivables have been subject to consistent underwriting standards, and explain how; and 2. When there are material changes to underwriting standards, it will receive from sellers disclosure about the timing and purpose of such changes. <p>The sponsor should also inform investors of the material selection criteria applied when selecting sellers (including where they are not financial institutions).</p>
Transaction level
<p>The sponsor should ensure that sellers (in their capacity as original lenders) in transactions with the conduit demonstrate to it that:</p> <ol style="list-style-type: none"> a. Any credit claims or receivables being transferred to or through a transaction held by the conduit have been originated in the ordinary course of the seller's business subject to materially non-deteriorating underwriting standards. Those underwriting standards should also not be less stringent than those applied to credit claims and receivables retained on the balance sheet of the seller and not financed by the conduit; and b. The obligors have been assessed as having the ability and volition to make timely payments on obligations. <p>The sponsor should also ensure that sellers disclose to it the timing and purpose of material changes to underwriting standards.</p>

In all circumstances, all credit claims or receivables must be originated in accordance with sound and prudent underwriting criteria based on an assessment that the obligor has the "ability and volition to make timely payments" on its obligations.

The sponsor of the securitisation is expected, where underlying credit claims or receivables have been acquired from third parties, to review the underwriting standards (i.e. to check their existence and assess their quality) of these third parties and to ascertain that they have assessed the obligors' "ability and volition to make timely payments" on their obligations.

If the sponsor of the securitisation did not originate the assets, the additional requirement will ensure that the seller has to check (a) the existence and quality of the underwriting standards;

(b) that the borrowers to whom the acquired loans are extended have been screened by the lender; and (c) that their ability and their willingness to repay have been assessed by the original lender. This should not, however, be understood as an obligation for the seller to perform this assessment itself.

5. *Asset selection and transfer*

<p>Conduit level</p> <p>The sponsor should:</p> <ol style="list-style-type: none"> 1. Provide representations and warranties to investors about the checks, in terms of their nature and frequency, it has conducted regarding enforceability of underlying assets; and 2. Disclose to investors the receipt of appropriate representations and warranties from sellers that the credit claims or receivables being transferred to the transactions in the conduit are not subject to any condition or encumbrance that can be foreseen to adversely affect enforceability in respect of collections due.
<p>Transaction level</p> <p>The sponsor should ensure that credit claims or receivables transferred to or through a transaction financed by the conduit:</p> <ol style="list-style-type: none"> a. Satisfy clearly defined eligibility criteria; b. Are not actively selected after the closing date, actively managed or otherwise cherry-picked.¹³ <p>An in-house legal opinion or an independent third-party legal opinion must support the claim that the true sale and the transfer of assets under the applicable laws comply with points (a) and (b) at the transaction level.</p> <p>The sponsor should be able to assess thoroughly the credit risk of the asset pool prior to its decision to provide full support to any given transaction or to the conduit.</p> <p>The sponsor should ensure that the transactions in the conduit effect true sale such that the underlying credit claims or receivables:</p> <ol style="list-style-type: none"> 1. Are enforceable against the obligor; 2. Are beyond the reach of the seller, its creditors, or liquidators and are not subject to material re-characterization risks or claw-back risks (in which the insolvency or bankruptcy of the seller could result in the assets being taken back from the pool by creditors or liquidators); 3. Are not effected through credit default swaps, derivatives or guarantees, but by a transfer¹⁴ of the credit claims or the receivables to the transaction; and 4. Demonstrate effective recourse to the ultimate obligation for the underlying credit claims or receivables and are not a re-securitisation position. <p>The sponsor should ensure that, in applicable jurisdictions, for conduits employing transfers of credit claims or receivables by other means, sellers can demonstrate to</p>

¹³ Provided they are not actively selected or otherwise cherry-picked, the addition of credit claims or receivables during the revolving periods or their substitution or repurchasing due to the breach of representations and warranties do not represent active portfolio management.

¹⁴ This requirement should not affect jurisdictions whose legal frameworks provide for a true sale with the same effects as described above, but by means other than a transfer of the credit claims or receivables.

it the existence of material obstacles preventing true sale at issuance¹⁵ and should clearly demonstrate the method of recourse to ultimate obligors.¹⁶ In such jurisdictions, any conditions where the transfer of the credit claims or receivables is delayed or contingent upon specific events and any factors affecting timely perfection of claims by the conduit should be clearly disclosed.

The sponsor should ensure that it receives from the individual sellers (in their capacity either as original lender or servicer) representations and warranties that the credit claims or receivables being transferred to or through the transaction are not subject to any condition or encumbrance that can be foreseen to adversely affect enforceability in respect of collections due.

6. *Initial and ongoing data*

Conduit level

To assist investors in conducting appropriate due diligence prior to investing in a new program offering, the sponsor should provide to potential investors sufficient aggregated data that illustrate the relevant risk characteristics of the underlying asset pools in accordance with applicable laws.

To assist investors in conducting appropriate and ongoing monitoring of their investments' performance and so that investors who wish to purchase commercial paper have sufficient information to conduct appropriate due diligence, the sponsor should provide timely and sufficient aggregated data that convey the relevant risk characteristics of the underlying pools in accordance with applicable laws. The sponsor should ensure that standardized investor reports are readily available to current and potential investors at least monthly. Cut-off dates of the aggregated data should be aligned with those used for investor reporting.

Transaction level

The sponsor should ensure that the individual sellers (in their capacity as servicers) provide it with:

- (a) sufficient asset-level data in accordance with applicable laws or, in the case of granular pools, summary stratification data on the relevant risk characteristics of the underlying pool before transferring any credit claims or receivables to such underlying pool; and
- (b) Timely asset-level data in accordance with applicable laws or granular pool stratification data on the risk characteristics of the underlying pool on an ongoing basis. Those data should allow the sponsor to fulfil its fiduciary duty at the conduit level in terms of disclosing information to investors, including the alignment of cut-off dates of the asset-level or granular pool stratification data with those used for investor reporting.

The seller may delegate some of these tasks, in which case the sponsor should ensure that there is appropriate oversight of the outsourced arrangements.

The standardized investor reports that are made readily available to current and potential investors at least monthly should include the following information:

¹⁵ For instance, the immediate realization of transfer tax or the requirement to notify all obligors of the transfer.

¹⁶ For instance, equitable assignment or perfected contingent transfer.

- Materially relevant data on the credit quality and performance of underlying assets, including data allowing investors to identify dilution, delinquencies and defaults, restructured receivables, forbearance, repurchases, losses, recoveries and other asset performance remedies in the pool;
- The form and amount of credit enhancement provided by the seller and sponsor at the transaction and the conduit level, respectively;
- Relevant information on the support provided by the sponsor; and
- The status and definitions of relevant triggers (such as performance, termination or counterparty replacement triggers).

C. Structural risk

1. *Full support*

Conduit level

The sponsor should provide the liquidity facility and the credit protection support¹⁷ for any ABCP program issued by a conduit. Such facility and support should ensure that investors are fully protected against credit risks, liquidity risks and any material dilution risks of the underlying asset pools financed by the conduit. On that basis, investors should be able to rely on the sponsor to ensure timely and full repayment of the commercial paper. This is not a comprehensive list of risks, but rather provides typical examples.

The full support provided should be able to irrevocably and unconditionally pay the ABCP liabilities in full and on time.

Number of sponsors providing support

While liquidity and credit protection support at both the conduit level and transaction level can be provided by more than one sponsor, the majority of the support (assessed in terms of coverage) has to be made by a single sponsor (referred to as the “main sponsor”).¹⁸ An exception can, however, be made for a limited period of time, where the main sponsor has to be replaced due to a material deterioration in its credit standing.

General requirements

Under the terms of the liquidity facility agreement:

- Upon specified events affecting its creditworthiness, the sponsor shall be obliged to collateralize its commitment in cash to the benefit of the investors or otherwise replace itself with another liquidity provider.
- If the sponsor does not renew its funding commitment for a specific transaction or the conduit in its entirety, the sponsor shall collateralize its commitments regarding a specific transaction or, if relevant, to the conduit in cash at the latest 30 days prior to the expiration of the liquidity facility, and no new receivables should be purchased under the affected commitment.

¹⁷ A sponsor can provide full support either at the ABCP program level or at the transaction level, i.e. by fully supporting each transaction within an ABCP program.

¹⁸ “Liquidity and credit protection support” refers to support provided by the sponsors. Any support provided by the seller is excluded.

The sponsor should provide investors with full information about the terms of the liquidity facility and the credit support provided to the ABCP conduit and the underlying transactions (in relation to the transactions, redacted where necessary to protect confidentiality).

To ensure that investors in the notes issued by the ABCP conduit are fully protected by the facility provided to the ABCP conduit, if the creditworthiness of the liquidity providers deteriorates or if a commitment is not renewed, the liquidity provider shall be required to fully collateralize the facility in cash to ensure the payment of maturing notes. As an alternative, a backup facility provider could be used in case the creditworthiness of the current provider is no longer sufficient. The facility should also be drawn down and used to redeem the outstanding notes in case it is not renewed at least 30 days prior to its expiration.

Information about the support provided to the ABCP structure, at the conduit and the transaction level, as well as the maturity of the facility provided to the ABCP structure, shall also be disclosed to investors. This will enable investors to assess the liquidity risks associated with their exposures to the ABCP structure.

2. *Redemption cash flow*

Transaction level

Unless the underlying pool of credit claims or receivables is sufficiently granular and has sufficiently distributed repayment profiles, the sponsor should ensure that the repayment of the credit claims or receivables underlying any of the individual transactions relies primarily on the general ability and willingness of the obligor to pay rather than the possibility that the obligor refinances or sells the collateral and that such repayment does not primarily rely on the drawing of an external liquidity facility provided to this transaction.

For capital purposes, sponsors cannot use support provided by their own liquidity and credit facilities towards meeting this criterion. For the avoidance of doubt, the requirement that the repayment shall not primarily rely on the drawing of an external liquidity facility does not apply to exposures in the form of the notes issued by the ABCP conduit.

3. *Currency and interest rate asset and liability mismatches*

Conduit level

The sponsor should ensure that any payment risk arising from different interest rate and currency profiles that is not mitigated at transaction level, or that may arise at the conduit level, is appropriately mitigated.

The sponsor should also ensure that derivatives are used for genuine hedging purposes only and that hedging transactions are documented according to industry-standard master agreements.

The sponsor should provide sufficient information to investors to allow them to assess how the payment risk arising from the different interest rate and currency profiles of assets and liabilities is appropriately mitigated, whether at the conduit level or at the transaction level.

Transaction level

To reduce the payment risk arising from the different interest rate and currency profiles of assets and liabilities, if any, and to improve the sponsor's ability to analyze cash flows of transactions, the sponsor should ensure that interest rate and foreign currency risks are appropriately mitigated. The sponsor should also ensure that derivatives are used for genuine hedging purposes only and that hedging transactions are documented according to industry-standard master agreements.

The term “appropriately mitigated” should be understood as not necessarily requiring a completely perfect hedge. The appropriateness of the mitigation of interest rate and foreign currency risks through the life of the transaction must be demonstrated by making available, in a timely and regular manner, quantitative information, including the fraction of notional amounts that are hedged, as well as sensitivity analysis that illustrates the effectiveness of the hedge in extreme but plausible scenarios.

The use of risk-mitigating measures other than derivatives is permitted only if the measures are specifically created and used for the purpose of hedging an individual and specific risk. Non-derivative risk mitigation measures must be fully funded and available at all times.

4. *Payment priorities and observability*

<p>Conduit level</p> <p>The commercial paper issued by the ABCP program should not include extension options or other features which may extend the final maturity of the asset-backed commercial paper, where the right to trigger does not belong exclusively to investors.</p> <p>The sponsor should:</p> <ul style="list-style-type: none"> (i) make representations and warranties to investors that the STC criteria are met at the transaction level and, in particular, that it has the ability to appropriately analyse the cash flow waterfall for each transaction which qualifies as a securitisation; and (ii) make available to investors a summary (illustrating the functioning) of these waterfalls and of the credit enhancement available at program level and transaction level.
<p>Transaction level</p> <p>To prevent the conduit from being subjected to unexpected repayment profiles from the transactions, the sponsor should ensure that:</p> <ol style="list-style-type: none"> 1. Priorities of payments are clearly defined at the time of acquisition of the interests in these transactions by the conduit; and 2. Appropriate legal comfort regarding the enforceability is provided. <p>For all transactions which qualify as a securitisation, the sponsor should ensure that all triggers affecting the cash flow waterfall, payment profile or priority of payments are clearly and fully disclosed to the sponsor in both the transactions’ documentation and reports, with information in the reports that clearly identifies any breach status, the ability for the breach to be reversed and the consequences of the breach. Reports should contain information that allows sponsors to easily ascertain the likelihood of a trigger being breached or reversed. Any triggers breached between payment dates should be disclosed to sponsors on a timely basis in accordance with the terms and conditions of the transaction documents.</p> <p>For any of the transactions where the beneficial interest held by the conduit qualifies as a securitisation position, the sponsor should ensure that any subordinated positions do not have inappropriate payment preference over payments to the conduit (which should always rank senior to any other position) and which are due and payable.</p> <p>Transactions featuring a revolving period should include provisions for appropriate early amortization events and/or triggers of termination of the revolving period, including, notably: (i) deterioration in the credit quality of the underlying exposures; (ii) a failure to replenish sufficient new underlying exposures of similar credit quality;</p>

and (iii) the occurrence of an insolvency-related event with regard to the individual sellers.

To ensure that debt forgiveness, forbearance, payment holidays, restructuring, dilution and other asset performance remedies can be clearly identified, policies and procedures, definitions, remedies and actions relating to delinquency, default, dilution or restructuring of underlying debtors should be provided in clear and consistent terms, such that the sponsor can clearly identify debt forgiveness, forbearance, payment holidays, restructuring, dilution and other asset performance remedies on an ongoing basis.

For each transaction which qualifies as a securitisation, the sponsor should ensure that it receives, both before the conduit acquires a beneficial interest in the transaction and on an ongoing basis, the liability cash flow analysis or information on the cash flow provisions allowing appropriate analysis of the cash flow waterfall of these transactions.

5. *Voting and enforcement rights*

Conduit level

To provide clarity to investors, the sponsor should make sufficient information available in order for investors to understand their enforcement rights on the underlying credit claims or receivables in the event of insolvency of the sponsor.

Transaction level

For each transaction, the sponsor should ensure that, in particular upon insolvency of the seller or where the obligor is in default on its obligation, all voting and enforcement rights related to the credit claims or receivables are, if applicable:

1. Transferred to the conduit; and
2. Clearly defined under all circumstances, including with respect to the rights of the conduit versus other parties with an interest (e.g. sellers), where relevant.

6. *Documentation disclosure and legal review*

Conduit level

To help investors understand fully the terms, conditions, and legal information prior to investing in a new program offering and to ensure that this information is set out in a clear and effective manner for all program offerings, the sponsor should ensure that sufficient initial offering documentation for the ABCP program is provided to investors (and readily available to potential investors on a continuous basis) within a reasonable period of time prior to issuance, such that the investor is provided with full disclosure of the legal information and comprehensive risk factors needed to make informed investment decisions. These should be composed such that readers can readily find, understand and use relevant information.

The sponsor should ensure that the terms and documentation of a conduit and the ABCP program it issues are reviewed and verified by an appropriately experienced and independent legal practice prior to publication and in the event of material changes. The sponsor should notify investors in a timely fashion of any changes in such documents that have an impact on the structural risks in the ABCP program.

To understand fully the terms, conditions and legal information prior to including a new transaction in the ABCP conduit and ensure that this information is set out in a clear and effective manner, the sponsor should ensure that it receives sufficient initial offering documentation for each transaction and that it is provided within a reasonable period of time prior to the inclusion in the conduit, with full disclosure of the legal information and comprehensive risk factors needed to supply liquidity and/or credit support facilities. The initial offering document for each transaction should be composed such that readers can readily find, understand and use relevant information.

The sponsor should also ensure that the terms and documentation of a transaction are reviewed and verified by an appropriately experienced and independent legal practice prior to the acquisition of the transaction and in the event of material changes.

7. Alignment of interest

Conduit level

In order to align the interests of those responsible for the underwriting of the credit claims and receivables with those of investors, a material net economic exposure should be retained by the sellers or the sponsor at the transaction level, or by the sponsor at the conduit level.

Ultimately, the sponsor should disclose to investors how and where a material net economic exposure is retained by the seller at the transaction level or by the sponsor at the transaction or the conduit level, and demonstrate the existence of a financial incentive in the performance of the assets.

8. Cap on maturity transformation

Conduit level

Maturity transformation undertaken through ABCP conduits should be limited. The sponsor should verify and disclose to investors that the weighted average maturity of all the transactions financed under the ABCP conduit is three years or less.

This number should be calculated as the higher of:

1. the exposure-weighted average residual maturity of the conduit's beneficial interests held or the assets purchased by the conduit in order to finance the transactions of the conduit;¹⁹
2. the exposure-weighted average maturity of the underlying assets financed by the conduit calculated by:
 - a. taking an exposure-weighted average of residual maturities of the underlying assets in each pool; and then
 - b. taking an exposure-weighted average across the conduit of the pool-level averages as calculated in Step 2a.

Where it is impractical for the sponsor to calculate the pool-level weighted average maturity in Step 2a (because the pool is very granular or dynamic), sponsors may instead use the maximum maturity of the assets in the pool as defined in the legal agreements governing the pool (e.g. investment guidelines).

¹⁹ Including purchased securitisation notes, loans, asset-backed deposits and purchased credit claims and/or receivables held directly on the conduit's balance sheet

D. Fiduciary and servicer risk

1. *Financial institution*

The sponsor should be a financial institution that is licensed to take deposits from the public, and is subject to appropriate prudential standards and levels of supervision.

2. *Fiduciary and contractual responsibilities*

Conduit level
<p>The sponsor should, based on the representations received from seller(s) and all other parties responsible for originating and servicing the asset pools, make representations and warranties to investors that:</p> <ol style="list-style-type: none"> 1. The various criteria defined at the level of each underlying transaction are met, and explain how; and 2. The seller's (or sellers') policies, procedures and risk management controls are well documented, adhere to good market practices and comply with the relevant regulatory regimes; and that strong systems and reporting capabilities are in place to ensure appropriate origination and servicing of the underlying assets. <p>The sponsor should be able to demonstrate expertise in providing liquidity and credit support in the context of ABCP conduits, and that it is supported by a management team with extensive industry experience.</p> <p>The sponsor should at all times act in accordance with reasonable and prudent standards. The policies, procedures and risk management controls of the sponsor should be well documented, and the sponsor should adhere to good market practices and relevant regulatory regime. There should be strong systems and reporting capabilities in place at the sponsor.</p> <p>The party or parties with fiduciary responsibility should act on a timely basis in the best interests of the investors.</p>
Transaction level
<p>The sponsor should ensure that it receives representations from the seller(s) and all other parties responsible for originating and servicing the asset pools that they:</p> <ol style="list-style-type: none"> 1. Have well documented procedures and policies in place to ensure appropriate servicing of the underlying assets; 2. Have expertise in the origination of assets that are the same as or similar to those in the asset pools; 3. Have extensive servicing and workout expertise, thorough legal and collateral knowledge and a track record in loss mitigation for the same or similar assets; 4. Have expertise in the servicing of the underlying credit claims or receivables; and 5. Are supported by a management team with extensive industry experience.

In assessing whether “strong systems and reporting capabilities are in place”, well documented policies, procedures and risk management controls, as well as strong systems and reporting capabilities, may be substantiated by an independent third-party review for sellers that are non-banking entities.

3. *Transparency to investors*

Conduit level

To help provide full transparency to investors and to assist them in the conduct of their due diligence, the sponsor should ensure that the contractual obligations, duties and responsibilities of all key parties to the conduit, both those with a fiduciary responsibility and the ancillary service providers, are defined clearly both in the initial offering and in any relevant underlying documentation²⁰ of the conduit and the ABCP program it issues.

The sponsor should also make representations and warranties to investors that the duties and responsibilities of all key parties are clearly defined at the transaction level.

The sponsor should ensure that the initial offering documentation disclosed to investors contains adequate provisions regarding the replacement of key counterparties of the conduit (e.g. bank account providers and derivatives counterparties) in the event of failure or non-performance or insolvency or deterioration of creditworthiness of any such counterparty.

The sponsor should also make representations and warranties to investors that provisions regarding the replacement of key counterparties at the transaction level are well documented.

The sponsor should provide sufficient information to investors about the liquidity facility and credit support provided to the ABCP program for them to understand its functioning and key risks.

Transaction level

The sponsor should conduct due diligence with respect to the transactions on behalf of the investors.

To assist the sponsor in meeting its fiduciary and contractual obligations, the duties and responsibilities of all key parties to all transactions (both those with a fiduciary responsibility and the ancillary service providers) should be defined clearly in all the documentation underlying these transactions and made available to the sponsor.

The sponsor should ensure that provisions regarding the replacement of key counterparties (in particular, the servicer or liquidity provider) in the event of failure or nonperformance or insolvency or other deterioration of any such counterparty for the transactions are well documented (in the documentation of these individual transactions).

To enhance the transparency and visibility of all receipts, payments and ledger entries at all times, the sponsor should ensure that, for all transactions, the performance reports include all of the following: the transactions' income and disbursements, such as scheduled principal, redemption principal, scheduled interest, prepaid principal, past due interest and fees and charges, and delinquent, defaulted, restructured and diluted amounts; and accurate accounting for amounts attributable to principal and interest deficiency ledgers.

E. Additional criteria for capital purposes**1. Credit risk of underlying exposures**

²⁰ "Underlying documentation" does not refer to the documentation of the underlying transactions.

At the date of acquisition of the assets, the underlying exposures must meet the conditions to be assigned a risk weight equal to or smaller than:

6. 40% on a value-weighted average exposure basis for the portfolio where the exposures are loans secured by residential mortgages or fully guaranteed residential loans;
7. 50% on an individual exposure basis where the exposure is a loan secured by a commercial mortgage;
8. 75% on an individual exposure basis where the exposure is a retail exposure; or
9. 100% on an individual exposure basis for any other exposure.

These risk weights should be after taking into account any eligible credit risk mitigation. The thresholds as set are based on the current Standardized Approach to credit risk, and may be revisited if the Standardized Approach for credit risk is subsequently revised.

2. *Granularity of the pool*

At the date of acquisition of any assets securitized by one of the conduits' transactions, the aggregated value of all exposures to a single obligor at that date shall not exceed 2% of the aggregated outstanding exposure value of all exposures in the program. In the case of trade receivables where the credit risk of those trade receivables is fully covered by credit protection, provided that the protection provider is a financial institution, only the portion of the trade receivables remaining after taking into account the effective of any purchase price discount and overcollateralization shall be included in the determination of whether the 2% limit is breached.

IX. Market Risk

I. Introduction

1. This Standard articulates specific requirements for the calculation of the market risk capital requirement for banks in the UAE. It is based closely on requirements of the framework for capital adequacy developed by the Basel Committee on Banking Supervision (BCBS), specifically as articulated in *Basel II: International Convergence of Capital Measurement and Capital Standards, June 2006*, and subsequent revisions and clarifications thereto.
2. This Standard applies to:
 - the risks pertaining to interest rate related instruments and equities in the trading book; and
 - foreign exchange risk and commodities risk throughout the bank.
3. Capital requirements for market risk apply on a consolidated basis for all banks in the UAE. Note that the capital required for general and specific market risk under this Standard is in addition to, not in place of, any capital required under other Central Bank Standards. Banks should follow the requirements of all other applicable Central Bank Standards to determine overall capital adequacy requirements; for example, the Counterparty Credit Risk Standard.
4. The Standards follow the calibration developed by the Basel Committee, which includes a maximum risk weight of 1250%, calibrated on a total capital adequacy requirement of 8%. The UAE instituted a higher minimum capital requirement of 10.5% (excluding capital buffers), applicable to all licensed banks. Consequently, the maximum capital charge for a single exposure will be the lesser of the value of the exposure after applying valid credit risk mitigation, netting and haircuts, and the capital resulting from applying a risk weight of 952% (reciprocal of 10.5%) to this exposure.

II. Definitions

In general, terms in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In addition, for this Standard, the following terms have the meanings defined in this section.

- a) A **commodity** is defined as a physical product that is or can be traded on a secondary market, e.g. agricultural products, minerals (including oil) and precious metals.
- b) **Convertible bonds** are debt issues or preference shares that are convertible, at a stated price, into common shares of the issuer.
- c) **Deep-discount bonds** are defined as bonds with a coupon of less than 3%.
- d) A **financial asset** is any asset that is cash, the right to receive cash or another financial asset; or the contractual right to exchange financial assets on potentially favorable terms, or an equity instrument.
- e) A **financial instrument** is any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another entity. Financial instruments include either primary financial instruments (or cash instruments) and derivative financial instruments.
- f) A **financial liability** is the contractual obligation to deliver cash or another financial asset or to exchange financial liabilities under conditions that are potentially unfavorable.

- g) **General market risk** is market risk related to broad movements in overall market prices or rates that reflect common movements among many related market instruments.
- h) **Marked-to-model** refers to the use of quantitative models to determine the value of positions or exposures, typically in the absence of reliable market prices.
- i) **Market risk** is defined as the risk of losses in on-balance-sheet and off-balance-sheet positions arising from movements in market prices.
- j) A **special purpose entity** is an entity, typically created to be bankruptcy-remote from the sponsoring entity, with operations limited to the acquisition and financing of specific assets as a method of isolating risk.
- k) **Specific risk** is market risk related to factors affecting a specific issuer, rate, currency, or commodity rather than to broad market movements.
- l) A **two-way market** is deemed to exist where there are independent bona fide offers to buy and sell so that a price reasonably related to the last sales price or current bona fide competitive bid and offer quotations can be determined within one day and settled at such price within a relatively short time conforming to trade custom.

III. Requirements

A. Scope and Coverage

5. The capital charges, as explained below, for interest rate related instruments and equities would apply to the trading book. The capital charges for foreign exchange risk and for commodities risk will apply to banks' total currency and commodity positions.

6. Banks must have clearly defined policies and procedures for determining which exposures to include in, and to exclude from, the trading book for purposes of calculating their regulatory capital, to ensure compliance with the criteria for trading book set forth in this Standard and taking into account the bank's risk management capabilities and practices. These policies and procedures must be fully documented and subject to periodic internal audit, and at a minimum address the general considerations listed below:

- The activities the bank considers to be trading and as constituting part of the trading book for regulatory capital purposes;
- The extent to which an exposure can be marked-to-market daily by reference to an active, liquid two-way market;
- For exposures that are marked-to-model, the extent to which the bank can:
 - Identify the material risks of the exposure;
 - Hedge the material risks of the exposure and the extent to which hedging instruments would have an active, liquid two-way market;
 - Derive reliable estimates for the key assumptions and parameters used in the model.
- The extent to which the bank can and is required to generate valuations for the exposure that can be validated externally in a consistent manner;
- The extent to which legal restrictions or other operational requirements would impede the bank's ability to effect an immediate liquidation of the exposure;

- The extent to which the bank is required to, and can, actively risk manage the exposure within its trading operations; and
- The extent to which the bank may transfer risk or exposures between the banking and the trading books and criteria for such transfers.

7. The following will be the basic requirements for positions eligible to receive trading book capital treatment:

- Clearly documented trading strategy for the position/instrument or portfolios, approved by senior management (which would include expected holding horizon);
- Clearly defined policies and procedures for the active management of the position, which must include;
 - positions are managed on a trading desk;
 - position limits are set and monitored for appropriateness;
 - dealers have the autonomy to enter into/manage the position within agreed limits and according to the agreed strategy;
 - positions are marked to market at least daily and when marking to model the parameters must be assessed on a daily basis;
 - positions are reported to senior management as an integral part of the institution's risk management process; and
 - positions are actively monitored with reference to market information sources (assessment should be made of the market liquidity or the ability to hedge positions or the portfolio risk profiles). This would include assessing the quality and availability of market inputs to the valuation process, level of market turnover, sizes of positions traded in the market, etc; and
- Clearly defined policy and procedures to monitor the positions against the bank's trading strategy including the monitoring of turnover and stale positions in the bank's trading book.

8. Term trading-related repo-style transactions that meet the requirements for trading-book treatment as stated in the paragraph above may be included in the bank's trading book for regulatory capital purposes even if a bank accounts for those transactions in the banking book. If the bank does so, all such repo-style transactions must be included in the trading book, and both legs of such transactions, either cash or securities, must be included in the trading book. Regardless of where they are booked, all repo-style transactions are subject to a credit risk capital requirement under the Central Bank's *Standard for Credit Risk Capital*.

9. When a bank hedges a banking book credit risk exposure using a credit derivative booked in its trading book (i.e. using an internal hedge), the banking book exposure is not deemed to be hedged for capital purposes unless the bank purchases from an eligible third party protection provider a credit derivative meeting the requirements in the Central Bank's *Standard for Credit Risk Capital*. Where such third party protection is purchased and is recognized as a hedge of a banking book exposure for regulatory capital purposes, neither the internal nor external credit derivative hedge would be included in the trading book for regulatory capital purposes.

10. Positions in the bank's own eligible regulatory capital instruments are deducted from capital. Positions in other banks', securities firms', and other financial entities' eligible regulatory capital instruments, as well as intangible assets, will receive the same treatment as that set down by the Central Bank for such assets held in the banking book. Where a bank

demonstrates to the Central Bank that it is an active market maker, then the Central Bank may establish a dealer exception for holdings of other banks', securities firms', and other financial entities' capital instruments in the trading book. In order to qualify for the dealer exception, the bank must have adequate systems and controls surrounding the trading of financial institutions' eligible regulatory capital instruments.

11. For the purposes of these Standards, the correlation trading portfolio incorporates securitisation exposures and nth-to-default credit derivatives that meet the following criteria:

- The positions are neither resecuritisation positions, nor derivatives of securitisation exposures that do not provide a pro-rata share in the proceeds of a securitisation tranche; and
- All reference entities are single-name products, including single-name credit derivatives, for which a liquid two-way market exists. This includes commonly traded indices based on these reference entities. Positions that reference an underlying that would be treated as a retail exposure, a residential mortgage exposure, or a commercial mortgage exposure under the standardized approach to credit risk are not included in the correlation-trading portfolio. Positions that reference a claim on a special purpose entity also are not included. A bank may include in the correlation trading portfolio positions that are hedges of securitisation exposures or nth-to-default credit derivatives, but that are not themselves either securitisation exposures or nth-to-default credit derivatives, where a liquid two-way market exists for the instrument or its underlying.

B. Standardized Measurement Methods

1. Interest rate risk

12. This Standard describes the framework for measuring the risk of holding or taking positions in debt securities and other interest rate related instruments in the trading book. The instruments covered include all fixed-rate and floating-rate debt securities and instruments that behave like them, including non-convertible preference shares. Banks should treat convertible bonds as debt securities if they trade like debt securities and as equities if they trade like equities.

13. The minimum capital requirement is expressed in terms of two separately calculated charges, one applying to the "specific risk" of each security, whether it is a short or a long position, and the other to the interest rate risk in the portfolio ("general market risk") where long and short positions in different securities or instruments can be offset.

Specific risk

14. In measuring the capital charge for specific risk, offsetting of long and short positions is restricted to matched positions in the identical issue (including positions in derivatives). No offsetting is permitted between different issues, even if the issuer is the same.

15. The specific risk capital charges for interest rate risk are as specified in Table 1 below.

Table 1: Specific Risk Charges for Interest Rate Risk

Categories	External credit assessment	Specific risk capital charge
Government	AAA to AA-	0%
	A+ to BBB-	0.25% (residual term to final maturity 6 months or less)
		1.00% (residual term to final maturity greater than 6 and up to and including 24 months)
		1.60% (residual term to final maturity exceeding 24 months)
	BB+ to B-	8%
	Below B-	12%
Qualifying	Unrated	8%
		0.25% (residual term to final maturity 6 months or less)
		1.00% (residual term to final maturity greater than 6 and up to and including 24 months)
		1.60% (residual term to final maturity exceeding 24 months)
Other	BB+ to BB-	8%
	Below BB-	12%
	Unrated	8%

16. The category “government” includes all forms of government paper as defined in the Central Bank’s Standard for Credit Risk. Exposure to the Federal Government and Emirates Government receive 0% risk weight, if such exposures are denominated and funded in AED or USD for a transition period of 7 years from the date of implementation of this Standard. After the transition period, 0% risk weights are only applied to exposures that are denominated and funded in AED. In general, only government debt rated AA- or better is eligible for the 0% specific risk charge. However, for debt rated below AA-, when the government paper is denominated in the domestic currency and funded by the bank in the same currency, the Central Bank uses national discretion to apply a 0% specific risk charge.²¹ The national discretion is limited to GCC Sovereigns.

17. The “qualifying” category includes securities issued by public sector entities and multilateral development banks, plus other securities that are rated investment-grade by at least two credit rating agencies recognized by the Central Bank for this purpose per Central Bank standards, or are rated investment-grade by one rating agency and not less than investment-grade by any other rating agency recognized by the Central Bank. Unrated securities may be considered “qualifying” subject to Central Bank approval on a case-by-case basis if the bank deems them to be of comparable investment quality and the issuer has securities listed on a recognized stock exchange. Unrated securities that are considered “qualifying” by the Central Bank can be recategorised from time to time if the Central Bank deems this necessary.

18. The specific risk charges stated in Table 1 for instruments issued by a non-qualifying issuer may considerably underestimate the specific risk for certain debt instruments with a high yield to redemption relative to government debt securities. In such cases, the Central Bank may direct a bank to apply a higher specific risk charge to such instruments, and/or to disallow offsetting of general market risk between such instruments and any other debt instruments.

²¹ This use of national discretion aligns the Market Risk Standard with the similar treatment under the Credit Risk Standard.

19. Banks must determine the specific risk capital charge for the correlation trading portfolio by computing (i) the total specific risk capital charges that would apply just to the net long positions from the net long correlation trading exposures combined, and (ii) the total specific risk capital charges that would apply just to the net short positions from the net short correlation trading exposures combined. The larger of these two amounts in terms of domestic currency is then the specific risk capital charge for the correlation-trading portfolio.

Specific risk rules for positions covered under the securitisation framework

20. The specific risk charges for securitisation exposures held in the trading book are based on the risk weights assigned to securitisation exposures under the Central Bank's *Standard on Required Capital for Securitisation Exposures*. Specifically, banks should determine the applicable risk weight applied to such positions in the banking book, and multiply the result by 8% to obtain the specific risk charge for the trading book exposure.

21. A securitisation exposure subject to a risk weight of 1250% under the Central Bank requirements (and therefore to a 100% specific risk charge under this Standard) may be excluded from the calculation of capital for general market risk.

Limitation of the specific risk capital charge to the maximum possible loss

22. Banks may limit the capital required for an individual position in a credit derivative or securitisation instrument to the maximum possible loss. For a short risk position, this limit can be calculated as the change in value due to the underlying names immediately becoming default risk-free. For a long risk position, the maximum possible loss could be calculated as the change in value in the event that all the underlying names were to default with zero recoveries. The maximum possible loss must be calculated for each individual position.

Specific risk capital charges for positions hedged by credit derivatives

23. Full allowance and offset can be recognized when the values of two legs, that is, long and short, always move in opposite directions and move broadly to the same extent. This would be the case when the two legs consist of completely identical instruments (e.g. two instruments with exactly the same issuer, coupon, currency, and maturity), or when a long cash position is hedged by a total rate of return swap (or vice versa) and there is an exact match between the reference obligation and the underlying cash position. (The maturity of the swap itself may be different from that of the underlying exposure.) In these cases, no specific risk capital requirement applies to either side of the position.

24. An 80% offset can be recognized when the value of long and short legs always move in opposite directions, but do not move broadly to the same extent. This would be the case when a long cash position is hedged by a credit default swap or a credit linked note (or vice versa) and there is an exact match in terms of the reference obligation, the maturity of both the reference obligation and the credit derivative, and the currency of the underlying exposure. In addition, key features of the credit derivative contract should not cause the price movement of the credit derivative to materially deviate from the price movements of the cash position. To the extent that the transaction transfers risk, that is taking account of restrictive payout provisions such as fixed payouts and materiality thresholds, an 80% specific risk offset can be applied to the side of the transaction with the higher capital charge, while the specific risk requirement on the other side is zero.

25. Partial allowance and offset can be recognized when the value of the long and short legs usually, but not necessarily always, move in opposite directions. This is the case in the following situations:

- The position would meet the conditions for full allowance but there is not an exact match between the reference obligation and the underlying exposure; the position otherwise meets the operational requirements for credit derivatives for credit risk mitigation under the Central Bank's *Standard for Credit Risk Capital*.

- The position would meet the conditions for full allowance but there is a currency or maturity mismatch between the credit protection and the underlying asset.
- The position would meet the conditions for full allowance but there is an asset mismatch between the cash position and the credit derivative. However, the underlying asset is included in the (deliverable) obligations in the credit derivative documentation.

In each of the cases above, rather than adding the specific risk capital requirements for each side of the transaction (i.e. the credit protection and the underlying asset), the bank can apply only the higher of the two capital requirements. Otherwise, in cases that do not meet the conditions above, a specific risk capital charge must be assessed against both sides of the position.

26. The capital charge for specific risk for a first-to-default credit derivative is the lesser of (1) the sum of the specific risk capital charges for the individual reference credit instruments in the basket, and (2) the maximum possible credit event payment under the contract. Where a bank has a risk position in one of the reference credit instruments underlying a first-to-default credit derivative and this credit derivative hedges the bank's risk position, the bank may reduce with respect to the hedged amount both the capital charge for specific risk for the reference credit instrument and that part of the capital charge for specific risk for the credit derivative that relates to this particular reference credit instrument. Where a bank has multiple risk positions in reference credit instruments underlying a first-to-default credit derivative, this offset is allowed only for that underlying reference credit instrument having the lowest specific risk capital charge.

27. For nth-to-default credit derivatives with n greater than one, no offset of the capital charge for specific risk with any underlying reference credit instrument is allowed. If the nth-to-default credit derivative is externally rated, then the protection seller must calculate the specific risk capital charge using the approach applied for securitisation exposures held in the trading book. Specifically, banks should determine the applicable risk weight applied to such positions as securitisation exposures in the banking book, and multiply the result by 8% to obtain the specific risk charge for the derivative exposure. Otherwise, the capital charge for specific risk for nth-to-default credit derivative with n greater than one is the lesser of (1) the sum of the specific risk capital charges for the individual reference credit instruments in the basket but disregarding the n-1 obligations with the lowest specific risk capital charges; and (2) the maximum possible credit event payment under the contract. The capital charge for nth-to-default credit derivative positions applies irrespective of whether the bank has a long or short position, that is, whether the bank obtains or provides protection.

General market risk

28. For general market risk, positions are slotted into time bands. The capital charge is the sum of four components calculated from amounts in each time band:

- The net short or long position in the whole trading book;
- A small proportion of the matched positions in each time-band (the “*vertical disallowance*”);
- A larger proportion of the matched positions across different time-bands (the “*horizontal disallowance*”); and
- Where applicable, a net charge for positions in options.

29. A bank can choose between two principal methods of slotting positions into time bands for general market risk: a “maturity” method and a “duration” method.

30. In the **maturity method**, long or short positions in debt securities and other sources of interest rate exposures including derivative instruments are slotted into a maturity ladder

comprising thirteen time-bands (or fifteen time-bands in case of low coupon instruments). Fixed rate instruments must be allocated according to the residual term to maturity and floating-rate instruments according to the residual term to the next repricing date. Opposite positions of the same amount in the same issues (but not different issues by the same issuer), whether actual or notional, can be omitted from the interest rate maturity framework, as can closely matched swaps, forwards, futures, and forward rate agreements (FRAs) that meet the conditions set out below in this Standard on allowable offsetting of matched positions.

31. The first step in the calculation is to weight the positions in each time-band by a risk weight designed to reflect the price sensitivity of those positions to assumed changes in interest rates. The weights for each time-band are set out in the risk-weight column of Table 2. Zero-coupon bonds and deep-discount bonds (defined as bonds with a coupon of less than 3%) should be slotted according to the time-bands set out in the column labeled “Coupon less than 3%” in Table 2.

Table 2: Risk Weights and Assumed Yield Changes for General Market Risk, by Zone and Time Band

Zones	Coupon 3% or more	Coupon less than 3%	Risk weight	Assumed Yield Change
Zone 1	1 month or less	1 month or less	0.00%	1.00
	1 to 3 months	1 to 3 months	0.20%	1.00
	3 to 6 months	3 to 6 months	0.40%	1.00
	6 to 12 months	6 to 12 months	0.70%	1.00
Zone 2	1 to 2 years	1.0 to 1.9 years	1.25%	0.90
	2 to 3 years	1.9 to 2.8 years	1.75%	0.80
	3 to 4 years	2.8 to 3.6 years	2.25%	0.75
Zone 3	4 to 5 years	3.6 to 4.3 years	2.75%	0.75
	5 to 7 years	4.3 to 5.7 years	3.25%	0.70
	7 to 10 years	5.7 to 7.3 years	3.75%	0.65
	10 to 15 years	7.3 to 9.3 years	4.50%	0.60
	15 to 20 years	9.3 to 10.6 years	5.25%	0.60
	over 20 years	10.6 to 12 years	6.00%	0.60
		12 to 20 years	8.00%	0.60
		over 20 years	12.50%	0.60

32. The next step in the calculation is to offset the weighted longs and shorts in each time-band, resulting in a single short or long position for each band. A 10% capital charge to reflect basis risk and gap risk – the vertical disallowance – is levied on the smaller of the offsetting long or short positions in each time-band. The result is two sets of weighted positions, the net long or short positions in each time-band and the vertical disallowances, which have no sign.

33. Next, banks are allowed to conduct two rounds of “horizontal offsetting,” subject to disallowances expressed as a fraction of the matched positions. First, the weighted long and

short positions in each of three zones identified in Table 2 may be offset, subject to the matched portion attracting a within-zone disallowance factor that is part of the capital charge:

Within Zone 1: 40%

Within Zone 2 or Zone 3: 30%

34. Second, the residual net position in each zone may be carried over and offset against opposite positions in other zones, subject to a second set of disallowance factors that apply between zones:

Between Zone 1 and Zone 2: 40%

Between Zone 2 and Zone 3: 40%

Between Zone 1 and Zone 3: 100%

35. Under the alternative **duration method**, banks with the necessary capability may, with the Central Bank's consent, calculate the price sensitivity of each position separately. Banks must elect and use this method on a continuous basis unless a change in method is approved by the Central Bank. To apply the duration method, banks should apply the following steps in order:

- Calculate the price sensitivity of each instrument in terms of a change in interest rates of between 0.6 and 1.0 percentage points depending on the maturity of the instrument per the last column of Table 2;
- Slot the resulting sensitivity measures into the fifteen time-bands set out in the "Coupon less than 3%" column of Table 2;
- Subject long and short positions in each time-band to a 5% vertical disallowance to reflect basis risk; and
- Carry forward the net positions in each time-band for horizontal offsetting subject to the within-zone and between-zone horizontal disallowances specified above.

36. Under either the maturity method or the duration method, separate maturity ladders should be used for each currency, and capital charges should be calculated for each currency separately and then summed with no offsetting across currencies between positions of opposite sign.

37. In the case of currencies in which business is insignificant, the bank may construct a single maturity ladder, and slot within each appropriate time-band the net long or short position for each currency. However, these individual net positions must be summed within each time-band, irrespective of whether they are long or short positions, to produce a gross position figure. These gross positions in each time band are then subject to the risk weights from Table 2, with no further offsetting permitted.

Interest rate derivatives

38. Interest rate risk calculations for market risk capital should include all interest rate derivatives and off-balance-sheet instruments held in the trading book that respond to changes in interest rates. The derivatives should be converted into equivalent positions in the relevant underlying, and then be subject to the specific and general market risk requirements as described above. Amounts reported should be the market value of the notional amount of the underlying or of the notional underlying. For instruments where the apparent notional amount differs from the effective notional amount, banks must use the effective notional amount.

39. Futures and forward contracts, including forward rate agreements, should be treated as a combination of a long position and a short position in a notional government security. The contractual period until delivery or exercise of a future or FRA, plus the life of the underlying instrument where applicable, should be used as the maturity. Where a range of deliverable instruments may be delivered to fulfil the contract, the bank can choose which deliverable security goes into the maturity or duration ladder, but should take into account any conversion factor defined by the exchange. In the case of a future on a corporate bond index, the position should be included in the maturity or duration ladder at the market value of the notional underlying portfolio of securities.

40. Swaps should be treated as two notional positions in government securities with relevant maturities. For swaps that pay or receive a fixed or floating interest rate against some other reference price such as an equity price, the interest rate component should be slotted into the appropriate repricing maturity category, with the equity component being included in the equity framework. The separate legs of cross-currency swaps are to be reported in the relevant maturity ladders for the currencies concerned.

Allowable offsetting of matched positions

41. If a bank has matching long and short positions in the trading book, where both actual and notional match in identical instruments with exactly the same issuer, coupon, currency and maturity, those positions may be excluded from interest rate capital framework altogether, for both specific and general market risk. A matched position in a future or forward and its corresponding underlying may be fully offset, and thus excluded from the calculation. When the future or forward comprises a range of deliverable instruments, offsetting of positions in the future or forward contract and its underlying is only permissible in cases where there is a readily identifiable underlying security that is most profitable for the trader with a short position to deliver. No offsetting is allowed between positions in different currencies; the separate legs of cross-currency swaps or forward foreign exchange deals are to be treated as notional positions in the relevant instruments and included in the appropriate calculation for each currency.

42. Under certain conditions, opposite positions in the same category of instruments, including options at their delta-equivalent value and the separate legs of different swaps, can be regarded as matched and allowed to offset fully. The positions must relate to the same underlying instruments, be of the same nominal value, and be denominated in the same currency. In addition:

- (i) **for futures:** offsetting positions in the notional or underlying instruments to which the futures contract relates must be for identical products and mature within seven days of each other;
- (ii) **for swaps and FRAs:** the reference rate (for floating rate positions) must be identical and the coupon closely matched (within 15 basis points); and
- (iii) **for swaps, FRAs and forwards:** the next interest fixing date or, for fixed coupon positions or forwards, the residual maturity must correspond to one another within the following limits:
 - (a) less than one month hence: must be same day;
 - (b) between one month and one year hence: must be within seven days of one another; or
 - (c) over one year hence: must be within thirty days of one another.

Specific risk for interest rate derivatives

43. Interest rate and currency swaps, FRAs, forward foreign exchange contracts, and interest rate futures are not subject to a specific risk charge. This exemption also applies to futures on an interest rate index. However, in the case of futures contracts where the

underlying is a debt security, or an index representing a basket of debt securities, such a specific risk charge does apply.

General market risk for interest rate derivatives

44. General market risk applies to positions in all derivative products in the same manner as for cash positions, subject only to the allowable offsetting of fully or very closely matched positions in identical instruments as defined above in this Standard. The various categories of instruments should be slotted into the maturity ladder and treated according to the rules identified earlier.

45. Table 3 below presents a summary of the regulatory treatment for interest rate derivatives for market risk purposes. Note that a contract for which the underlying instrument is a government debt security rated AA- or better has no capital requirement for specific risk. Also, note that the specific risk charge relates to the issuer of the instrument that is referenced by the derivative contract; the derivative is still subject to a separate capital charge for counterparty credit risk under the Central Bank's *Standard for Counterparty Credit Risk*.

Table 3: Summary of treatment of interest rate derivatives

Instrument	Specific risk charge	General market risk charge
Futures and forward contracts on:		
• Government debt securities	Yes, if below AA-	Yes, as two positions
• Corporate debt securities	Yes	
• Index on interest rates	No	
FRAs and swaps	No	Yes, as two positions
Forward foreign exchange	No	Yes, as one position in each currency
Options on:		
• Government debt securities	Yes, if below AA-	Either (a) carve out together with associated hedging positions under the simplified approach; or (b) calculate general market risk charge according to the delta-plus approach (gamma and vega should receive separate capital charges)
• Corporate debt securities	Yes	
• Index on interest rates	No	
• FRAs and swaps	No	

2. Equity position risk

46. This section covers market risk capital for positions in equities held in the trading book. It applies to long and short positions in all instruments that exhibit market behavior similar to equities. It applies to common stocks – whether voting or non-voting – convertible securities that behave like equities, and commitments to buy or sell equity securities, but not to non-convertible preference shares.

47. As with debt securities, the minimum capital standards for equities includes two separately calculated charges, one for the “specific risk” of holding a long or short position in an individual equity, and one for the “general market risk” of holding a long or short position in the market as a whole. The requirements apply in modified form to equity derivative products, stock indices, and index arbitrage; the relevant modifications are described later in this Standard.

Specific and general market risk

48. *Specific risk* is calculated as a percentage of the bank’s gross equity positions, that is, the sum of all long equity positions and all short equity positions, summed without regard to sign (that is, the sum of the absolute values of the positions in each equity). The capital charge for specific risk is calculated as 8% of gross equity positions.

49. *General market risk* is calculated based on overall net position in an equity market, which is the difference between the sum of the longs and the sum of the shorts. The capital charge for general market risk is calculated as 8% of overall net equity positions.

50. Long and short positions in the same issue may be reported on a net basis. The long or short position in the market must be calculated on a market-by-market basis, that is, a separate calculation has to be carried out for each national market in which the bank holds equities.

Equity derivatives

51. Equity derivatives and off-balance-sheet positions that are affected by changes in equity prices should be included in the measurement system, with the exception of certain options positions as described further below. This includes futures and swaps on both individual equities and on stock indices.

Calculation of positions

52. To calculate specific and general market risk, derivatives are converted into equivalent positions in the relevant underlying. Positions in derivatives should be converted into notional equity positions as follows:

- Futures and forward contracts relating to individual equities should be reported at current market prices;
- Futures relating to stock indices should be reported as the marked-to-market value of the notional underlying equity portfolio;
- Equity swaps should be treated as two notional positions; and
- Equity options and stock index options should either be “carved out” together with the associated underlying or be incorporated in the measure of general market risk described in this section according to the delta-plus method.

53. Matched positions in each identical equity or stock index in each market may be fully offset, resulting in a single net short or long position to which the specific and general market risk charges will apply. For example, a future in a given equity may be offset against an opposite cash position in the same equity. Any interest rate risk arising out of the future, however, should be treated per the requirements for interest rate risk in the trading book.

Specific Risk and General Market Risk for Equity Derivatives

54. Table 4 below presents a summary of the regulatory treatment for equity derivatives for market risk purposes. Note that derivatives are also subject to a separate capital charge for counterparty credit risk under the Central Bank’s *Standard for Counterparty Credit Risk*.

Table 4: Summary of treatment of equity derivatives

Instrument	Specific risk charge	General market risk charge
Futures and forward contracts on: <ul style="list-style-type: none"> Individual equities Equity indexes 	Yes 2%	Yes, as underlying
Options on: <ul style="list-style-type: none"> Individual equities Equity indexes 	Yes 2%	Either (a) carve out together with associated hedging positions under the simplified approach; or (b) calculate general market risk charge according to the delta-plus approach (gamma and vega should receive separate capital charges)

55. In addition to the general market risk requirement, a further capital charge of 2% must be applied to the net long or short position in index contracts on a diversified portfolio of equities, to cover factors such as execution risk.

56. Where a bank engages in a deliberate arbitrage strategy under which a basket of stocks is matched against a futures contract on a broadly-based index, a modified capital requirement applies, provided:

- The trade has been deliberately entered into and separately controlled as part of the strategy; and
- The composition of the basket of stocks represents at least 90% of the index when broken down into its notional components.

In such a case, the capital requirement is 2% of the gross value of the positions on each side. This requirement applies even if all of the stocks comprising the index are held in identical proportions. Any excess value of the stocks comprising the basket over the value of the futures contract or excess value of the futures contract over the value of the basket must be treated as an open long or short equity position.

57. However, on certain futures-related arbitrage strategies, the additional 2% capital charge is applied to only one side of the trade, with the opposite position exempt from this capital charge. This special treatment applies:

- When a bank takes an opposite position in exactly the same index at different dates or in different market centers; or
- When a bank has opposite positions in contracts involving different but similar indices at the same date (in which case, the Central Bank may determine whether the two indices in such a strategy are sufficiently similar, with sufficient common components).

58. A bank with a position in depository receipts against an opposite position in the underlying equity, or identical equities in different markets, may offset the positions the long and short positions, provided that any costs on conversion are fully taken into account. (Such trades may also introduce foreign exchange risk requiring market risk capital.)

3. **Foreign exchange risk**

59. This section sets out minimum capital standards to cover the risk of holding or taking positions in foreign currencies, including gold. Gold is treated as a foreign exchange position for purposes of market risk rather than as a commodity, because its volatility is more in line with foreign currencies and because banks typically manage gold exposures in a similar manner to foreign currencies. These requirements apply to all foreign currency and gold exposures throughout the entire bank, in both the trading book and the banking book.

Measuring the exposure in a single currency

60. The bank's net open position in each currency, long or short, should be calculated by summing:

- The net spot position calculated as all asset items less all liability items denominated in a given currency, including accrued interest and accrued expenses;
- The net forward position calculated as all amounts to be received less all amounts to be paid under forward foreign exchange transactions in a given currency, including currency futures and the principal on currency swaps not included in the spot position;
- Guarantees (and similar instruments) in the given currency that are certain to be called and are likely to be irrecoverable;
- At the discretion of the reporting bank, net future income and expenses not yet accrued but already fully hedged;
- Any other item representing a profit or loss in foreign currencies; and
- The net delta-based equivalent of the total book of foreign currency options. (Options are also subject to additional considerations as described below in this Standard.)

61. Expected but unearned future interest and expenses may be excluded unless the amounts are certain and have been hedged. If a bank includes future income and expenses, it must do so on a consistent basis, and is not permitted to select only those expected future flows that reduce required capital.

62. Positions in composite currencies (such as SDRs or synthetic currencies) should be separately reported, but may be either treated as currencies in their own right or split into their component parts for measuring the bank's open positions. While either approach may be used, the selected approach should be used consistently by the bank.

63. Positions (either spot or forward) in gold should first be expressed in common units (e.g. kilos or pounds), with the net position converted at current spot rates into UAE Dirham equivalent value. Where gold is part of a forward contract (quantity of gold to be received or to be delivered), any interest rate or foreign currency exposure from the other leg of the contract should be reported as set out for interest rate and currency exposures under this Standard.

64. Forward positions may be valued at current spot market exchange rates. However, banks that use net present values of positions in their normal management accounting are expected to use those net present values, discounted using current interest rates and valued at current spot rates, for measuring their forward currency and gold positions.

65. Items that are deducted from a bank's capital when calculating its capital base, such as investments in non-consolidated subsidiaries, or other long-term participations denominated in foreign currencies, which are reported in the published accounts at historic cost, do not need to be included as foreign currency exposures for the foreign exchange risk calculation.

66. When assessing foreign exchange risk on a consolidated basis, it may be technically impractical in the case of some marginal operations to include the currency positions of some foreign branches or subsidiaries. In such cases, the bank may use an established internal position limit in each currency as a proxy for the actual position, provided there is adequate ex-post monitoring of actual positions against such limits to confirm that the limits are effective. The bank should add the limits, without regard to sign, to the net open position in each currency.

67. Banks should convert the nominal amount (or net present value) of the net position in each foreign currency and in gold at current spot rates into UAE Dirham (AED) equivalent for purposes of reporting and capital calculations.

Measuring market risk for foreign exchange positions

68. Calculation of market risk capital for foreign currency positions is based on the net open positions in foreign currencies and in gold. For purposes of market risk capital requirements, the Central Bank takes into account the stable relationship between the AED and the US dollar, which results in UAE banks facing no material foreign exchange market risk with respect to open US dollar positions.

69. A bank should calculate its overall net open foreign exchange position for the bank as follows:

- Calculate the sum of all net short foreign currency positions, and the sum of all net long foreign currency positions, excluding the net open position in the US dollar.
- Take the larger of the two sums, from the step above, and add the absolute value of the net position (short or long) in gold.

The capital charge for foreign exchange market risk is 8% of the position resulting from the calculation above.

70. A bank doing negligible business in foreign currency that does not take foreign exchange positions for its own account may, at the discretion of the Central Bank, be exempted from capital requirements on these positions provided that:

- Its foreign currency business, measured as the greater of the sum of its gross long positions and the sum of its gross short positions in all foreign currencies *including* the US dollar, does not exceed 100% of total capital; and
- Its overall net open foreign exchange position as defined in this section does not exceed 2% of total capital.

4. Commodities risk

71. This section establishes a minimum capital standard to cover the risk of holding or taking positions in commodities, including precious metals but excluding gold. Banks may choose between two alternative approaches for measuring commodities position risk: a maturity ladder approach based on seven time-bands, and a simplified approach.

72. Under either approach, long and short positions may be offset to calculate open positions in each commodity. Banks first express each commodity position (spot plus forward) in a standard unit of measurement (barrels, kilos, grams etc.), then convert the net position in each commodity into a value in AED at current spot rates. For markets that have daily delivery dates, any contracts maturing within ten days of one another may be offset.

73. In general, long and short positions in different commodities may not be offset. However, the Central Bank permits banks to offset long and short positions in different commodities within a given commodity type in cases where the commodities are deliverable

against one another, where “commodity type” has the meaning as defined in the *Counterparty Credit Risk* Standard. The Central Bank may also permit offsetting if the commodities are close substitutes for each other and a minimum correlation of 0.9 between their price movements can be clearly established by the bank over a minimum period of one year. However, a bank basing its capital calculation on correlations must satisfy the Central Bank of the accuracy of the method chosen for assessing correlation, and must obtain the Central Bank’s prior approval. In addition, the bank must have an approved process for identifying commodity types under the *Counterparty Credit Risk* Standard.²²

74. All commodity derivatives and off-balance-sheet positions that are affected by changes in commodity prices should be included in this measurement framework. This includes commodity futures, commodity swaps, and options where the “delta plus” method is used. In order to calculate the risk, commodity derivatives should be converted into notional commodities positions and assigned to maturities as follows:

- *Futures and forward contracts relating to individual commodities* should be incorporated in the measurement system as notional amounts of barrels, kilos etc. and should be assigned a maturity with reference to expiry date.
- *Commodity swaps* where one leg is a fixed price and the other is the current market price should be incorporated as a series of positions equal to the notional amount of the contract, with one position corresponding to each payment on the swap and slotted into the maturity ladder accordingly. The positions would be long positions if the bank is paying fixed and receiving floating, and short positions if the bank is receiving fixed and paying floating.

75. Banks should incorporate commodity swaps where the legs are in different commodities into the relevant maturity ladder, with no offsetting allowed.

Maturity ladder approach

76. Under the maturity ladder approach, the bank assigns positions in each commodity to one of seven time bands, as shown in Table 5 below. Banks must use a separate maturity ladder for each commodity. Holdings of physical stocks of any commodity should be allocated to the shortest time band (that is, 0-1 month).

Table 5: Time-bands for the maturity ladder

Time band	Maturity range			
1	0	-	1	month
2	1	-	3	months
3	3	-	6	months
4	6	-	12	months
5	1	-	2	years
6	2	-	3	years
7	over		3	years

²² The Central Bank has exercised the national discretion provided under the BCBS framework to permit offsetting of long and short positions in closely related commodities under the conditions described in this Standards. The Central Bank believes that this approach provides appropriate recognition of the actual underlying risks, while requiring well-controlled processes to identify the relevant offsetting commodity positions. It also aligns the treatment of commodities under this Standards with the corresponding treatment of commodity positions with respect to market-driven exposure under the Central Bank’s counterparty credit risk requirements.

77. Capital for commodity market risk consists of two broad components: a set of capital charges on the gross positions (long plus short) in each time band and capital charges against a series of net position calculations. Each component is described further below.

78. For the first component, the bank should calculate 1.5% of the gross position (long plus short, without offsetting) in each of the seven time bands, and sum the results across time bands.

79. For the second component, the bank should first calculate 0.6% of the net position (the absolute value of the difference between long and short positions) in time band 1. To this, the bank should add 0.6% of the net position in time bands 1 and 2 combined. The bank should do the same for time bands 1 through 3 combined, 1 through 4 combined, 1 through 5 combined, and 1 through 6 combined, each time adding 0.6% of the calculated net position. Finally, the bank should add 15% of the net position across all time bands (1 through 7).

80. Required capital for commodity market risk is then the sum of the two broad components calculated per the two paragraphs above.

Simplified approach

81. Under the simplified approach, the capital charge is set at 15% of the net position, long or short, in each commodity. However, each commodity is subject to an additional capital charge of 3% of the bank's gross position – long plus short – in that particular commodity. In valuing the gross positions in commodity derivatives for this purpose, banks should use the current spot price.

5. Treatment of options

82. Two alternative approaches apply to options. Banks with purchased options only (rather than written or sold options) can choose to use a simplified approach described below. Banks with more complex option positions that also write options must use the delta-plus approach rather than the simplified approach.

83. If a bank has written option positions, but all of those written options are hedged by perfectly matched long positions in exactly the same options, no capital is required for market risk on those options.

Simplified approach

84. Under the simplified approach, banks use the following treatments for option positions as noted:

Purchased call or purchased put: The capital charge is the lesser of (1) the market value of the underlying security multiplied by the sum of specific and general market risk charges for the underlying, or (2) the market value of the option. Where the position does not fall within the trading book (i.e. options on certain foreign exchange or commodities positions not belonging to the trading book), it may be acceptable to use the book value instead of the market value.

Purchased put with a long position in the underlying cash instrument, or purchased call with a short position in the underlying cash instrument: The capital charge is the market value of the underlying security multiplied by the sum of specific and general market risk charges for the underlying, less the amount the option is in the money (if any), bounded at zero. For options with a residual maturity of more than six months, the strike price should be compared with the forward, not current, price. A bank unable to do this must take the in-the-money amount to be zero.

85. In some cases, such as foreign exchange, it may be unclear which side is the “underlying security.” In such cases, the asset that would be received if the option were exercised should be considered as the underlying. In addition, the nominal value should be used for items where the market value of the underlying instrument could be zero, such as caps and floors, swaptions, or similar instruments.

Delta-plus approach

86. Options should be included in market risk calculations for each type of risk as a delta-weighted position equal to the market value of the underlying multiplied by the delta.

87. For options with *equities* as the underlying, the delta-weighted positions should be incorporated into the equity market risk capital calculation described above in this Standard. For purposes of this calculation, each national market should be treated as a separate underlying. Similarly, the capital charge for options on *foreign exchange and gold* positions should be based on the method set out in the section on foreign exchange risk. The net delta-based equivalent of the foreign currency and gold options should be incorporated into the measurement of the exposure for the respective currency (or gold) position. The capital charge for options on *commodities* should be based on either the simplified or the maturity ladder approach.

88. Delta-weighted positions with *debt securities or interest rates* as the underlying should be slotted into the interest rate time-bands, using either the maturity method or the duration method, under the following procedure. A two-legged approach should be used as for other derivatives, requiring one entry at the time the underlying contract takes effect and a second at the time the underlying contract matures. For instance, a purchased call option on a June three-month interest-rate future should in April be considered, on the basis of its delta-equivalent value, to be a long position with a maturity of five months and a short position with a maturity of two months. A written option should be similarly slotted as a long position with a maturity of two months and a short position with a maturity of five months. Floating rate instruments with caps or floors should be treated as a combination of floating rate securities and a series of European-style options.

89. In addition to the capital charges arising from delta risk as described above, banks using the delta-plus approach are subject to capital charges for *gamma* and *Vega* risk as described below. Banks are required to determine the gamma and Vega for each option position (including hedge positions) separately. These sensitivities must be calculated using an approved exchange model, or using the bank’s proprietary options pricing models subject to oversight by the Central Bank. The capital charges should be calculated as follows:

- (i) for each individual option a “gamma impact” should be calculated as:

$$\text{Gamma impact} = \frac{1}{2} \times \text{Gamma} \times VU^2$$

where VU = Variation of the underlying of the option.

- (ii) VU will be calculated as follows:

- For interest rate options if the underlying is a bond, the market value of the underlying should be multiplied by the risk weights set out in Table 2. An equivalent calculation should be carried out where the underlying is an interest rate, again based on the assumed changes in yield from Table 2;
- For options on equities and equity indices, the market value of the underlying should be multiplied by 8%;
- For foreign exchange and gold options, the market value of the underlying should be multiplied by 8%;

- For options on commodities, the market value of the underlying should be multiplied by 15%.
- (iii) For the purpose of this calculation the following positions should be treated as the same underlying:
- For interest rates, each time-band as set out in Table 2;
 - For equities and stock indices, each national market;
 - For foreign currencies, each currency pair (and gold);
 - For commodities, each individual commodity.
- (iv) Each option on the same underlying will have a gamma impact that is either positive or negative. These individual gamma impacts should be summed; resulting in a net gamma impact for each underlying that is either positive or negative. Only those net gamma impacts that are negative should be included in the capital calculation.

90. The total gamma capital charge is the sum of the absolute value of the net negative gamma impacts as calculated above.

91. For volatility risk or Vega, banks are required to calculate the capital charges by multiplying the sum of the Vegas for all options on the same underlying, as defined above, by a proportional shift in volatility of +/-25%. The total capital charge for Vega risk is the sum of the absolute value of the individual capital charges that have been calculated for Vega risk.

IV. Risk-Weighted Assets

92. The total minimum required capital charge for market risk is the sum of the separate calculations for interest rate risk, equity risk, foreign exchange risk, and commodities risk as defined above, with additional capital for options positions as appropriate. A bank must calculate the RWA for market risk by multiplying the total capital requirement for market risk as calculated above by the factor 12.5:

Market Risk RWA = (Capital Charge × 12.5)

V. Review Requirements

93. Bank calculations under this Standard and associated bank processes must be subject to appropriate levels of independent review and challenge. Reviews must cover material aspects of the calculations under this Standard, including but not limited to the processes for identification of relevant positions in the trading book and/or banking book, the application of the requirements for calculation of specific risk and general risk for each type of market risk, the identification of offsetting long and short positions, and the treatment of options positions under either the simplified approach or the delta-plus approach.

VI. Shari'ah Implementation

94. Banks offering Islamic financial services which have market exposure in their Shari'ah compliant transactions held in the banking and trading books, which are parallel to the transactions stated in this standard, shall calculate the relevant risk weighted assets to maintain an appropriate level of capital in accordance with the provisions of this Standard, provided that it is in a manner that is Shari'ah compliant.

VII. Appendix: Prudent Valuation Guidance

95. Banks should apply prudent valuation practices for the trading book. These practices should at a minimum include the systems and controls, as well as the aspects of valuation methodologies, described in this Appendix.

A. Systems and Controls

96. Banks must establish and maintain adequate systems and controls sufficient to give management and the Central Bank confidence that their valuation estimates are prudent and reliable. These systems must be integrated with other risk management systems within the organization (such as credit analysis). Such systems must include:

- Documented policies and procedures for the process of valuation. This includes clearly defined responsibilities of the various areas involved in the determination of the valuation, sources of market information and review of their appropriateness, guidelines for the use of unobservable inputs reflecting the bank's assumptions of what market participants would use in pricing the position, frequency of independent valuation, timing of closing prices, procedures for adjusting valuations, end of the month and ad-hoc verification procedures; and
- Clear and independent (i.e. independent of front office) reporting lines for the department accountable for the valuation process. The reporting line should ultimately be to a main board executive director.

B. Valuation Methodologies

1. *Marking to market*

97. Marking to market is the at-least-daily valuation of positions at readily available close out prices that are sourced independently. Examples of readily available close out prices include exchange prices, screen prices, or quotes from several independent reputable brokers.

98. Banks must mark to market as much as possible. The more prudent side of a bid/offer spread should be used unless the institution is a significant market maker in a particular position type and it can close out at mid-market. Banks should maximize the use of relevant observable inputs and minimize the use of unobservable inputs when estimating fair value using a valuation technique. However, some observable inputs or transactions may not be relevant, such as in a forced liquidation or distressed sale, or transactions may not be observable, such as when markets are inactive. In such cases, the observable data should be considered, but may not be determinative.

2. *Marking to model*

99. Only where marking to market is not possible should banks mark to model, but this must be demonstrated to be prudent. Marking to model is defined as any valuation that has to be benchmarked, extrapolated, or otherwise calculated from a market input. When marking to model, an extra degree of conservatism is appropriate. The Central Bank will consider the following in assessing whether a mark-to-model valuation is prudent:

- Senior management should be aware of the elements of the trading book or of other fair-valued positions that are subject to mark to model and should understand the materiality of the uncertainty this creates in the reporting of the risk/performance of the business.

- Market inputs should be sourced, to the extent possible, in line with market prices (as discussed above). The appropriateness of the market inputs for the particular position being valued should be reviewed regularly.
- Where available, generally accepted valuation methodologies for particular products should be used as far as possible.
- Where the institution itself develops the model, it should be based on appropriate assumptions that have been assessed and challenged by suitably qualified parties independent of the development process. The model should be developed or approved independently of the front office. The model should be independently tested, including validation of the mathematics, the assumptions, and the software implementation.
- There should be formal change control procedures in place, and a secure copy of the model should be held and periodically used to check valuations.
- Risk management should be aware of the weaknesses or limitations of the models used, and should account for those model weaknesses or limitations when using the valuation output.
- The model should be subject to periodic review to assess its performance (e.g. assessing continued appropriateness of the assumptions, analysis of P&L versus risk factors, comparison of actual close out values to model outputs).
- Valuation adjustments should be made as appropriate, for example, to cover the uncertainty of the model valuation.

3. *Independent price verification*

100. Independent price verification is distinct from daily marking to market. It is the process by which market prices or model inputs are regularly verified for accuracy. While daily marking to market may be performed by dealers, verification of market prices or model inputs should be performed by a unit independent of the dealing room, at least monthly (or, depending on the nature of the market/trading activity, more frequently). It need not be performed as frequently as daily marking to market, since independent marking of positions should reveal any error or bias in pricing, which should result in the elimination of inaccurate daily marks.

101. Independent price verification entails a higher standard of accuracy in that the market prices or model inputs are used to determine profit and loss figures, whereas daily marks are used primarily for management reporting. For independent price verification, where pricing sources are more subjective, for example where there is only one available broker quote, prudent measures such as valuation adjustments may be appropriate.

4. *Valuation adjustments*

102. As part of their procedures for marking to market, banks must establish and maintain procedures for considering valuation adjustments. The Central Bank expects banks using third-party valuations to consider whether valuation adjustments are necessary. Such considerations are also necessary when marking to model.

103. The Central Bank expects the following valuation adjustments/reserves to be formally considered at a minimum: unearned credit spreads, close-out costs, operational risks, early termination, investing and funding costs, and future administrative costs and, where appropriate, model risk.

104. Banks must establish and maintain procedures for judging the necessity of and calculating an adjustment to the current valuation of less liquid positions for regulatory capital

purposes. This adjustment may be in addition to any changes to the value of the position required for financial reporting purposes and should be designed to reflect the illiquidity of the position. Banks should consider the need for an adjustment to a position's valuation to reflect current illiquidity whether the position is marked to market using market prices or observable inputs, valued using third-party valuations, or marked to model. Such adjustments to the current valuation of less liquid positions should impact Tier 1 regulatory capital, and may exceed valuation adjustments made under financial reporting standards.

105. Bearing in mind that the assumptions made about liquidity in the market risk capital charge may not be consistent with the bank's ability to sell or hedge out less liquid positions, where appropriate, banks must take an adjustment to the current valuation of these positions, and review their continued appropriateness on an on-going basis. Closeout prices for concentrated positions and/or stale positions should be considered in establishing the adjustment. Banks must consider all relevant factors when determining the appropriateness of the adjustment for less liquid positions. These factors may include, but are not limited to, the amount of time it would take to hedge out the position/risks within the position, the average volatility of bid/offer spreads, the availability of independent market quotes (number and identity of market makers), the average and volatility of trading volumes (including trading volumes during periods of market stress), market concentrations, the aging of positions, the extent to which valuation relies on marking to model, and the impact of other model risks.

106. For complex products such as securitisation exposures and nth-to-default credit derivatives, banks must explicitly assess the need for valuation adjustments to reflect both the model risk associated with using a possibly incorrect valuation methodology, and the risk associated with using unobservable (and possibly incorrect) calibration parameters in the valuation model.

X. Operational Risk

I. Introduction

1. This Standard articulates specific requirements for the calculation of the operational risk capital requirement for banks in the UAE. It is based closely on requirements of the framework for capital adequacy developed by the Basel Committee on Banking Supervision (BCBS), specifically as articulated in Basel II: International Convergence of Capital Measurement and Capital Standards, June 2006, and subsequent revisions and clarifications thereto.
2. Banks are required to calculate operational risk capital charges according to the methods and criteria addressed in this Standard.
3. Capital requirements for Operational Risk apply on a consolidated basis for all banks in the UAE. Banks should follow the requirements of all other applicable Central Bank Standards to determine overall capital adequacy requirements.

II. Definitions

In general, terms in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In addition, for this Standard, the following terms have the meanings defined in this section.

- a. **Operational risk** is the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. Operational risk includes legal and compliance risk but excludes strategic and reputational risk.
- b. **Gross income**: net interest income plus net non-interest income, as defined by the Central Bank and/or applicable accounting standards. This measure should:
 - Be gross of any provisions (e.g., for unpaid interest);
 - Be gross of operating expenses, including fees paid to outsourcing service providers but excluding fees received by banks that provide outsourcing services (i.e., such outsourcing fees received shall be included in the definition of gross income);
 - Exclude realised profits/losses from the sale of securities in the banking book (such as securities classified as “held to maturity” and “available for sale” under IFRS, which typically constitute items of the banking book); and
 - Exclude extraordinary or irregular items as well as income derived from insurance.
- c. **Loans and advances**: drawn amounts on credit facilities provided by banks to borrowers.

III. Requirements

A. Approaches

4. Banks can apply one of two methods for calculating the Pillar 1 capital requirement for operational risk as below:
 - (i) Basic Indicator Approach (BIA); or
 - (ii) Standardised Approach (SA).
5. The Standardised Approach includes the Alternative Standardised Approach (ASA), which is a simplified version of the Standardised Approach that may be appropriate to small domestic banks focusing on retail or commercial banking activities.

6. Banks are encouraged to move from the BIA to SA as they develop more sophisticated operational risk measurement systems and practices. Qualifying criteria for the Standardised Approach are presented below in Section B.

7. Internationally active banks and banks with significant operational risk exposures (for example, specialised processing banks) are expected to use the SA.

8. The Central Bank will review the capital requirement produced by the operational risk approach used by a bank (whether BIA or SA) for general credibility, especially in relation to a bank's peer. In the event that credibility is lacking, the Central Bank will consider appropriate supervisory action under Pillar 2.

9. A bank is required to use the same approach, either the BIA or the SA, for all parts of its operations. The use of SA is subject to qualification by the Central Bank on the basis of the qualification criteria outlined in Section B.

10. A bank using the SA is not allowed without supervisory approval to choose to revert to the BIA once it has been approved for the SA. However, if the Central Bank determines that a bank using SA no longer meets the qualifying criteria for this approach, it may require the bank to revert to the BIA.

1. The Basic Indicator Approach (BIA)

11. Banks using the BIA shall hold capital for operational risk equal to the average over the previous three years of a fixed percentage (denoted alpha) of positive annual gross income. Figures for any year in which annual gross income is negative or zero shall be excluded from both the numerator and denominator when calculating the gross income average.

12. The capital requirement shall be calculated as follows:

$$K_{BIA} = \left[\sum (GI_{1..n} \times \alpha) \right] / n$$

where:

K_{BIA} = The capital charge under the BIA;
 GI = Annual gross income, where positive, over the previous three years;
 n = Number of the previous three years for which gross income is positive; and
 α = 15%, relating the industry wide level of required capital to the industry wide level of the indicator.

2. The Standardised Approach (SA)

13. In the SA, banks' activities are divided into eight business lines, including corporate finance, trading & sales, retail banking, commercial banking, payment & settlement, agency services, asset management, and retail brokerage. The business lines are defined in the table under Paragraph 14.

Principles for business line mapping:

14. The principles that banks shall apply for mapping their own business lines into the regulatory eight business lines as defined by the SA for the purpose of calculating the minimum capital required for operational risk are listed below.

Mapping of Business Lines

Level 1	Level 2	Activity Groups
Corporate Finance	Corporate Finance	Mergers and acquisitions, underwriting, privatisations, securitisation, research, debt (government and high yield), equity, syndications, IPO, secondary private placements
	Municipal/Government Finance	
	Merchant Banking	
	Advisory Services	
Trading and Sales	Sales	Fixed income, equity, foreign exchanges, commodities, credit, funding, own position securities, lending and repos, brokerage, debt, prime brokerage
	Market Making	
	Proprietary Positions	
	Treasury	
Retail Banking	Retail Banking	Retail lending and deposits, banking services, trust and estates
	Private Banking	Private lending and deposits, banking services, trust and estate, investment advice
	Card Services	Merchant/commercial/corporate cards, private labels and retail
Commercial Banking	Commercial Banking	Project finance, real estate, export finance, trade finance, factoring, leasing, lending, guarantees, bills of exchange
Payment and Settlement	External Clients	Payments and collections, funds transfer, clearing and settlement
Agency Services	Custody	Escrow, depository receipts, securities lending (customers) corporate actions
	Corporate Agency	Issuer and paying agents
	Corporate Trust	
Asset Management	Discretionary Fund Management	Pooled, segregated, retail, institutional, closed, open, private equity
	Non-Discretionary Fund Management	Pooled, segregated, retail, institutional, closed, open
Retail Brokerage	Retail Brokerage	Execution and full service

- (i) All activities must be mapped into the eight level 1 business lines in a mutually exclusive and jointly exhaustive manner;
- (ii) Any banking or non-banking activity which cannot be readily mapped into the business line framework, but which represents an ancillary function must be allocated to the business line it supports. If more than one business line is supported through the ancillary activity, an objective mapping criteria must be used;
- (iii) When mapping gross income, if an activity cannot be mapped into a particular business line then the business line yielding the highest charge must be used. The same business line equally applies to any associated ancillary activity;
- (iv) Banks may use internal pricing methods to allocate gross income between business lines provided that total gross income for the bank (as would be recorded under the BIA) still equals the sum of gross income for the eight business lines;
- (v) The mapping of activities into business lines for operational risk capital purposes must be consistent with the definitions of business lines used for regulatory capital calculations in other risk categories (i.e., credit and market risk). Any deviations from this principle must be clearly motivated and documented;
- (vi) The mapping process used must be clearly documented. In particular, written business line definitions must be clear and detailed enough to allow third parties to replicate the business line mapping. Documentation must, among other things, clearly motivate any exceptions or overrides and be kept on record;
- (vii) Processes must be in place to define the mapping of any new activities or products;

- (viii) Senior management is responsible for the mapping policy (which is subject to the approval by the board of directors); and
- (ix) The mapping process to business lines must be subject to independent review.

Supplementary business line mapping guidance:

15. There is a variety of valid approaches that banks may use to map their activities to the eight business lines, provided the approach used meets the business line mapping principles set out above. The following is therefore an example of one possible approach that could be used by a bank to map its gross income and it is hereby presented for guidance only.

- (i) Gross income for retail banking consists of net interest income on loans and advances to retail customers and SMEs treated as retail, plus fees related to traditional retail activities, net income from swaps and derivatives held to hedge the retail banking book, and income on purchased retail receivables. To calculate net interest income for retail banking, a bank takes the interest earned on its loans and advances to retail customers less the weighted average cost of funding of the loans (from whatever source — retail or other deposits).
- (ii) Similarly, gross income for commercial banking consists of the net interest income on loans and advances to corporate (plus SMEs treated as corporate), interbank and sovereign customers and income on purchased corporate receivables, plus fees related to traditional commercial banking activities including commitments, guarantees, bills of exchange, net income (e.g., from coupons and dividends) on securities held in the banking book, and profits/losses on swaps and derivatives held to hedge the commercial banking book. The calculation of net interest income is based on interest earned on loans and advances to corporate, interbank and sovereign customers less the weighted average cost of funding for these loans (from whatever source).
- (iii) For trading and sales, gross income consists of profits/losses on instruments held for trading purposes (i.e., in the mark-to-market book), net of funding cost, plus fees from wholesale brokerage.
- (iv) For the other five business lines, gross income consists primarily of the net fees/commissions earned in each of these businesses. Payment and settlement consists of fees to cover provision of payment/settlement facilities for wholesale counterparties. Payment and settlement losses related to bank's own activities should also be incorporated in the loss experience of the affected business line. Asset management is management of assets on behalf of others.

Capital Calculation under the Standardised Approach:

16. Within each business line, gross income is a broad indicator that serves as a proxy for the scale of business operations and thus the likely scale of operational risk exposure within each of these business lines. The capital charge for each business line is calculated by multiplying gross income by a factor (denoted by beta) assigned to that business line. Beta serves as a proxy for the industry-wide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line. It should be noted that in the SA gross income is measured for each business line, not the whole institution, (e.g., in corporate finance, the indicator is the gross income generated in the corporate finance business line).

17. The total capital charge is calculated as the three-year average of the simple summation of the regulatory capital charges across each of the business lines in each year. In any given year, negative capital charges (resulting from negative gross income) in any

business line may offset positive capital charges in other business lines without limit. However, where the aggregate capital charge across all business lines within a given year is negative, then the input to the numerator for that year shall be zero. The total capital charge may be expressed as:

$$K_{TSA} = \left\{ \sum_{years\ 1-3} \max \left[\sum (GI_{1-8} \times \beta_{1-8}), 0 \right] \right\} / 3$$

where:

- K_{TSA} = The capital charge under the SA;
 GI_{1-8} = Annual gross income in a given year, as defined above in the BIA, for each of the eight business lines; and
 β_{1-8} = A fixed percentage relating the level of required capital to the level of the gross income for each of the eight business lines.

The values of the betas are detailed below.

Business Lines	Beta Factors
Corporate finance (β_1)	18%
Trading and sales (β_2)	18%
Retail banking (β_3)	12%
Commercial banking (β_4)	15%
Payment and settlement (β_5)	18%
Agency services (β_6)	15%
Asset management (β_7)	12%
Retail brokerage (β_8)	12%

Capital Calculation under the Alternative Standardised Approach:

18. The Central Bank may allow a bank to use the ASA provided the bank is able to satisfy the Central Bank that this alternative approach provides an improved basis for capturing its operational risk. Once a bank has been allowed to use the ASA, it will not be allowed to revert to use of the SA without the permission of the Central Bank. Large diversified banks in major markets are not authorized to use the ASA.

19. Under the ASA, the operational risk capital charge and methodology are the same as for the SA except for two business lines — retail banking and commercial banking. For these business lines, loans and advances — multiplied by a fixed factor 'm' — replaces gross income as the exposure indicator. The betas for retail and commercial banking are unchanged from the SA. The ASA operational risk capital charge for retail banking (with the same basic formula for commercial banking) can be expressed as:

$$K_{RB} = \beta_{RB} \times m \times LA_{RB}$$

where

- K_{RB} = The capital charge for the retail banking business line;
 β_{RB} = The beta for the retail banking business line;
 LA_{RB} = Total outstanding retail loans and advances (non-risk weighted and gross of provisions), averaged over the past three years; and
 m = 0.035.

20. For the purposes of the ASA, total loans and advances in the retail banking business line consists of the total drawn amounts in the following credit portfolios: retail, SMEs treated as retail, and purchased retail receivables.

21. For commercial banking, total loans and advances consists of the drawn amounts in the following credit portfolios: corporate, sovereign, bank, specialised lending, SMEs treated as corporate and purchased corporate receivables. The book value of securities held in the banking book should also be included.

22. Under the ASA, banks may aggregate retail and commercial banking (if they wish to) using a beta of 15%.

23. Similarly, those banks that are unable to disaggregate their gross income into the other six business lines can aggregate the total gross income for these six business lines using a beta of 18%, with negative gross income treated as described in paragraph 17 above.

24. As under the SA, the total capital charge for the ASA is calculated as the simple summation of the regulatory capital charges across each of the eight business lines.

B. Qualifying criteria for the SA and the ASA

25. In order to qualify for use of the SA or ASA, a bank shall satisfy the Central Bank that, at a minimum:

- (i) Its board of directors and senior management, as appropriate, are actively involved in the oversight of the operational risk management framework;
- (ii) It has an operational risk management system that is conceptually sound and is implemented with integrity; and
- (iii) It has sufficient resources in the use of the approach in the major business lines as well as the control and audit areas.

26. The Central Bank may insist on a period of initial monitoring of a bank's SA or ASA before it is used for regulatory capital purposes.

27. A bank shall develop specific policies and have documented criteria for mapping gross income for current business lines and activities into the standardised framework. The criteria shall be reviewed and adjusted for new or changing business activities as appropriate. These criteria shall be compliant with the principles for business line mapping that are set out above in paragraph 14.

28. Banks shall also meet the following additional criteria:

- (i) The bank shall have an operational risk management system with clear responsibilities assigned to an operational risk management function. The operational risk management function shall be responsible for developing strategies to identify, assess, monitor and control/mitigate operational risk; for codifying firm-level policies and procedures concerning operational risk management and controls; for the design and implementation of the firm's operational risk assessment methodology; and for the design and implementation of a risk-reporting system for operational risk;
- (ii) As part of the bank's internal operational risk assessment system, the bank shall systematically track relevant operational risk data including material losses by business line. Its operational risk assessment system shall be closely integrated into the risk management processes of the bank. Its output shall be an integral part of the process of monitoring and controlling the banks operational risk profile. For

instance, this information shall play a prominent role in risk reporting, management reporting, and risk analysis. The bank shall have techniques for creating incentives to improve the management of operational risk throughout the firm;

- (iii) The bank shall have regular reporting of operational risk exposures, including material operational losses, to business unit management, senior management, and to the board of directors. The bank shall have procedures for taking appropriate action according to the information within the management reports;
- (iv) The bank's operational risk management system shall be well documented. The bank shall have a routine in place for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operational risk management system, which shall include policies for the treatment of noncompliance issues;
- (v) The bank's operational risk management processes and assessment system shall be subject to validation and regular independent review. These reviews shall include both the activities of the business units and of the operational risk management function; and
- (vi) The bank's operational risk assessment system (including the internal validation processes) shall be subject to regular review by external auditors and/or the Central Bank.

Additional Qualifying criteria specifically for the ASA

- 29. Large diversified banks are not allowed to use the ASA.
- 30. To be permitted to use the ASA, a bank shall demonstrate to the Central Bank that it meets all the following conditions:
 - (i) Its retail or commercial banking activities shall account for at least 90% of its income;
 - (ii) The gross income is not a reliable operational risk exposure indicator; for instance a significant proportion of its retail or commercial banking activities comprise loans associated with a high default probability and therefore interest rate income is inflated and operational risk may be overstated; and
 - (iii) A bank should be able to demonstrate to the Central Bank that the ASA provides a more appropriate basis than the SA for calculating its capital requirement for operational risk.
- 31. The Central Bank may determine additional qualifying criteria for the ASA.

IV. Review Requirements

- 32. Bank calculations of operational risk capital requirements under this Standard shall be subject to appropriate levels of independent review and challenge by third parties. Reviews shall cover business line mapping and allocation of gross income and loans and advances to the regulatory-defined business lines.

V. Risk Weighted Assets

- 33. A bank must calculate the RWA for operational risk by multiplying the total capital requirement for operational risk as calculated above by the factor 12.5:

$$\text{Operational Risk RWA} = \text{Capital Charge} \times 12.5$$

VI. Shari'ah Implementation

34. Banks offering Islamic financial services engaging in Shari'ah with respect to operational risks as approved by their internal Shari'ah control committees should calculate the Operational risk capital in accordance with provisions set out in this standard/guidance and in the manner acceptable by Shari'ah. This is applicable until relevant standards and/or guidance in respect of these transactions are issued specifically for banks offering Islamic financial services

Pillar 2

XI. Pillar 2 – Internal Capital Adequacy Assessment Process (ICAAP)

I. Introduction and Scope

1. This Standard discusses the key principles of supervisory review, with respect to banking risks, including guidance relating to, among other things, the treatment of interest rate risk in the banking book, credit risk (stress testing, residual risk, and credit concentration risk), operational risk, enhanced cross-border communication and cooperation, and securitisation.
2. Banks are only permitted to perform a Pillar I Plus approach. Internal models are not allowed in ICAAP for estimating capital requirements for credit, market or operational risk. For risk management purposes, banks may use internal models, but figures reported to the Central Bank should be based on the Standardised Approach.
3. All buffers are to be in addition to existing requirements. An off-setting of certain requirements is not permitted i.e. lower Pillar 2 for Pillar 1 risks are not allowed.
4. The type of capital which the Central Bank will require banks to provide for pillar 2 risks will be solely at the discretion of the Central Bank; this may be CET1 only, or a mix between CET1, AT1 and Tier 2.
5. It should be noted that given a normal business model the capital risk charge for Pillar 2 should always be positive if the risk exists (in particular for the IRRBB and Concentration risk).

II. Definitions

In general, terms in this Standard have the meanings defined in other regulations and standards issued by the Central Bank. In addition, for this Standard, the following terms have the meanings defined in this section.

- a. **Concentration risk** is the potential for a loss in value of an investment portfolio of a bank when an individual or group of exposures move together in an unfavorable direction.
- b. **Cyber risk** means any risk of financial loss, disruption or damage to the reputation of an organisation from some sort of failure of its information technology systems.
- c. **Management information system**, or MIS: Any process, systems or framework used by an institution to collect, store or disseminate data in the form of useful information to the relevant stakeholders for decision-making.
- d. **Operational Risk**: The risk of loss resulting from inadequate or failed internal processes, people, systems or from external events. This definition includes legal risk but excludes strategic and reputational risk.

III. Importance of supervisory review

6. The supervisory review process, as set forth by the Central Bank, is intended not only to ensure that banks in the UAE have adequate capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing risks.

7. The supervisory review process recognises the responsibility of bank management in developing an internal capital assessment process and setting minimum capital requirements that are commensurate with the bank's risk profile and control environment. Bank management continues to bear responsibility for ensuring that the bank has adequate capital to support its risks beyond the core minimum requirements in Pillar 1.

8. The Central Bank will evaluate how well banks are assessing their capital needs relative to their risks and intervene, where appropriate. This interaction is intended to foster an active dialogue between banks, the Central Bank such that when deficiencies are identified, prompt, and decisive action can be taken to reduce risk or restore capital.

9. The Central Bank recognises the relationship that exists between the amount of capital held by the bank against its risks and the strength and effectiveness of the bank's risk management and internal control processes. However, increased capital must not be viewed as sufficient for addressing increased risks confronting the bank. Other, complementary, means for addressing risk, such as strengthening risk management, applying internal limits, strengthening the level of provisions and reserves, and improving internal controls, must also be considered as complimentary measures. Furthermore, capital must not be regarded as a substitute for addressing fundamentally inadequate control or risk management processes. However, the Central Bank may require banks to hold more capital to compensate for deficiencies.

10. There are three main areas that will be particularly suited for its treatment under Pillar 2: risks considered under Pillar 1 that are not fully captured by the Pillar 1 framework (e.g. credit concentration risk); those factors not taken into account by the Pillar 1 framework (e.g. interest rate risk in the banking book, business and strategic risk); and factors external to the bank (e.g. business cycle effects). A further important aspect of Pillar 2 is the assessment of compliance with the minimum standards and disclosure requirements of the more advanced methods in Pillar 1. The Central Bank will ensure that these requirements are being met, both as qualifying criteria and on a continuing basis. The quality of risk management will also be considered and any shortcoming may warrant a capital add-on by the bank or by the Central Bank.

IV. Four key principles of supervisory review

11. The Central Bank has followed the international standards²³ set out by the BCBS and identified four key principles of supervisory review.

Principle 1: Banks must have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels.

12. Banks must be able to demonstrate that the decided minimum capital levels are well founded and that these levels are consistent with their overall risk profile and current operating environment. In assessing capital adequacy, bank management needs to be mindful of the particular stage of the business cycle in which the bank is operating. Rigorous forward-looking stress testing that identifies possible events or changes in market conditions that could

²³ BCBS128 and BCBS157

adversely affect the bank must be performed. Bank management clearly bears the responsibility for ensuring that the bank has adequate capital to support its risks.

13. The seven main features of a rigorous process are as follows:
 - i. Active board and senior management oversight;
 - ii. Appropriate policies, methodologies for assessment of capital needs, procedures and limits;
 - iii. Sound capital assessment;
 - iv. Comprehensive and timely identification, measurement, mitigation, controlling, monitoring and reporting of risks;
 - v. Appropriate management information systems (MIS) at the business and firm-wide level;
 - vi. Comprehensive internal controls;
 - vii. For the completion of ICAAP, regulatory requirements (Pillar I) is required as the first step of computation.

It should also be noted that under no circumstances could Pillar I and Pillar II be netted against each other. They are both separate requirements.

A. Board and Senior Management Oversight

14. It is the responsibility of the Board of Directors and senior management to define the bank's risk appetite and to ensure that the bank's risk management framework includes detailed policies and methodologies that set specific firm-wide prudential limits on the bank's activities, which are consistent with its risk taking appetite and capacity. In order to determine the overall risk appetite, the board and senior management must first have an understanding of risk exposures on a firm-wide basis. To achieve this understanding, senior management must bring together the perspectives of the key business and control functions. In order to develop an integrated firm-wide perspective on risk, senior management must overcome organisational silos between business lines and share information on market developments, risks and risk mitigation techniques. Senior management must establish a risk management process that is not limited to credit, market, liquidity and operational risks, but incorporates all material risks. This includes reputational, legal, anti-money laundering, conduct risk and strategic risks, as well as risks that do not appear to be significant in isolation, but when combined with other risks could lead to material losses. The analysis of a bank's current and future capital requirements in relation to its strategic objectives is a vital element of the strategic planning process. The strategic plan must clearly outline the bank's capital needs, anticipated capital depletion expenditures, minimum internally assessed required capital level, and external capital sources. Senior management and the board must view capital planning as a crucial element in being able to achieve its desired strategic objectives.

15. The board of directors and senior management must possess sufficient knowledge of all major business lines to ensure that appropriate policies, controls and risk monitoring systems are effective. They must have the necessary expertise to understand the capital markets activities in which the bank is involved – such as securitisation and off-balance sheet activities – and the associated risks. The board and senior management must remain informed on an on-going basis about these risks as financial markets, risk management practices and the bank's activities evolve. In addition, the board and senior management must ensure that accountability and lines of authority are clearly defined.

16. With respect to new or complex products and activities, senior management must understand the underlying assumptions regarding business models, valuation and risk management practices. In addition, senior management must evaluate the potential risk exposure if those assumptions fail.

17. Before embarking on new activities or introducing products new to the bank, the board and senior management must identify and review the changes in firm-wide risks arising from these potential new products or activities and ensure that the infrastructure and internal controls necessary to manage the related risks are in place. In this review, a bank must also consider and address the possible difficulty in valuing the new products and how they might perform in a stressed economic environment. It is also the responsibility of the banks to assess prudential and market conduct risks when reviewing new products or activities.

18. A bank's risk function and its Chief Risk Officer (CRO) or equivalent position must be independent of the individual business lines and report directly to the bank's Board of Directors. In addition, the risk function must highlight to senior management and the board risk management concerns, such as risk concentrations, violations of risk appetite limits as well as violations of minimum internally set capital requirements.

B. Appropriate policies, procedures and limits

19. Firm-wide risk management programmes must include detailed policies that set specific firm-wide prudential limits on the principal risks relevant to a bank's activities. Additionally, a bank must have a clearly defined risk appetite for market conduct risk (non-prudential risks). A bank's policies and procedures must provide specific guidance for the implementation of broad business strategies and must establish, where appropriate, internal limits for the various types of risk to which the bank may be exposed. These limits must consider the bank's role in the financial system and be defined in relation to the bank's capital, total assets, and earnings or, where adequate measures exist, its overall risk level.

20. A bank's policies, procedures and limits must:

- i. Provide for adequate and timely identification, measurement, monitoring, control and mitigation of the risks (prudential and market conduct risks) posed by its lending, investing, trading, securitisation, off-balance sheet, fiduciary and other significant activities at the business line and firm wide levels;
- ii. Ensure that the economic substance of a bank's risk exposures, including reputational risk and valuation uncertainty, are fully recognised and incorporated into the bank's risk management processes;
- iii. Be consistent with the bank's stated requirements and objectives, as well as its overall financial strength;
- iv. Clearly define accountability and lines of authority across the bank's various business activities, and ensure there is a clear separation between business lines and the risk management function;
- v. Escalate and address breaches of internal position limits;
- vi. Provide for the review of new businesses and products by bringing together all relevant risk management, control and business lines to ensure that the bank is able to manage and control the activity prior to it being initiated; and
- vii. Include a schedule and process for reviewing the policies, procedures and limits and for updating them as appropriate.

C. Sound capital assessment

21. Fundamental elements of sound capital assessment include:

- i. Policies, procedures and methodologies designed to ensure that the bank identifies, measures, and reports all material risks;
- ii. A process that relates capital to the level of risk;
- iii. A process that states capital adequacy requirements (i.e. minimum thresholds for CAR ratio) with respect to risk, taking account of the bank's strategic focus and business plan; and

- iv. A process of internal controls, reviews and audits to ensure the integrity of the overall management process.

D. Comprehensive assessment of risks

22. All material risks faced by the bank must be addressed in the capital assessment process. While the Central Bank recognises that not all risks can be measured precisely, a process must be developed to estimate risks. Therefore, the following risk exposures, which by no means constitute a comprehensive list of all risks, must be considered:

23. **Credit risk:** Banks must have methodologies that enable them to assess the credit risk involved in exposures to individual borrowers or counterparties as well as at the portfolio level. For banks, the credit review assessment of capital adequacy, at a minimum, must cover four areas: risk rating systems, portfolio analysis/aggregation, securitisation/complex credit derivatives, and large exposures and risk concentrations.

24. Internal risk ratings are an important tool in monitoring credit risk. Internal risk ratings must be adequate to support the identification and measurement of risk from all credit exposures, and must be integrated into a banks' overall analysis of credit risk and capital adequacy. The ratings system must provide detailed ratings for all assets, not only for watch list or for problem assets. Appropriateness of loan loss reserves must be included in the credit risk assessment for capital adequacy.

25. The analysis of credit risk must adequately identify any weaknesses at the portfolio level, including any concentrations of risk. It must also adequately take into consideration the risks involved in managing credit concentrations and other portfolio issues through such mechanisms as securitisation programmes and complex credit derivatives.

26. **Operational risk:** The failure to properly manage operational risk can result in a misstatement of a bank's risk/return profile and expose the bank to significant losses.

27. A bank must develop a framework for managing operational risk (including cyber risk) and evaluate the adequacy of capital given this framework. The framework must cover the bank's appetite and tolerance for operational risk, as specified through the policies for managing this risk, including the extent and manner in which operational risk is transferred outside the bank. It must also include policies outlining the bank's approach to identifying, assessing, monitoring and controlling/mitigating the risk.

28. **Market risk:** Banks must have methodologies that enable them to assess and actively manage all market risks, wherever they arise, at position, desk, business line and firm-wide level. For banks, their assessment of internal capital adequacy for market risk, at a minimum, must be based on stress testing, including an assessment of concentration risk and the assessment of illiquidity under stressful market scenarios, although all firms' assessments must include stress testing appropriate to their trading activity.

29. A bank must demonstrate that it has enough capital to not only meet the minimum capital requirements but also to withstand a range of severe but plausible market shocks. In particular, it must factor in, where appropriate:

- i. Illiquidity of prices;
- ii. Concentrated positions (in relation to market turnover);
- iii. One-way markets;
- iv. Non-linear products/deep out-of-the money positions;
- v. Events and jumps-to-defaults;
- vi. Significant shifts in correlations;

30. The stress tests applied by a bank for market risk and, in particular, the calibration of those tests (e.g. the parameters of the shocks or types of events considered) must be reconciled back to a clear statement setting out the premise upon which the bank's internal capital assessment is based (e.g. ensuring there is adequate capital to manage the traded portfolios within stated limits through what may be a prolonged period of market stress and illiquidity, or that there is adequate capital to ensure that, over a given time horizon to a specified confidence level, all positions can be liquidated or the risk hedged in an orderly fashion). The market shocks applied in the tests must reflect the nature of portfolios and the time it could take to hedge out or manage risks under severe market conditions.

31. **Concentration risk** must be pro-actively managed and assessed by firms and concentrated positions must be routinely reported to senior management.

32. Banks must demonstrate how they combine their risk measurement approaches to arrive at the overall internal capital for market risk.

33. **Interest rate risk in the banking book:** The measurement process must include all material interest rate positions of the bank and consider all relevant repricing and maturity data, including modelling maturity assumptions. Such information will generally include current balance and contractual rate of interest associated with the instruments and portfolios, principal payments, interest reset dates, maturities, the rate index used for repricing, and contractual interest rate ceilings or floors for adjustable-rate items. The system must also have well-documented assumptions and techniques.

34. Regardless of the type and level of complexity of the measurement system used, bank management must ensure the adequacy and completeness of the system. Because the quality and reliability of the measurement system is largely dependent on the various assumptions used in the model which will be checked by the Central Bank for reasonability, management must give particular attention to these items.

35. **Liquidity risk:** Liquidity is crucial to the ongoing viability of any banking organisation. Banks' capital positions can have an effect on their ability to obtain liquidity, especially in a crisis. Each bank must have adequate systems for measuring, monitoring and controlling liquidity risk. Banks must evaluate the adequacy of capital given their own liquidity profile and the liquidity of the markets in which they operate. Please refer to the Regulation regarding Liquidity Risk Circular No: 33/2015

36. **Other risks:** Although the Central Bank recognises that 'other' risks, such as reputational, strategic and anti-money laundering, are not easily measurable, it expects banks to further develop techniques for managing all aspects of these risks.

E. Monitoring and reporting

37. The bank must establish an adequate system for monitoring and reporting risk exposures and assessing how the bank's changing risk profile affects the need for capital. The bank's senior management or board of directors must, on a regular basis, receive reports on the bank's risk profile and capital needs. These reports must allow senior management to:

- i. Evaluate the level and trend of material risks and their effect on capital levels;
- ii. Evaluate the sensitivity and reasonableness of key assumptions used in the capital assessment measurement system;
- iii. Determine whether the bank holds sufficient capital against the various risks and is in compliance with established internal capital adequacy requirements; and
- iv. Assess its future capital requirements based on the bank's reported risk profile (3 to 5 years) and make necessary adjustments to the bank's strategic plan accordingly as well as the effect of any anticipated changes to regulatory requirements.

38. A bank's MIS must provide the board and senior management in a clear and concise manner with timely and relevant information concerning their bank's risk profile. This information must include all risk exposures, including those that are off-balance sheet. Management must understand the assumptions behind and limitations inherent in specific risk measures.

39. The key elements necessary for the aggregation of risks are an appropriate infrastructure and MIS that (i) allow for the aggregation of exposures and risk measures across business lines and (ii) support customised identification of concentrations and emerging risks. MIS developed to achieve this objective must support the ability to evaluate the impact of various types of economic and financial shocks that affect the whole bank. Further, a bank's systems must be flexible enough to incorporate hedging and other risk mitigation actions to be carried out on a firm-wide basis while taking into account the various related basis risks.

40. To enable proactive management of risk, the board and senior management need to ensure that MIS is capable of providing regular, accurate and timely information on the bank's aggregate risk profile, as well as the main assumptions used for risk aggregation. MIS must be adaptable and responsive to changes in the bank's underlying risk assumptions and must incorporate multiple perspectives of risk exposure to account for uncertainties in risk measurement. In addition, it must be sufficiently flexible so that the bank can generate forward-looking bank-wide scenario analyses that capture management's interpretation of evolving market conditions and stressed conditions. Third-party inputs or other tools used within MIS (e.g. credit ratings, risk measures, models) must be subject to initial and ongoing validation.

41. Banks are required that their MIS must be capable of capturing limit breaches and there must be procedures in place to promptly report such breaches to senior management, as well as to ensure that appropriate follow-up actions are taken. For instance, similar exposures must be aggregated across business platforms (including the banking and trading books) to determine whether there is a concentration or a breach of an internal position limit.

F. Internal control review

42. The bank's internal control structure is essential to the capital assessment process. Effective control of the capital assessment process includes an independent review and, where appropriate, the involvement of internal and external audit. The bank's board of directors has a responsibility to ensure that management establishes a system for assessing the various risks, develops a system to relate risk to the bank's capital level, and establishes a method for monitoring compliance with internal policies. The board must regularly verify whether its system of internal controls is adequate to ensure well-ordered and prudent conduct of business.

43. Risk management processes must be frequently monitored and tested by independent control areas and internal, as well as external, auditors. The aim is to ensure that the information on which decisions are based is accurate so that processes fully reflect management policies and that regular reporting, including the reporting of limit breaches and other exception-based reporting, is undertaken effectively. The risk management function of banks must be independent of the business lines in order to ensure an adequate separation of duties and to avoid conflicts of interest.

44. The purpose of periodic reviews of the risk management process is to ensure its integrity, accuracy, and reasonableness. Areas that the Central Bank will review include:

- i. Appropriateness of the bank's capital assessment process given the nature, scope and complexity of its activities;
- ii. Identification of large exposures and risk concentrations;
- iii. Accuracy and completeness of data inputs into the bank's assessment process;

- iv. Reasonableness and validity of scenarios used in the assessment process (scenarios and modelling assumptions behind banks' response to those scenarios); and
- v. Stress testing and analysis of assumptions and inputs together with the resultant outputs.
- vi. Validation of the output (not only of the process) with proper benchmarking to peers and best practice.

Principle 2: The Central Bank will review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. The Central Bank will take appropriate supervisory action if it is not satisfied with the result of this process.

45. The Central Bank will regularly review the process by which a bank assesses its capital adequacy, risk position, resulting minimum required capital levels, and quality of capital held. The Central Bank will also evaluate the degree to which a bank has in place a sound internal process to assess capital adequacy. The emphasis of the review must be on the quality of the bank's risk management and controls with the Central Bank setting the minimum required capital. The periodic review can involve some combination of:

- i. On-site examinations or inspections;
- ii. Off-site review;
- iii. Discussions with bank management;
- iv. Review of work done by internal auditors and where appropriate external auditors;
- v. Periodic reporting; and

46. The substantial impact that errors in the methodology or assumptions of formal analyses can have on resulting capital requirements requires a detailed review by the Central Bank of each bank's internal analysis. The Central Bank will have its own methodologies to benchmark the outcomes of the ICAAP and, if necessary, impose additional capital requirements.

Supervisory Review Process

A. Review of adequacy of risk assessment

47. The Central Bank will assess the degree to which internal requirements and processes incorporate the full range of material risks faced by the bank. The Central Bank will also review the adequacy of risk measures used in assessing internal capital adequacy and the extent to which these risk measures are also used operationally in setting limits, evaluating business line performance, and evaluating and controlling risks more generally. In addition, the Central Bank will review the results of stress tests (including sensitivity analyses and scenario analyses) conducted by the banks and how these results relate to capital plans.

B. Assessment of capital adequacy

48. The Central Bank will review the bank's processes to determine that:

- i. Minimum capital requirements chosen are comprehensive and relevant to the current operating environment and the risk profile of the bank;
- ii. Minimum capital requirements are properly monitored and reviewed by senior management; and
- iii. The composition of capital is appropriate for the nature and scale of the bank's business.

49. The Central Bank will also consider the extent to which the bank has provided for unexpected events in setting its minimum capital requirements. This analysis must cover a wide range of external conditions and scenarios, and the sophistication of techniques and stress tests used must be commensurate with the bank's activities.

C. Assessment of the control environment

50. The Central Bank will consider the quality of the bank's management information reporting and systems, the manner in which business risks and activities are aggregated, and management's record in responding to emerging or changing risks.

51. In all instances, the capital requirement at an individual bank must be determined according to the bank's risk profile and adequacy of its risk management process and internal controls. External factors such as business cycle effects and the macroeconomic environment must also be considered. Another consideration is the variability in a bank's profitability in normal circumstances.

D. The Central Bank's review of the regulatory framework

52. In order for certain internal methodologies (e.g. VaR), credit risk mitigation techniques and asset securitisations to be recognised for regulatory capital purposes, banks will need to meet a number of requirements, including risk management standards and disclosures. In particular, banks will be required to disclose features of their internal methodologies used in calculating minimum capital requirements. As part of the supervisory review process, the Central Bank will ensure that these conditions are met on an ongoing basis.

53. The Central Bank regards this review of as an integral part of the supervisory review process under Principle 2.

54. The Central Bank will also perform a review of compliance with certain conditions and requirements set for standardised approaches.

Principle 3: The Central Bank expects banks to operate above the minimum regulatory capital ratios and may require banks to hold capital in excess of the minimum.

55. The Central Bank will take appropriate action if it is not satisfied with the results of the bank's own risk assessment and capital allocation or with the minimum capital levels as determined by the bank. The Central Bank will add additional capital requirements where the Central Bank is not satisfied that all risks have been identified. Important to note is that banks shall not disclose this publicly.

56. Pillar 1 capital requirements shall include a buffer for uncertainties surrounding the Pillar 1 regime that affect the banking population as a whole. Bank-specific uncertainties will be treated under Pillar 2. The Central Bank require banks to operate with a buffer, over and above the Pillar 1 standards. Banks must maintain this buffer for example:

- i. Pillar 1 minimums are anticipated to be set to achieve a level of bank creditworthiness in markets that is below the level of creditworthiness sought by many banks for their own reasons. For example, most international banks appear to prefer to have low risk profile and thus be highly rated by internationally recognised rating agencies. This is currently the case in the UAE. Thus, banks are likely to choose to operate above Pillar 1 minimums for competitive reasons.
- ii. In the normal course of business, the type and volume of activities will change, as will the different risk exposures, causing fluctuations in the overall capital ratio.
- iii. It may be costly for banks to raise additional capital, especially if this needs to be done quickly or at a time when market conditions are unfavourable.
- iv. For banks to fall below minimum regulatory capital requirements is a serious matter. It will place banks in breach of the relevant law and/or prompt non-discretionary corrective action on the part of supervisors such as withdrawal of license.

- v. There may be risks, either specific to individual banks, or more generally to an economy at large, that are not taken into account in Pillar 1. The Central Bank uses its own internal benchmarks and may request banks at any time for additional data to calculate an add-on.

57. There are several means available to the Central Bank for ensuring that individual banks are operating with adequate levels of capital. Among other methods, the Central Bank may set higher minimum capital requirements or define categories above minimum ratios (e.g. well capitalised and adequately capitalised) for identifying the capitalisation level of the bank.

Principle 4: The Central Bank will intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and will require rapid remedial action if capital is not maintained or restored.

58. The Central Bank will consider a range of options if it becomes concerned that a bank is not meeting the requirements embodied in the supervisory principles outlined above. These actions may trigger the recovery plan that includes and not limited to intensifying the monitoring of the bank, restricting the payment of dividends, requiring the bank to prepare and implement a satisfactory capital adequacy restoration plan, and requiring the bank to raise additional capital immediately. The Central Bank have the discretion to use the tools best suited to the circumstances of the bank and its operating environment.

59. The permanent solution to banks' difficulties is not exclusively increased capital. However, some of the required measures (such as improving systems and controls) may take some time to implement. Therefore, increased capital requirements might be used as an interim measure while permanent measures to improve the bank's position are being put in place. Once these permanent measures have been put in place and have been seen by the Central Bank to be effective, the interim increase in capital requirements may be removed.

V. Specific issues to be addressed under the supervisory review process

60. Below are a few important issues that the Central Bank will particularly focus on when carrying out the supervisory review process. These issues include some key risks that are not directly addressed under Pillar 1.

A. Interest rate risk in the banking book

61. Interest rate risk in the banking book is a potentially significant risk that requires capital. There is considerable heterogeneity across UAE banks in terms of the nature of the underlying risk and the processes for monitoring and managing it. In light of this, the Central Bank considers it is most appropriate to treat interest rate risk in the banking book under Pillar 2 of the Framework.

62. To facilitate the Central Bank's monitoring of interest rate risk exposures across banks, banks would have to provide the results of their internal measurement systems, expressed in terms of both, economic value and net interest income, relative to capital, using a standardised interest rate shock as described in the accompanying guidance document.

63. If the Central Bank determines that banks are not holding capital commensurate with the level of interest rate risk, they must require the bank to reduce its risk, to hold a specific additional amount of capital or some combination of the two.

B. Stress tests

64. A bank should ensure that it has sufficient capital to meet the Pillar 1 requirements and the results (where a deficiency has been indicated) of the credit risk stress test performed. The Central Bank will review how the stress test has been carried out.

65. Central bank will use the reference model to challenge the stress test results. Reference model is based on +/- 200 basis point shock based on NII and EVE. Central Bank assumes a higher basis point for stress testing which is described in the accompanying guidance document.

66. The results of the stress test will thus contribute directly to the expectation that a bank will operate above the Pillar 1 minimum regulatory capital ratios. The outcome of the Central Bank stress tests will be used as a benchmark. If there is an impact of more than 200bps, the Central Bank will require setting higher minimum capital requirements so that capital resources could cover the Pillar 1 requirements plus the result of a recalculated stress test.

C. Residual risk

67. This section allows banks to offset credit or counterparty risk with collateral, guarantees or credit derivatives, leading to reduced capital charges in Pillar 1. While banks use credit risk mitigation (CRM) techniques to reduce their credit risk, these techniques give rise to risks that may render the overall risk reduction less effective. Accordingly, these risks (e.g. operational risk or liquidity risk) to which banks are exposed are of supervisory concern. Where such risks arise, and irrespective of fulfilling the minimum requirements set out in Pillar 1, a bank could find itself with greater credit risk exposure to the underlying counterparty than it had expected. Examples of these risks include:

- i. Inability to seize, or realise in a timely manner, collateral pledged (on default of the counterparty);
- ii. Refusal or delay by a guarantor to pay; and
- iii. Ineffectiveness of untested documentation.

68. The Central Bank will require banks to have in place appropriate written CRM policies and procedures in order to control these residual risks. A bank may be required to submit these policies and procedures to the Central Bank and must regularly review their appropriateness, effectiveness and operation.

69. In its CRM policies and procedures, a bank must consider whether, when calculating capital requirements, it is appropriate to give the full recognition of the value of the credit risk mitigant as permitted in Pillar 1 and must demonstrate that its CRM management policies and procedures are appropriate to the level of capital benefit that it is recognising. Where the Central Bank is not satisfied as to the robustness, suitability or application of these policies and procedures they may direct the bank to take immediate remedial action or hold additional capital against residual risk until the deficiencies in the CRM procedures are rectified to the satisfaction of the Central Bank. For example, the Central Bank may direct a bank to:

- i. Make adjustments to the assumptions on holding periods, supervisory haircuts, or volatility (in the own haircuts approach);
- ii. Give less than full recognition of credit risk mitigants (on the whole credit portfolio or by specific product line); and/or
- iii. Hold a specific additional amount of capital.

D. Risk Concentration

70. Unmanaged risk and excessive concentrations are an important cause of major problems in banks. A bank must aggregate all similar direct and indirect exposures regardless of where the exposures have been booked. A risk concentration is any single exposure or

group of similar exposures (e.g. to the same borrower or counterparty, including protection providers, geographic area, industry or other risk factors) with the potential to produce (i) losses large enough (relative to a bank's earnings, capital, total assets or overall risk level) to threaten a bank's creditworthiness or ability to maintain its core operations or (ii) a change in a bank's risk profile. Risk concentrations must be analysed on both a bank legal entity and consolidated basis, as an unmanaged concentration at a subsidiary bank may appear immaterial at the consolidated level, but can nonetheless threaten the viability of the subsidiary. A change in the concentration risk is identified as a significant change.

71. Risk concentrations must be viewed in the context of a single or a set of closely related risk-drivers that may have different impacts on a bank. These concentrations must be integrated when assessing a bank's overall risk exposure. A bank must consider concentrations that are based on common or correlated risk factors that reflect more subtle or more situation-specific factors than traditional concentrations, such as correlations between market, credit risks and liquidity risk.

72. The growth of market-based intermediation has increased the possibility that different areas of a bank are exposed to a common set of products, risk factors or counterparties. This has created new challenges for risk aggregation and concentration management. Through its risk management processes and MIS, a bank must be able to identify and aggregate similar risk exposures across the firm, including across legal entities, asset types (e.g. loans, derivatives and structured products), risk areas (e.g. the trading book) and geographic regions. The typical situations in which risk concentrations can arise include:

- i. Exposures to a single counterparty, borrower or group of connected counterparties or borrowers;
- ii. Industry or economic sectors, including exposures to both regulated and nonregulated financial institutions such as hedge funds and private equity firms;
- iii. Geographical regions;
- iv. Exposures arising from credit risk mitigation techniques, including exposure to similar collateral types or to a single or closely related credit protection provider;
- v. Trading exposures;
- vi. Exposures to counterparties (e.g. hedge funds and hedge counterparties) through the execution or processing of transactions (either product or service);
- vii. Assets that are held in the banking book or trading book, such as loans, derivatives and structured products; and
- viii. Off-balance sheet exposures, including guarantees, liquidity lines and other commitments.

73. Risk concentrations can also arise through a combination of exposures across these broad categories. A bank must have an understanding of its firm-wide risk concentrations resulting from similar exposures across its different business lines.

74. While risk concentrations often arise due to direct exposures to borrowers and obligors, a bank may also incur a concentration to a particular asset type indirectly through investments backed by such assets (e.g. collateralised debt obligations – CDOs), as well as exposure to protection providers guaranteeing the performance of the specific asset type (e.g. monoline insurers). A bank must have in place adequate, systematic procedures for identifying high correlation between the creditworthiness of a protection provider and the obligors of the underlying exposures due to their performance being dependent on common factors beyond systematic risk (i.e. "wrong way risk").

75. Procedures must be in place to communicate risk concentrations to the board of directors and senior management in a manner that clearly indicates where in the organisation each segment of a risk concentration resides. A bank must have credible risk mitigation strategies in place that have senior management approval. This may include altering business strategies, reducing limits or increasing minimum capital requirements in line with the desired

risk profile. While it implements risk mitigation strategies, the bank must be aware of possible concentrations that might arise because of employing risk mitigation techniques.

76. Banks must employ a number of techniques, as appropriate, to measure risk concentrations. These techniques include shocks to various risk factors; use of business level and firm-wide scenarios; and the use of integrated stress testing and economic capital models. The Central Bank will use the reference model to challenge the credit concentration risk. The reference model is based on Herfindahl-Hirschman index (HHI), therefore the Central Bank requires all the banks to calculate and report the credit concentration risk using Herfindahl-Hirschman Index (HHI) methodology (single name and sector concentration) to be part of ICAAP document irrespective of the approach chosen by the bank. Identified concentrations must be measured in a number of ways, including for example, consideration of gross versus net exposures, use of notional amounts, and analysis of exposures with and without counterparty hedges. A bank must establish internal position limits for concentrations to which it may be exposed. When conducting periodic stress tests, a bank must incorporate all major risk concentrations and identify and respond to potential changes in market conditions that could adversely have an impact on their performance and capital adequacy.

77. The assessment of such risks under a bank's ICAAP and the supervisory review process must not be a mechanical process, but one in which each bank determines, depending on its business model, its own specific vulnerabilities. Every bank must discuss these vulnerabilities with the Central Bank. An appropriate level of capital for risk concentrations must be incorporated in a bank's ICAAP, as well as in Pillar 2 assessments.

78. A bank must have in place effective internal policies, systems and controls to identify, measure, monitor, manage, control and mitigate its risk concentrations in a timely manner. Not only must normal market conditions be considered, but also the potential build-up of concentrations under stressed market conditions, economic downturns and periods of general market illiquidity. In addition, the bank must assess scenarios that consider possible concentrations arising from contractual and non-contractual contingent claims. The scenarios must also combine the potential build-up of pipeline exposures together with the loss of market liquidity and a significant decline in asset values. The Central Bank will use its own benchmarking to determine if banks estimation of additional capital requirements is sufficient.

E. Counterparty credit risk

79. Counterparty Credit Risk (CCR) represents a form of credit risk and is covered in Pillar 1.

80. The bank must have counterparty credit risk management policies, processes and systems that are conceptually sound and implemented with integrity relative to the sophistication and complexity of a firm's holdings of exposures that give rise to CCR. A sound counterparty credit risk management framework shall include the identification, measurement, management, approval and internal reporting of CCR.

81. The bank's risk management policies must take account of the market, liquidity and operational risks that can be associated with CCR and, to the extent practicable, interrelationships among those risks. The bank must not undertake business with a counterparty without assessing its creditworthiness and must take due account of both settlement and pre-settlement credit risk. These risks must be managed as comprehensively as practicable at the counterparty level (aggregating counterparty exposures with other credit exposures) and at the firm-wide level.

82. The board of directors and senior management must be actively involved in the CCR control process and must regard this as an essential aspect of the business to which significant resources need to be devoted.

83. The bank's CCR management system must be used in conjunction with internal credit and trading limits. In this regard, credit and trading limits must be the outcome of the firm's risk measurement model in a manner that is consistent over time and that is well understood by credit managers, traders and senior management.

84. The bank must have a routine and rigorous program of stress testing in place as a supplement to the CCR analysis based on the day-to-day output of the bank's risk measurement model. The results of this stress testing must be reviewed periodically by senior management and must be reflected in the CCR policies and limits set by management and the board of directors. Where stress tests reveal particular vulnerability to a given set of circumstances, management must explicitly consider appropriate risk management strategies (e.g. by hedging against that outcome, or reducing the size of the firm's exposures).

85. The bank must have a routine in place for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operation of the CCR management system. The firm's CCR management system must be well documented, for example, through a risk management manual that describes the basic principles of the risk management system and that provides an explanation of the empirical techniques used to measure CCR.

86. The bank must conduct an independent review of the CCR management system regularly through its own internal auditing process. This review must include both the activities of the business credit and trading units and of the independent CCR control. A review of the overall CCR management process must take place at regular intervals (ideally not less than once a year) and must specifically address, at a minimum:

- i. The adequacy of the documentation of the CCR management system and process;
- ii. The organisation of the CCR control;
- iii. The integration of CCR measures into daily risk management;
- iv. The approval process for risk pricing models and valuation systems used by front and back-office personnel;
- v. The validation of any significant change in the CCR measurement process;
- vi. The scope of counterparty credit risks captured by the risk measurement model;
- vii. The integrity of the management information system;
- viii. The accuracy and completeness of CCR data;
- ix. The verification of the consistency, timeliness and reliability of data sources used to run internal models, including the independence of such data sources;
- x. The accuracy and appropriateness of volatility and correlation assumptions;
- xi. The accuracy of valuation and risk transformation calculations;
- xii. The verification of the model's accuracy through frequent back testing.

F. Operational risk

87. Gross income, used in the Basic Indicator and Standardised Approaches for operational risk, is only a proxy for the scale of operational risk exposure of a bank and can in some cases underestimate the need for capital for operational risk. The Central Bank will consider whether the capital requirement generated by the Pillar 1 calculation gives a consistent picture of the individual bank's operational risk exposure, for example in comparison with other banks of similar size and with similar operations. The use of Pillar 2 to charge capital for inadequacy in risk management may also be applied by the Central Bank.

88. A bank offering Islamic financial services must ensure that its operational risk management framework addresses any operational risks arising from potential non-compliance with Shari'ah provisions and Higher Shari'ah Authority resolutions.

G. Market risk

Policies and procedures for trading book eligibility

89. Clear policies and procedures used to determine the exposures that may be included in, and those that must be excluded from, the trading book for purposes of calculating regulatory capital are critical to ensure the consistency and integrity of a bank's trading book. The Central Bank must be satisfied that the policies and procedures clearly delineate the boundaries of the bank's trading book and consistent with the bank's risk management capabilities and practices. The Central Bank must also be satisfied that transfers of positions between banking and trading books can only occur in a very limited set of circumstances. The Central Bank will require a bank to modify its policies and procedures when they prove insufficient with the general principles set forth in this Standard, or not consistent with the bank's risk management capabilities and practices.

Valuation

90. Prudent valuation policies and procedures form the foundation on which any robust assessment of market risk capital adequacy must be built. For a well-diversified portfolio consisting of highly liquid cash instruments, and without market concentration, the valuation of the portfolio, combined with the minimum quantitative standards may deliver sufficient capital to enable a bank, in adverse market conditions, to close out or hedge its positions in a quick and orderly fashion. However, for less well diversified portfolios, for portfolios containing less liquid instruments, for portfolios with concentrations in relation to market turnover, and/or for portfolios which contain large numbers of positions that are marked-to-model this is less likely to be the case. In such circumstances, the Central Bank will consider whether a bank has sufficient capital. To the extent, if there is a shortfall, the Central Bank will react appropriately. This will usually require the bank to reduce its risks and set higher minimum capital requirements.

H. Reputational risk and implicit support

91. Reputational risk of the bank can be defined as the risk arising from negative perception on the part of customers, counterparties, shareholders, investors, debt-holders, market analysts, other relevant parties or regulators that can adversely affect a bank's ability to maintain existing, or establish new, business relationships and continued access to sources of funding (e.g. through the interbank or securitisation markets). Reputational risk is multidimensional and reflects the perception of other market participants. Furthermore, it exists throughout the organisation and exposure to reputational risk is essentially a function of the adequacy of the bank's internal risk management processes, as well as the manner and efficiency with which management responds to external influences on bank-related transactions.

92. Reputational risk can lead to the provision of implicit support by the bank, which may give rise to credit, liquidity, market and legal risk – all of which can have a negative impact on a bank's earnings, liquidity and capital position. A bank must identify potential sources of reputational risk to which it is exposed. These include the bank's business lines, liabilities, affiliated operations, off-balance sheet vehicles and the markets in which it operates. The risks that arise must be incorporated into the bank's risk management processes and appropriately addressed in its ICAAP and liquidity contingency plans.

93. A bank must incorporate the exposures that could give rise to reputational risk into its assessments of whether the requirements under the securitisation framework have been met and the potential adverse impact of providing implicit support.

94. Reputational risk also may affect a bank's liabilities, since market confidence and a bank's ability to fund its business are closely related to its reputation. For instance, to avoid damaging its reputation, a bank may call its liabilities even though this might negatively affect its liquidity profile. This is particularly true for liabilities that are components of regulatory

capital, such as hybrid/subordinated debt. In such cases, a bank's capital position is likely to suffer.

95. Bank management must have appropriate policies in place to identify sources of reputational risk when entering new markets, products or lines of activities. In addition, a bank's stress testing procedures must take account of reputational risk so management has a firm understanding of the consequences and second round effects of reputational risk.

96. Once a bank identifies potential exposures arising from reputational concerns, it must measure the amount of support it might have to provide (including implicit support of securitisations) or losses it might experience under adverse market conditions. In particular, in order to avoid reputational damages and to maintain market confidence, a bank must develop methodologies to measure as precisely as possible the effect of reputational risk in terms of other risk types (e.g. credit, liquidity, market or operational risk) to which it may be exposed. This could be accomplished by including reputational risk scenarios in regular stress tests. For instance, non-contractual off-balance sheet exposures could be included in the stress tests to determine the effect on a bank's credit, market and liquidity risk profiles. Methodologies also could include comparing the actual amount of exposure carried on the balance sheet versus the maximum exposure amount held off-balance sheet, that is, the potential amount to which the bank could be exposed.

97. A bank must pay particular attention to the effects of reputational risk on its overall liquidity position, taking into account both possible increases in the asset side of the balance sheet and possible restrictions on funding, as well as the loss of reputation as a result in various counterparties' loss of confidence.

98. In contrast to contractual credit exposures, such as guarantees, implicit support is a more subtle form of exposure. Implicit support arises when a bank provides post-sale support to a securitisation transaction in excess of any contractual obligation. Such non-contractual support exposes a bank to the risk of loss, such as loss arising from deterioration in the credit quality of the securitisation's underlying assets.

99. By providing implicit support, a bank signals to the market that all of the risks inherent in the securitised assets are still held by the organisation and, in effect, had not been transferred. Since the risk arising from the potential provision of implicit support is not captured ex ante under Pillar 1, it must be considered as part of the Pillar 2 process. In addition, the processes for approving new products or strategic initiatives must consider the potential provision of implicit support and must be incorporated in a bank's ICAAP.

I. Market Conduct Risk

100. This Standard will focus on regulatory supervision of market conduct by the Central Bank. Supervision will rely on the supervisory activities identified in the previous chapters and is supplemented by the follow requirements and activities.

101. The Central Bank has taken steps to strengthen its regulatory and supervisory framework regarding market conduct of financial institutions by creating a separate Consumer Protection Department (CPD) that will have the resources and mandate to focus on monitoring market conduct, providing regulatory supervision and addressing issues of compliance / enforcement. It also has a mandate to improve consumer financial literacy through consumer education programs and outreach activities.

Consumer Protection Framework

102. A Consumer Protection Framework (CPF) is a regulatory and supervisory response designed to protect consumers by establishing standards of market conduct for institutional behaviour to mitigate potential risks of misconduct and protect consumers from harm.

103. Market conduct is defined simply as to how a financial institution conducts itself in the marketplace in terms of the level of integrity, fairness, and competency that it demonstrates in dealing with consumers. It includes the behaviour and actions of a financial institution in the market place involving such matters as:

- i. product design, development
- ii. marketing and sales practices,
- iii. advertising,
- iv. compliance with laws,
- v. fulfilling its obligations to customers,
- vi. treatment of customer's / dispute resolution,
- vii. conflicts of interest,
- viii. transparency and disclosure
- ix. Market competition, pricing, etc.

104. The supervisory activities under the CPF are risk-based and requires a comprehensive understanding of the retail operations of the financial institutions; the risks created by the behaviour of these organisations, the risks from products and services offered, and how these risks are being managed. The risk-based approach assesses the nature of the institution's business activities and the risks that are inherent to each type of activity undertaken. The supervisory framework requires open, transparent and frequent flow of quality data and information between the financial institutions and the Central Bank that allows CPD to effectively perform up-to-date market conduct assessments.

Importance of Supervisory Review – Market Conduct

105. Many of the supervisory requirements discussed in previous sections of these Standards fully apply to the supervision of market conduct. However, supervision of market conduct adds another dimension and perspective in regulatory supervision. The additional supervisory concerns are highlighted as follows.

Board and Senior Management Oversight

106. In addition to the previous chapters, it is expected that effective reporting occur quarterly regarding any compliance issues regarding retail operations, analysis of consumer complaints / trends and identification of systemic issues. Boards should be confident that its retail workers have had the training and qualification to fulfil their responsibilities and regulatory responsibilities and those effective verifications are carried out.

Appropriate Policies, Procedures and Limits:

107. More specifically, market conduct will focus on policies, procedures, practices and related training associated with product design, development, distribution, marketing, advertising and sales. The Central Bank will evaluate the same elements for third parties carrying out outsourced retail activities.

Comprehensive Risk Assessment:

Operational Risk:

108. The financial institution must have a framework for monitoring, identifying and mitigating market conduct risks association with business lines and the products and services offered at the retail level. This includes identifying risks associated with institutional errors or misconduct. Risk analysis must consider such activities including product design, development, marketing, pricing, distribution, sales, advertising, disclosure, suitability, affordability, product assumptions and accuracy / method of calculations, fraud, technology downtime, etc. Institutions must also evaluate the risks related to third party distributors, suppliers / contractors.

109. An important differentiation from prudent supervision is the matter of materiality. It is not the basis for mitigating conduct risks in the retail market place. The regulatory concerns are on proactive mitigation of risks with the objectives of promoting consumer confidence in the integrity of the market place, preventing harm done to the consumer and ensuring proper dispute resolution and redress where there is harm.

Reputational Risks:

110. The institution must also evaluate the impact that a risk event in the retail operations may have on its reputation in the market place, (a) whether it is an event of significant mis-selling or improper disclosure or calculation errors, these may be systemic issues that will attract regulatory actions, may attract public awareness and media attention and (b) what measures will the institution have in place to mitigate this risk and associated response by consumers.

Monitoring and Reporting:

111. Institutions are expected to have an adequate system for monitoring and reporting on their retail operations. The bank's senior management or board of directors must ensure proper monitoring and reporting including risk analysis and trends in consumer inquiries and complaints. Reporting to the board should evaluate the quality and frequency of training of front line staff; the proper qualifications of staff to sell or market products, the meeting of performance indicators, the identification and frequency of bank errors, compliance with regulatory requirements and other matters of conduct risk.

112. Financial institutions will provide timely and accurate information as requested by the Central Bank including complaint information as required by the Central Bank as per Notice 383/2017 regarding setting up a Complaint Unit.

113. Financial institutions will provide notice to the Central Bank of any material changes and/or important issues that may affect consumers or the retail operations of the financial institution.

J. Liquidity risk management and supervision

114. The financial market crisis underscores the importance of assessing the potential impact of liquidity risk on capital adequacy in a bank's ICAAP. Senior management must consider the relationship between liquidity and capital since liquidity risk can affect capital adequacy, which, in turn, can aggravate a bank's liquidity profile.

115. Another facet of liquidity risk management is that a bank must appropriately price the costs, benefits and risks of liquidity into the internal pricing, performance measurement, and new product approval process of all significant business activities.

116. A bank is expected to be able to thoroughly identify, measure and control liquidity risks, especially with regard to complex products and contingent commitments (both contractual and non-contractual). This process must involve the ability to project cash flows arising from assets, liabilities and off-balance sheet items over various time horizons, and must ensure diversification in both the tenor and source of funding. A bank must utilise early warning indicators to identify the emergence of increased risk or vulnerabilities in its liquidity position or funding needs. It must have the ability to control liquidity risk exposure and funding needs, regardless of its organisation structure, within and across legal entities, business lines, and currencies, taking into account any legal, regulatory and operational limitations to the transferability of liquidity.

117. A bank's failure to effectively manage intraday liquidity could leave it unable to meet its payment obligations at the time expected, which could lead to liquidity dislocations that cascade quickly across many systems and institutions. As such, the bank's management of

intraday liquidity risks must be considered as a crucial part of liquidity risk management. It must also actively manage its collateral positions and have the ability to calculate all of its collateral positions.

118. While banks typically manage liquidity under “normal” circumstances, they must also be prepared to manage liquidity under stressed conditions. A bank must perform stress tests or scenario analyses on a regular basis in order to identify and quantify their exposures to possible future liquidity stresses, analysing possible impacts on the bank’s cash flows, liquidity positions, profitability, and solvency. The results of these stress tests must be discussed thoroughly by management, and based on this discussion, must form the basis for taking remedial or mitigating actions to limit the bank’s exposures, build up a liquidity cushion, and adjust its liquidity profile to fit its risk tolerance. The results of stress tests must also play a key role in shaping the bank’s contingency funding planning, which must outline policies for managing a range of stress events and clearly sets out strategies for addressing liquidity shortfalls in emergencies.

119. The Central Bank’s reserves the right to set higher liquidity requirements in Pillar 2.

K. Valuation practices

120. In order to enhance the supervisory assessment of banks’ valuation practices, the Basel Committee published Supervisory guidance for assessing banks’ financial instrument fair value practices in April 2009. This guidance applies to all positions that are measured at fair value and at all times, not only during times of stress.

121. The characteristics of complex structured products as well as simple but illiquid products, including securitisation transactions, make their valuation inherently difficult due, in part, to the absence of active and liquid markets, the complexity and uniqueness of the cash waterfalls, and the links between valuations and underlying risk factors. The absence of a transparent price from a liquid market means that the valuation must rely on models or proxy-pricing methodologies, as well as on expert judgment. The outputs of such models and processes are highly sensitive to the inputs and parameter assumptions adopted, which may themselves be subject to estimation error and uncertainty. Moreover, calibration of the valuation methodologies is often complicated by the lack of readily available benchmarks.

122. Therefore, a bank is expected to have adequate governance structures and control processes for fair valuing exposures for risk management and financial reporting purposes. The valuation governance structures and related processes must be embedded in the overall governance structure of the bank, and consistent for both risk management and reporting purposes. The governance structures and processes are expected to explicitly cover the role of the board and senior management. In addition, the board must receive reports from senior management on the valuation oversight and valuation model performance issues that are brought to senior management for resolution, as well as all significant changes to valuation policies.

123. A bank must also have clear and robust governance structures for the production, assignment and verification of financial instrument valuations. Policies must ensure that the approvals of all valuation methodologies are well documented. In addition, policies and procedures must set forth the range of acceptable practices for the initial pricing, marking-to-market/model, valuation adjustments and periodic independent revaluation. New product approval processes (which has to be established in the first place) must include all internal stakeholders relevant to risk measurement, risk management, and the assignment and verification of valuations of financial instruments.

124. A bank’s control processes for testing and reporting valuations must be consistently applied across the firm and integrated with risk measurement and management processes. In particular, valuation controls must be applied consistently across similar instruments (risks) and consistent across business lines (books). These controls must be subject to internal audit.

Regardless of the booking location of a new product, reviews and approval of valuation methodologies must be guided by a minimum set of considerations. Furthermore, the valuation/new product approval process must be supported by a transparent, well-documented inventory of acceptable valuation methodologies that are specific to products and businesses. The Board must be familiar with and approve the basic assumptions behind these methodologies.

125. In order to establish and verify valuations for instruments and transactions in which it engages, a bank must have adequate capacity, including during periods of stress. This capacity must be commensurate with the importance, riskiness and size of these exposures in the context of the business profile of the bank. In addition, for those exposures that represent material risk, a bank is expected to have the capacity to produce valuations using alternative methods that cannot just solely rely on the valuations provided by its counterparts in the event that primary inputs and approaches become unreliable, unavailable or not relevant due to market discontinuities or illiquidity. A bank must test and review the performance of its models under stress conditions so that it understands the limitations of the models under stress conditions.

126. The relevance and reliability of valuations is directly related to the quality and reliability of the inputs. Where values are determined to be in an active market, a bank must maximise the use of relevant observable inputs and minimise the use of unobservable inputs when estimating fair value using a valuation technique. However, where a market is deemed inactive, observable inputs or transactions may not be relevant, such as in a forced liquidation or distress sale, or transactions may not be observable, such as when markets are inactive. In such cases, accounting fair value guidance provides assistance on what must be considered, but may not be determinative. In assessing whether a source is reliable and relevant, a bank must consider, among other things:

- i. The frequency and availability of the prices/quotes;
- ii. Whether those prices represent actual regularly occurring transactions on an arm's length basis;
- iii. The breadth of the distribution of the data and whether it is generally available to the relevant participants in the market;
- iv. The timeliness of the information relative to the frequency of valuations;
- v. The number of independent sources that produce the quotes/prices;
- vi. The maturity of the market; and
- vii. The similarity between the financial instrument sold in a transaction and the instrument held by the bank.

L. Sound stress testing practices

127. In order to strengthen banks' stress testing practices, as well as improve supervision of those practices, in October 2018 the Basel Committee published Principles for sound stress testing practices and supervision. Improvements in stress testing alone cannot address all risk management weaknesses, but as part of a comprehensive approach, stress testing has a leading role to play in strengthening bank corporate governance and the resilience of individual banks and the financial system.

128. Stress testing is an important tool that is used by banks as part of their internal risk management that alerts bank management to adverse unexpected outcomes related to a broad variety of risks, and provides an indication to banks of how much capital might be needed to absorb losses if large shocks occur. Moreover, stress testing supplements other risk management approaches and measures. It plays a particularly important role in:

- i. Providing forward looking assessments of risk,
- ii. Overcoming limitations of models and historical data,
- iii. Supporting internal and external communication,

- iv. Feeding into capital and liquidity planning procedures,
- v. Informing the setting of a banks' risk tolerance,
- vi. Addressing existing or potential, firm-wide risk concentrations, and
- vii. Facilitating the development of risk mitigation or contingency plans across a range of stressed conditions.

129. Stress testing is especially important after long periods of benign risk, when the fading memory of negative economic conditions can lead to complacency and the under-pricing of risk, and when innovation leads to the rapid growth of new products for which there is limited or no loss data.

130. Stress testing must form an integral part of the overall governance and risk management culture of the bank. Board and senior management involvement in setting stress testing objectives, defining scenarios, discussing the results of stress tests, assessing potential actions and decision making is critical in ensuring the appropriate use of stress testing in banks' risk governance and capital planning. Senior management must take an active interest in the development and operation of stress testing. The results of stress tests must contribute to strategic decision making and foster internal debate regarding assumptions, such as the cost, risk and speed with which new capital could be raised or that positions could be hedged or sold. Board and senior management involvement in the stress-testing program is essential for its effective operation.

131. Therefore, a bank's capital planning process must incorporate rigorous, forward-looking stress testing that identifies possible events or changes in market conditions that could adversely have an impact on the bank. Banks, in their ICAAPs must examine future capital resources and capital requirements under adverse scenarios. In particular, the results of forward-looking stress testing must be considered when evaluating the adequacy of a bank's capital buffer. Capital adequacy must be assessed under stressed conditions against a variety of capital ratios, including regulatory ratios. In addition, the possibility that a crisis impairs the ability of even very healthy banks to raise funds at reasonable cost must be considered.

132. In addition, a bank must develop methodologies to measure the effect of reputational risk arising from other risk types, namely credit, liquidity, market and other risks that they may be exposed to in order to avoid reputational damages and in order to maintain market confidence. This could be done by including reputational risk scenarios in regular stress tests. For instance, AML sanctions.

133. A bank must carefully assess the risks with respect to commitments to off-balance sheet vehicles and third-party firms related to structured credit securities and the possibility that assets will need to be taken on-balance sheet for reputational reasons. Therefore, in its stress-testing programme, a bank must include scenarios assessing the size and soundness of such vehicles and firms relative to its own financial, liquidity and regulatory capital positions. This analysis must include structural, solvency, liquidity and other risk issues, including the effects of covenants and triggers.

134. The Central Bank will assess the effectiveness of banks' stress testing programme in identifying relevant vulnerabilities. The Central Bank will review the key assumptions driving stress-testing results and challenge their continuing relevance in view of existing and potentially changing market conditions. The Central Bank will challenge the banks on how stress testing is used and the way it affects decision-making. Where this assessment reveals material shortcomings, the Central Bank will require a bank to detail a plan of corrective action

VI. Other aspects of the supervisory review process

Supervisory transparency and accountability

135. The supervision of banks is not an exact science, and therefore, discretionary elements within the supervisory review process are inevitable. The Central Bank will carry out its obligations in a transparent and accountable manner. The Central Bank will make publicly

available the criteria (defined in the accompanying Guidance) to be used in the review of banks' internal capital assessments. If the Central Bank chooses to set higher minimum capital requirements or to set categories of capital in excess of the regulatory minimum, factors that may be considered in doing so will be publicly available. Where the capital requirements are set above the minimum for an individual bank, the Central Bank will explain to the bank the risk characteristics specific to the bank, which resulted in the requirement and any remedial action necessary.

Supervisory review process for securitisation

136. Further to the Pillar 1 principle that banks must take account of the economic substance of transactions in their determination of capital adequacy, the Central Bank will monitor, as appropriate, whether banks have done so adequately. As a result, regulatory capital treatments for specific securitisation exposures might differ from those specified in Pillar 1 of the Framework, particularly in instances where the general capital requirement would not adequately and sufficiently reflect the risks to which an individual banking organisation is exposed.

137. Amongst other things, the Central Bank will review where relevant a bank's own assessment of its capital needs and how that has been reflected in the capital calculation as well as the documentation of certain transactions to determine whether the capital requirements accord with the risk profile (e.g. substitution clauses). The Central Bank will also review the manner in which banks have addressed the issue of maturity mismatch in relation to retained positions in their economic capital calculations. In particular, they will be vigilant in monitoring for the structuring of maturity mismatches in transactions to artificially reduce capital requirements. Additionally, the Central Bank will review the bank's economic capital assessment of actual correlation between assets in the pool and how they have reflected that in the calculation. Where the Central Bank considers that a bank's approach is not adequate, they will take appropriate action. Such action might include denying or reducing capital relief in the case of originated assets, or increasing the capital required against securitisation exposures acquired.

Significance of risk transfer

138. Securitisation transactions may be carried out for purposes other than credit risk transfer (e.g. funding). Where this is the case, there might still be a limited transfer of credit risk. However, for an originating bank to achieve reductions in capital requirements, the risk transfer arising from a securitisation has to be deemed significant by the Central Bank. If the risk transfer is considered insufficient or non-existent, the Central Bank will require the application of a higher capital requirement than prescribed under Pillar 1 or, alternatively, may deny a bank from obtaining any capital relief from the securitisations. Therefore, the capital relief that can be achieved will correspond to the amount of credit risk that is effectively transferred. The following includes a set of examples where the Central Bank will have concerns about the degree of risk transfer, such as retaining or repurchasing significant amounts of risk or "cherry picking" the exposures to be transferred via a securitisation.

139. Retaining or repurchasing significant securitisation exposures, depending on the proportion of risk held by the originator, might undermine the intent of a securitisation to transfer credit risk. Specifically, the Central Bank might expect that a significant portion of the credit risk and of the nominal value of the pool be transferred to at least one independent third party at inception and on an ongoing basis. Where banks repurchase risk for market making purposes, the Central Bank could find it appropriate for an originator to buy part of a transaction but not, for example, to repurchase a whole tranche. The Central Bank will expect that where positions have been bought for market making purposes, these positions must be resold within an appropriate period, thereby remaining true to the initial intention to transfer risk.

140. Another implication of realising only a non-significant risk transfer, especially if related to good quality unrated exposures, is that both the poorer quality unrated assets and most of the credit risk embedded in the exposures underlying the securitised transaction are likely to remain with the originator. Accordingly, and depending on the outcome of the supervisory review process, the Central Bank will increase the capital requirement for particular exposures or even increase the overall level of capital the bank is required to hold.

Market innovations

141. As the minimum capital requirements for securitisation may not be able to address all potential issues, the Central Bank will consider new features of securitisation transactions as they arise. Such assessments would include reviewing the impact new features may have on credit risk transfer and, where appropriate, the Central Bank will be expected to take appropriate action under Pillar 2. A Pillar 1 response may be formulated to take account of market innovations. Such a response may take the form of a set of operational requirements and/or a specific capital treatment.

Risk evaluation and management

142. A bank must conduct analyses of the underlying risks when investing in the structured products and must not solely rely on the external credit ratings assigned to securitisation exposures by the credit rating agencies. A bank must be aware that external ratings are a useful starting point for credit analysis, but are no substitute for full and proper understanding of the underlying risk, especially where ratings for certain asset classes have a short history or have been shown to be volatile. Moreover, a bank also must conduct credit analysis of the securitisation exposure at acquisition and on an ongoing basis. It must also have in place the necessary quantitative tools, valuation models and stress tests of sufficient sophistication to reliably assess all relevant risks.

143. When assessing securitisation exposures, a bank must ensure that it fully understands the credit quality and risk characteristics of the underlying exposures in structured credit transactions, including any risk concentrations. In addition, a bank must review the maturity of the exposures underlying structured credit transactions relative to the issued liabilities in order to assess potential maturity mismatches.

144. A bank must track credit risk in securitisation exposures at the transaction level and across securitisations exposures within each business line and across business lines. It must produce reliable measures of aggregate risk. A bank also must track all meaningful concentrations in securitisation exposures, such as name, product or sector concentrations, and feed this information to firm-wide risk aggregation systems that track, for example, credit exposure to a particular obligor.

145. A bank's own assessment of risk needs to be based on a comprehensive understanding of the structure of the securitisation transaction. It must identify the various types of triggers, credit events and other legal provisions that may affect the performance of its on- and off-balance sheet exposures and integrate these triggers and provisions into its funding/liquidity, credit and balance sheet management. The impact of the events or triggers on a bank's liquidity and capital position must also be considered.

146. Banks either underestimated or did not anticipate that a market-wide disruption could prevent them from securitising warehoused or pipeline exposures and did not anticipate the effect this could have on liquidity, earnings and capital adequacy. As part of its risk management processes, a bank must consider and, where appropriate, mark-to-market warehoused positions, as well as those in the pipeline, regardless of the probability of securitising the exposures. It must consider scenarios that may prevent it from securitising its assets as part of its stress testing and identify the potential effect of such exposures on its liquidity, earnings and capital adequacy.

147. A bank must develop prudent contingency plans specifying how it would respond to funding, capital and other pressures that arise when access to securitisation markets is reduced. The contingency plans must also address how the bank would address valuation challenges for potentially illiquid positions held for sale or for trading. The risk measures, stress testing results and contingency plans must be incorporated into the bank's risk management processes and its ICAAP, and must result in an appropriate level of capital under Pillar 2 in excess of the minimum requirements.

148. A bank that employs risk mitigation techniques must fully understand the risks to be mitigated, the potential effects of that mitigation and whether or not the mitigation is fully effective. This is to help ensure that the bank does not understate the true risk in its assessment of capital. In particular, it must consider whether it would provide support to the securitisation structures in stressed scenarios due to the reliance on securitisation as a funding tool.

Provision of implicit support

149. Support to a transaction, whether contractual (i.e. credit enhancements provided at the inception of a securitised transaction) or non-contractual (implicit support) can take numerous forms. For instance, contractual support can include over collateralisation, credit derivatives, spread accounts, contractual recourse obligations, subordinated notes, credit risk mitigants provided to a specific tranche, the subordination of fee or interest income or the deferral of margin income, and clean-up calls that exceed 10 percent of the initial issuance. Examples of implicit support include the purchase of deteriorating credit risk exposures from the underlying pool, the sale of discounted credit risk exposures into the pool of securitized credit risk exposures, the purchase of underlying exposures at above market price or an increase in the first loss position according to the deterioration of the underlying exposures.

150. The provision of implicit (or non-contractual) support, as opposed to contractual credit support (i.e. credit enhancements), raises significant supervisory concerns. For traditional securitisation structures the provision of implicit support undermines the clean break criteria, which when satisfied would allow banks to exclude the securitised assets from regulatory capital calculations. For synthetic securitisation structures, it negates the significance of risk transference. By providing implicit support, banks signal to the market that the risk is still with the bank and has not in effect been transferred. The bank's capital calculation therefore understates the true risk. Accordingly, the Central Bank will take appropriate action when a banking organisation provides implicit support.

151. When a bank has been found to provide implicit support to a securitisation, it will be required to hold capital against all of the underlying exposures associated with the structure as if they had not been securitised. It will also be required to disclose publicly that it was found to have provided non-contractual support, as well as the resulting increase in the capital charge (as noted above). The aim is to require banks to hold capital against exposures for which they assume the credit risk, and to discourage them from providing non-contractual support.

152. If a bank is found to have provided implicit support on more than one occasion, the bank is required to disclose its transgression publicly and the Central Bank will take appropriate action that may include, but is not limited to, one or more of the following:

- i. The bank may be prevented from gaining favourable capital treatment on securitised assets for a period of time to be determined by the Central Bank;
- ii. The bank may be required to hold capital against all securitised assets as though the bank had created a commitment to them, by applying a conversion factor to the risk weight of the underlying assets;
- iii. For purposes of capital calculations, the bank may be required to treat all securitised assets as if they remained on the balance sheet;

- iv. The bank must be required by the Central Bank to hold regulatory capital in excess of the minimum risk-based capital ratios.

153. The Central Bank will be vigilant in determining implicit support and will take appropriate supervisory action to mitigate the effects. Pending any investigation, the bank may be prohibited from any capital relief for planned securitisation transactions (moratorium). The Central Bank's response will be aimed at changing the bank's behaviour with regard to the provision of implicit support, and to correct market perception as to the willingness of the bank to provide future recourse beyond contractual obligations.

Residual risks

154. As with credit risk mitigation techniques more generally, the Central Bank will review the appropriateness of banks' approaches to the recognition of credit protection. In particular, with regard to securitisations, the Central Bank will review the appropriateness of protection recognised against first loss credit enhancements. On these positions, expected loss is less likely to be a significant element of the risk and is likely to be retained by the protection buyer through the pricing. Therefore, the Central Bank will expect banks' policies to take account of this in determining their economic capital. If the Central Bank does not consider the approach to protection recognised as adequate, action will be taken. Such action may include increasing the capital requirement against a particular transaction or class of transactions.

Call provisions

155. The Central Bank expects a bank not to make use of clauses that entitles it to call the securitisation transaction or the coverage of credit protection prematurely if this would increase the bank's exposure to losses or deterioration in the credit quality of the underlying exposures.

156. Besides the general principle stated above, the Central Bank expects banks to only execute clean-up calls for economic business purposes, such as when the cost of servicing the outstanding credit exposures exceeds the benefits of servicing the underlying credit exposures.

157. Subject to national discretion, the Central Bank will require a review prior to the bank exercising a call which can be expected to include consideration of:

- i. The rationale for the bank's decision to exercise the call; and
- ii. The impact of the exercise of the call on the bank's regulatory capital ratio.

158. The Central Bank will also require the bank to enter into a follow-up transaction, if necessary, depending on the bank's overall risk profile, and existing market conditions.

159. Date related calls must be set at a date no earlier than the duration or the weighted average life of the underlying securitisation exposures. Accordingly, supervisory authorities may require a minimum period to elapse before the first possible call date can be set, given, for instance, the existence of up-front sunk costs of a capital market securitisation transaction.

Early amortisation

160. The Central Bank will review how banks internally measure, monitor, and manage risks associated with securitisations of revolving credit facilities, including an assessment of the risk and likelihood of early amortisation of such transactions. At a minimum, the Central Bank will ensure that banks have implemented reasonable methods for allocating economic capital against the economic substance of the credit risk arising from revolving securitisations and must expect banks to have adequate capital and liquidity contingency plans that evaluate the probability of an early amortisation occurring and address the implications of both scheduled and early amortisation. In addition, the capital contingency plan must address the possibility

that the bank will face higher levels of required capital under the early amortisation Pillar 1 capital requirement.

161. Because most early amortisation triggers are tied to excess spread levels, the factors affecting these levels must be well understood, monitored, and managed, to the extent possible by the originating bank. For example, the following factors affecting excess spread must generally be considered:

- i. Interest payments made by borrowers on the underlying receivable balances;
- ii. Other fees and charges to be paid by the underlying obligors (e.g. late-payment fees, cash advance fees, over-limit fees);
- iii. Gross charge-offs;
- iv. Principal payments;
- v. Recoveries on charged-off loans;
- vi. Interchange income;
- vii. Interest paid on investors' certificates;
- viii. Macroeconomic factors such as bankruptcy rates, interest rate movements, unemployment rates; etc.

162. Banks must consider the effects that changes in portfolio management or business strategies may have on the levels of excess spread and on the likelihood of an early amortisation event. For example, marketing strategies or underwriting changes that result in lower finance charges or higher charge-offs, might also lower excess spread levels and increase the likelihood of an early amortisation event.

163. Banks must use techniques such as static pool cash collections analyses and stress tests to better understand pool performance. These techniques can highlight adverse trends or potential adverse impacts. Banks must have policies in place to respond promptly to adverse or unanticipated changes. The Central Bank will take appropriate action where they do not consider these policies adequate. Such action may include, but is not limited to, directing a bank to obtain a dedicated liquidity line or raising the early amortisation credit conversion factor, thus, increasing the bank's capital requirements.

164. While the early amortisation capital charge described in Pillar 1 is meant to address potential supervisory concerns associated with an early amortisation event, such as the inability of excess spread to cover potential losses, the policies and monitoring described in this section recognise that a given level of excess spread is not, by itself, a perfect proxy for credit performance of the underlying pool of exposures. In some circumstances, for example, excess spread levels may decline so rapidly as to not provide a timely indicator of underlying credit deterioration. Further, excess spread levels may reside far above trigger levels, but still exhibit a high degree of volatility, which could warrant supervisory attention. In addition, excess spread levels can fluctuate for reasons unrelated to underlying credit risk, such as a mismatch in the rate at which finance charges reprice relative to investor certificate rates. Routine fluctuations of excess spread might not generate supervisory concerns, even when they result in different capital requirements. This is particularly the case as a bank moves in or out of the first step of the early amortisation credit conversion factors. On the other hand, existing excess spread levels may be maintained by adding (or designating) an increasing number of new accounts to the master trust, an action that would tend to mask potential deterioration in a portfolio. For all of these reasons, supervisors will place particular emphasis on internal management, controls, and risk monitoring activities with respect to securitisations with early amortisation features.

165. The Central Bank expects that the sophistication of a bank's system in monitoring the likelihood and risks of an early amortisation event will be commensurate with the size and complexity of the bank's securitisation activities that involve early amortisation provisions.

166. For controlled amortisations specifically, the Central Bank will also review the process by which a bank determines the minimum amortisation period required to pay down 90% of

the outstanding balance at the point of early amortisation. Where the Central Bank does not consider this adequate, it will take appropriate action, such as increasing the conversion factor associated with a particular transaction or class of transactions.

VIII.Shari'ah Implementation

Banks providing Islamic financial services must comply with the requirements and provisions of this standard for their Shari'ah compliant transactions that are alternative to transactions referred to in this Standard, provided it is acceptable by Islamic Shari'ah. This is applicable until relevant standards and/or guidance are issued specifically for transactions of banks offering Islamic financial services.

Pillar 3

XII. Pillar 3 – Market Disclosure

I. Scope and Application

The revised disclosure requirements presented in this Standard supersede the existing Pillar 3 disclosure requirements issued in 2009. These revised requirements are an integral part of the Basel framework and they complement other disclosure requirements issued separately by Central Bank, which are uploaded on Central Bank's online portal for banks to download. Pillar 3 Disclosure requirements apply to all banks in the UAE at consolidated level for local banks and all branches of foreign banks.

Implementation date

The Pillar 3 tables and disclosures will be effective from Q2, 2020 for the previous quarter/year's figures and every quarter/year going forward. Banks need to report in each table as per the requirements for that table set out in the Appendix since few tables are required to be reported every quarter or semi-annually or annually.

Reporting

Banks should publish their Pillar 3 report in a stand-alone document on the bank's UAE-specific website that provides a readily accessible source of prudential measures for users. The Pillar 3 report may be appended to form a discrete section of a bank's financial reporting, but the full report will be needed to be disclosed separately in the Pillar 3 tables as well.

II. Shari'ah Implementation

Banks offering Islamic financial services should comply with these disclosure requirements. These requirements are applicable to their activities that are in line with Islamic Shari'ah rules and principals, which are neither interest-based lending nor borrowing but are parallel to the activities described in these Guidance and Explanatory Notes

Further guidance on Pillar 3 disclosure requirements has been set out in the document, "Guidance for Capital Adequacy of Banks in the UAE".

Leverage Ratio

XIII. Leverage Ratio

I. Introduction and Scope

1. This Standard articulates specific requirements for the calculation of the leverage ratio capital requirement for banks in the UAE. It is based closely on requirements of the framework for capital adequacy developed by the Basel Committee on Banking Supervision, specifically as articulated in *Basel III: Finalising post-crisis reforms*, December 2017.
2. The Central Bank leverage ratio framework introduces a simple, transparent, non-risk based measure to act as a credible supplement to the risk-based capital requirements. The leverage ratio is intended to:
 - Restrict the build-up of leverage in the banking sector to avoid destabilizing deleveraging processes that can damage the broader financial system and the economy; and
 - Reinforce the risk-based requirements with a simple, non-risk based “backstop” measure.
3. The Central Bank is of the view that:
 - A simple leverage ratio framework is critical and complementary to the risk-based capital framework; and
 - A credible leverage ratio is one that ensures broad and adequate capture of both the on- and off-balance-sheet sources of banks’ leverage.
4. This Standards supports the Central Bank’s *Regulations Re Capital Adequacy* and shall be applied as set forth therein.

II. Definitions

In general, terms in this Standard have the meanings defined in other Regulations and Standards issued by the Central Bank. In addition, for this Standard, the following terms have the meanings defined in this section.

- a. A **central counterparty (CCP)** is an entity that interposes itself between counterparties to contracts traded within one or more financial markets, becoming the legal counterparty such that it is the buyer to every seller and the seller to every buyer.
- b. A **clearing member (CM)** is defined as a member of, or direct participant in, a CCP that is entitled to enter into transactions with the CCP.
- c. A **clearing member client** is defined as a party to a cleared transaction associated with a CCP in which a CM either acts as a financial intermediary with respect to the party or guarantees the performance of the party to the CCP.
- d. **Commitment** means any contractual arrangement that has been offered by the bank and accepted by the client to extend credit, purchase assets or issue credit substitutes. It includes any such arrangement that can be unconditionally cancelled by the bank at any time without prior notice to the obligor. It also includes any such arrangement that can be cancelled by the bank if the obligor fails to meet conditions set out in the facility document, including conditions that must be met by the obligor prior to any initial or subsequent drawdown arrangement.
- e. **General provisions or general loan loss reserves** are reserves held against future,

presently unidentified losses that are freely available to meet losses which subsequently materialize. Provisions ascribed to identify deterioration of particular assets or known liabilities, whether individual or grouped, should be excluded.

- f. A **multi-level client structure** is one in which banks can centrally clear as indirect clients; that is, when clearing services are provided to the bank by an institution which is not a direct CM, but is itself a client of a CM or another clearing client. The term “higher level client” refers to the institution that provides clearing services.
- g. A **netting set** is a group of contracts with a single counterparty subject to a legally enforceable agreement for net settlement, and satisfying all of the conditions for netting sets specified in this Standards.
- h. **Potential future exposure (PFE)** is an estimate of the potential increase in exposure to counterparty risk against which regulatory capital must be held.
- i. A **qualifying central counterparty (QCCP)** is a CCP that meets the conditions for QCCPs established by the Central Bank.
- j. **Regular-way purchases or sales** are purchases or sales of financial assets under contracts for which the terms require delivery of the assets within the time frame established generally by regulation or convention in the marketplace concerned.
- k. The **remaining maturity** of a derivative transaction is the time remaining until the latest date at which the contract may still be active. If a derivative contract has another derivative contract as its underlying (for example, a swaption) and may be physically exercised into the underlying contract (that is, a bank would assume a position in the underlying contract in the event of exercise), then the remaining maturity of the contract is the time until the final settlement date of the underlying derivative contract. For a derivative contract that is structured such that any outstanding exposure is settled on specified dates and the terms are reset so that the fair value of the contract is zero, the remaining maturity equals the time until the next reset date.
- l. **Securities financing transactions (SFTs)** are transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on market valuations and the transactions are often subject to margin agreements.
- m. **Variation margin (VM)** means margin in the form of cash or financial assets exchanged on a periodic basis between counterparties to recognize changes in contract value due to changes in market factors.
- n. A **walkaway clause** is a provision that permits a non-defaulting counterparty to make only limited payments or no payment at all, to the estate of a defaulter, even if the defaulter is a net creditor.

III. Requirements

A. Leverage Ratio

5. The Central Bank leverage ratio is defined as the capital measure (the numerator) divided by the exposure measure (the denominator), with this ratio expressed as a percentage:

$$\text{Leverage ratio} = \frac{\text{Capital measure}}{\text{Exposure measure}}$$

6. The capital measure for the leverage ratio is Tier 1 capital – comprising Common Equity Tier 1 and/or Additional Tier 1 instruments – as defined in the Central Bank’s Capital Supply Standards.

7. Both the capital measure and the exposure measure are to be calculated on a quarter-end basis. However, banks may, subject to Central Bank approval, use more frequent calculations (e.g. daily or monthly averaging) as long as they do so consistently.

8. Banks must at all times maintain a leverage ratio that equals or exceeds the minimum required leverage ratio as specified in UAE regulations.

B. Scope of Consolidation

9. The leverage ratio framework follows the same scope of regulatory consolidation, including consolidation criteria, as is used for the risk-based capital framework.

10. Treatment of investments in the capital of banking, financial, insurance and commercial entities that are outside the regulatory scope of consolidation: where a banking, financial, insurance or commercial entity is outside the scope of regulatory consolidation, only the investment in the capital of such entities (i.e. only the carrying value of the investment, as opposed to the underlying assets and other exposures of the investee) is to be included in the leverage ratio exposure measure. However, investments in the capital of such entities that are deducted from Tier 1 capital may be excluded from the leverage ratio exposure measure.

C. Exposure Measure

11. The leverage ratio exposure measure generally follows gross accounting values.

12. Unless specified differently below, banks must not take account of physical or financial collateral, guarantees or other credit risk mitigation techniques to reduce the leverage ratio exposure measure, nor may banks net assets and liabilities.

13. To ensure consistency, any item deducted from Tier 1 capital according to the Central Bank’s risk-based capital framework and regulatory adjustments other than those related to liabilities may be deducted from the leverage ratio exposure measure.

14. Liability items must not be deducted from the leverage ratio exposure measure.

15. With regard to traditional securitizations, an originating bank may exclude securitized exposures from its leverage ratio exposure measure if the securitization meets the operational requirements for the recognition of risk transference according to the Central Bank’s securitization framework. Banks meeting these conditions must include any retained securitization exposures in their leverage ratio exposure measure. In all other cases, the securitized exposures must be included in the leverage ratio exposure measure.

16. Where the Central Bank is concerned that transactions are not adequately captured in the leverage ratio exposure measure or may lead to a potentially destabilizing deleveraging process, it will carefully scrutinize these transactions and consider a range of actions to address such concerns. Central Bank actions may include requiring enhancements in banks’ management of leverage, imposing operational requirements (e.g. additional reporting to supervisors), requiring that the relevant exposure is adequately capitalized through a Pillar 2 capital charge, or any other measures deemed appropriate.

17. To facilitate the implementation of monetary policies, the Central Bank may

consider temporarily exempting certain central bank reserves (that is, bank balances or placements at the central bank) from the leverage ratio exposure measure in exceptional macroeconomic circumstances. In such an event, the Central Bank would also increase the calibration of the minimum leverage ratio requirement commensurately to offset the impact of exempting central bank reserves. In addition, banks would be required to disclose the impact of any temporary exemption alongside ongoing public disclosure of the leverage ratio without application of such exemption.

18. A bank's total leverage ratio exposure measure is the sum of the following exposures:

- On balance sheet exposures (excluding on-balance-sheet derivative and SFT exposures);
- derivative exposures;
- SFT exposures; and
- Off-balance sheet items.

The specific treatments for these four main exposure types are defined below.

1. On-balance-sheet exposures

19. Banks must include all balance sheet assets in their leverage ratio exposure measure, including on-balance-sheet derivatives collateral and collateral for SFTs, with the exception of on-balance-sheet derivative and SFT assets that are covered in subsections two and three below.

20. On-balance-sheet, non-derivative assets are included in the leverage ratio exposure measure at their accounting values less deductions for associated specific provisions. In addition, general provisions or general loan loss reserves, which have reduced Tier 1 capital, may be deducted from the leverage ratio exposure measure.

21. Regular-way purchases or sales of financial assets that have not been settled (hereafter "unsettled trades") can be accounted for either on the trade date (trade date accounting) or on the settlement date (settlement date accounting). For the purpose of the leverage ratio exposure measure, banks using trade date accounting must reverse out any offsetting between cash receivables for unsettled sales and cash payables for unsettled purchases of financial assets that may be recognized under the applicable accounting framework, but may offset between those cash receivables and cash payables (regardless of whether such offsetting is recognized under the applicable accounting framework) if the following conditions are met:

- the financial assets bought and sold that are associated with cash payables and receivables are fair valued through income and included in the bank's regulatory trading book; and
- the transactions of the financial assets are settled on a delivery-versus-payment basis.

Banks using settlement date accounting will be subject to the treatment set out in the off-balance sheet of this Standard.

22. Cash pooling refers to arrangements involving treasury products whereby a bank combines the credit and/or debit balances of several individual participating customer accounts into a single account balance to facilitate cash and/or liquidity management. For the purposes of the leverage ratio exposure measure, where a cash pooling

arrangement entails a transfer at least on a daily basis of the credit and/or debit balances of the individual participating customer accounts into a single account balance, the individual participating customer accounts are deemed to be extinguished and transformed into a single account balance upon the transfer, provided the bank is not liable for the balances on an individual basis upon the transfer. When the transfer of credit and/or debit balances of the individual participating customer accounts does not occur daily, for purposes of the leverage ratio exposure measure, extinguishment and transformation into a single account balance is deemed to occur and this single account balance may serve as the basis of the leverage ratio exposure measure provided all of the following conditions are met:

- in addition to providing for the several individual participating customer accounts, the cash pooling arrangement provides for a single account, into which the balances of all individual participating customer accounts can be transferred and thus extinguished;
- the bank (i) has a legally enforceable right to transfer the balances of the individual participating customer accounts into a single account so that the bank is not liable for the balances on an individual basis and (ii) at any point in time, the bank must have the discretion and be in a position to exercise this right;
- the Central Bank does not deem as inadequate the frequency by which the balances of individual participating customer accounts are transferred to a single account;
- there are no maturity mismatches among the balances of the individual participating customer accounts included in the cash pooling arrangement or all balances are either overnight or on demand; and
- the bank charges or pays interest and/or fees based on the combined balance of the individual participating customer accounts included in the cash pooling arrangement.

In the event the abovementioned conditions are not met, the individual balances of the participating customer accounts must be reflected separately in the leverage ratio exposure measure.

2. Derivative exposures

23. In general, for the purpose of the leverage ratio exposure measure, exposures for derivatives are calculated in accordance with the Central Bank's Standard for Counterparty Credit Risk Capital through the two components of replacement cost (RC) and PFE, as follows:

$$\text{Exposure measure} = (\text{RC} + \text{PFE}) \times 1.4$$

Where, RC is Replacement Cost, and PFE is Potential Future Exposure.

24. Where a valid bilateral netting contract is in place, the exposure measure is calculated at the netting set level. However, contracts containing walkaway clauses are not eligible for netting for the purpose of calculating the leverage ratio exposure measure pursuant to this Standards.

25. The PFE for derivative exposures must be calculated in accordance with the Central Bank's *Standard for Counterparty Credit Risk Capital*. Mathematically:

$$\text{PFE} = (\text{PFE multiplier}) \times (\text{AddOn}_{\text{agg}})$$

where PFE multiplier is as specified in the Standards, and

AddOn_{agg} is the aggregate Add On for derivatives exposure as specified in the Standards.

However, for the purposes of this Standards, the PFE multiplier from the Standards is fixed at a value of one. Therefore, for the purposes of calculating derivatives exposure for the leverage ratio, PFE is simply equal to the aggregate Add On.

26. Derivative transactions in which a bank sells protection using a written credit derivative are included in this exposure measure as derivatives, but may also create an additional credit exposure that is included as exposure for purposes of the leverage ratio, as set out below in this Standards.

27. As a general principle of the leverage ratio framework, collateral received may not be netted against derivative exposures. Hence, when calculating the exposure amount as set forth above, a bank must not reduce the leverage ratio exposure measure amount by any collateral received from the counterparty. However, the maturity factor in the PFE add-on calculation can recognize the PFE-reducing effect from the regular exchange of VM.

28. Similarly, with regard to collateral provided, banks must gross up their leverage ratio exposure measure by the amount of any derivatives collateral provided where the provision of that collateral has reduced the value of their balance sheet assets under their operative accounting framework.

29. For purposes of this standards, RC of a transaction or netting set is measured as follows:

$$RC = \max(V - CVMr, +CVMp, 0)$$

where:

V is the market value of the individual derivative transaction or of the derivative transactions in a netting set;

CVMr is the cash VM received that meets the conditions set out below and for which the amount has not already reduced the market value of the derivative transaction V under the bank's operative accounting standards; and

CVMp is the cash VM provided by the bank and that meets the same conditions.

2.a. Cash Variation Margin

30. In the treatment of derivative exposures for the purpose of the leverage ratio exposure measure, the cash portion of VM exchanged between counterparties may be viewed as a form of pre-settlement payment if the following conditions are met:

- For trades not cleared through a QCCP, the cash received by the recipient counterparty is not segregated. Cash VM would satisfy the non-segregation criterion if the recipient counterparty has no restrictions by law, regulation, or any agreement with the counterparty on the ability to use the cash received (i.e. the cash VM received is used as its own cash).
- VM is calculated and exchanged on at least a daily basis based on mark-to-market valuation of derivative positions. To meet this criterion, derivative positions must be valued daily and cash VM must be transferred at least daily to the counterparty or to the counterparty's account, as appropriate. Cash VM exchanged on the morning of the subsequent trading day based on the previous, end-of-day market values would meet this criterion.
- The VM is received in a currency specified in the derivative contract, governing master netting agreement (MNA), credit support annex to the qualifying MNA, or as defined by any netting agreement with a CCP.

- VM exchanged is the full amount that would be necessary to extinguish the mark-to-market exposure of the derivative subject to the threshold and minimum transfer amounts applicable to the counterparty.
- Derivative transactions and VM are covered by a single MNA between the legal entities that are the counterparties in the derivative transaction. The MNA must explicitly stipulate that the counterparties agree to settle net any payment obligations covered by such a netting agreement, taking into account any VM received or provided if a credit event occurs involving either counterparty. The MNA must be legally enforceable and effective in all relevant jurisdictions, including in the event of default and bankruptcy or insolvency. For the purposes of this paragraph, the term “MNA” includes any netting agreement that provides legally enforceable rights of offset and a Master MNA may be deemed to be a single MNA.

31. If the conditions in the paragraph above are met, the cash portion of VM received may be used to reduce the RC portion of the leverage ratio exposure measure, and the receivables assets from cash VM provided may be deducted from the leverage ratio exposure measure as follows:

- In the case of cash VM received, the receiving bank may reduce the RC (but not the PFE component) of the exposure amount of the derivative asset.
- In the case of cash VM provided to a counterparty, the posting bank may deduct the resulting receivable from its leverage ratio exposure measure where the cash VM has been recognized as an asset under the bank’s operative accounting framework, and instead include the cash VM provided in the calculation of the derivative RC.

2.b. Clearing-Related Exposures

32. Where a bank acting as CM offers clearing services to clients, the CM’s trade exposures to the CCP that arise when the CM is obligated to reimburse the client for any losses suffered due to changes in the value of its transactions in the event that the CCP defaults must be captured by applying the same treatment that applies to any other type of derivative transaction. However, if the CM, based on the contractual arrangements with the client, is not obligated to reimburse the client for any losses suffered in the event that a QCCP defaults, the CM need not recognize the resulting trade exposures to the QCCP in the leverage ratio exposure measure. In addition, where a bank provides clearing services as a “higher level client” within a multi-level client structure, the bank need not recognize in its leverage ratio exposure measure the resulting trade exposures to the CM or to an entity that serves as a higher level client to the bank in the leverage ratio exposure measure if it meets all of the following conditions:

- The offsetting transactions are identified by the QCCP as higher level client transactions and collateral to support them is held by the QCCP and/or the CM, as applicable, under arrangements that prevent any losses to the higher level client due to: (i) the default or insolvency of the CM, (ii) the default or insolvency of the CM’s other clients, and (iii) the joint default or insolvency of the CM and any of its other clients;
- The bank must have conducted a sufficient legal review (and undertake such further review as necessary to ensure continuing enforceability) and have a well-founded basis to conclude that, in the event of legal challenge, the relevant courts and administrative authorities would find that such arrangements mentioned above would be legal, valid, binding and enforceable under relevant laws of the relevant jurisdiction(s);
- Relevant laws, regulation, rules, contractual or administrative arrangements provide

that the offsetting transactions with the defaulted or insolvent CM are highly likely to continue to be indirectly transacted through the QCCP, or by the QCCP, if the CM defaults or becomes insolvent. In such circumstances, the higher level client positions and collateral with the QCCP will be transferred at market value unless the higher level client requests to close out the position at market value; and

- The bank is not obligated to reimburse its client for any losses suffered in the event of default of either the CM or the QCCP.

33. Where a client enters directly into a derivative transaction with the CCP and the CM guarantees the performance of its client's derivative trade exposures to the CCP, the bank acting as the CM for the client to the CCP must calculate its related leverage ratio exposure resulting from the guarantee as a derivative exposure as if it had entered directly into the transaction with the client, including with regard to the receipt or provision of cash VM.

34. For the above treatment of clearing services, an entity affiliated to the bank acting as a CM may be considered a client if it is outside the relevant scope of regulatory consolidation at the level at which the leverage ratio is applied. In contrast, if an affiliate entity falls within the regulatory scope of consolidation, the trade between the affiliate entity and the CM is eliminated in the course of consolidation but the CM still has a trade exposure to the CCP. In this case, the transaction with the CCP will be considered proprietary and must be included in the leverage ratio exposure measure.

2.c. Written Credit Derivatives

35. In addition to the CCR exposure arising from the fair value of the contracts, written credit derivatives create a notional credit exposure arising from the creditworthiness of the reference entity. Therefore, written credit derivatives must be treated consistently with cash instruments (e.g. loans, bonds) for the purposes of the leverage ratio exposure measure.

36. The effective notional amount referenced by a written credit derivative is to be included in the leverage ratio exposure measure unless the written credit derivative is included in a transaction cleared on behalf of a client of the bank acting as a CM (or acting as a clearing services provider in a multi-level client structure) and the transaction meets the requirements for the exclusion of trade exposures to the QCCP (or, in the case of a multi-level client structure, the requirements for the exclusion of trade exposures to the CM or the QCCP). The "effective notional amount" is obtained by adjusting the notional amount to reflect the true exposure of contracts that are leveraged or otherwise enhanced by the structure of the transaction. Further, the effective notional amount of a written credit derivative may be reduced by any negative change in fair value amount that has been incorporated into the calculation of Tier 1 capital with respect to the written credit derivative.

The resulting amount may be further reduced by the effective notional amount of a purchased credit derivative on the same reference name, provided that:

- the credit protection purchased through credit derivatives is otherwise subject to the same or more conservative material terms as those in the corresponding written credit derivative. Material terms include the level of subordination, optionality, credit events, reference and any other characteristics relevant to the valuation of the derivative;
- the remaining maturity of the credit protection purchased through credit derivatives is equal to or greater than the remaining maturity of the written credit derivative;
- the credit protection purchased through credit derivatives is not purchased from a counterparty whose credit quality is highly correlated with the value of the reference obligation;

- in the event that the effective notional amount of a written credit derivative is reduced by any negative change in fair value reflected in the bank's Tier 1 capital, the effective notional amount of the offsetting credit protection purchased through credit derivatives must also be reduced by any resulting positive change in fair value reflected in Tier 1 capital; and
- the credit protection purchased through credit derivatives is not included in a transaction that has been cleared on behalf of a client (or that has been cleared by the bank in its role as a clearing services provider in a multi-level client services structure) and for which the effective notional amount referenced by the corresponding written credit derivative is excluded from the leverage ratio exposure measure according to this paragraph.

37. For the purposes of the leverage ratio, the term "written credit derivative" refers to a broad range of credit derivatives through which a bank effectively provides credit protection and is not limited solely to credit default swaps and total return swaps. When written options create a similar potential credit exposure to an underlying entity, that credit exposure also must be included in the leverage ratio exposure.

38. For the purposes of the leverage ratio, two reference names are considered to be the same only if they refer to the same legal entity.

39. Credit protection on a pool of reference names purchased through credit derivatives may offset credit protection sold on individual reference names if the credit protection purchased is economically equivalent to purchasing credit protection separately on each of the individual names in the pool. If a bank purchases credit protection on a pool of reference names through credit derivatives, but the credit protection purchased does not cover the entire pool (i.e. the protection covers only a subset of the pool, as in the case of an nth-to-default credit derivative or a securitization tranche), then the written credit derivatives on the individual reference names may not be offset. However, such purchased credit protection may offset written credit derivatives on a pool provided that the credit protection purchased through credit derivatives covers the entirety of the subset of the pool on which the credit protection has been sold.

40. Where a bank purchases credit protection through a total return swap and records the net payments received as net income, but does not record offsetting deterioration in the value of the written credit derivative (either through reductions in fair value or by an addition to reserves) in Tier 1 capital, the credit protection will not be recognized for the purpose of offsetting the effective notional amounts related to written credit derivatives.

41. Banks may choose to exclude from the netting set for the PFE calculation the portion of a written credit derivative which is not offset and for which the effective notional amount is included in the leverage ratio exposure measure.

3. Securities financing transaction exposures

42. SFTs are included in the leverage ratio exposure measure according to the treatment described below.

3.a. General Treatment (Bank Acting as Principal)

43. For a bank acting as principal to an SFT, two components of exposure must be calculated, summed, and included in the leverage ratio exposure measure: adjusted gross SFT assets as described in the following paragraph, and a measure of CCR, as described below.

44. Gross SFT assets as recognized for accounting purposes (i.e. with no recognition of accounting netting) should be reduced by the value of any securities received under an

SFT where the bank has recognized the securities as an asset on its balance sheet. In addition, cash payables and cash receivables in SFTs with the same counterparty may be measured net if all the following criteria are met:

- The transactions have the same explicit final settlement date (transactions with no explicit end date but that can be unwound at any time by either party to the transaction are not eligible);
- The right to set off the amount owed to the counterparty with the amount owed by the counterparty is legally enforceable both currently in the normal course of business and in the event of the counterparty's default, insolvency, or bankruptcy; and
- The counterparties intend to settle net, settle simultaneously, or the transactions are subject to a settlement mechanism that results in the functional equivalent of net settlement – that is, the cash flows of the transactions are equivalent, in effect, to a single net amount on the settlement date. To achieve such equivalence, both transactions must be settled through the same settlement system and the settlement arrangements must be supported by cash and/or intraday credit facilities intended to ensure that settlement of both transactions will occur by the end of the business day and that any issues arising from the securities legs of the SFTs do not interfere with the completion of the net settlement of the cash receivables and payables. If there is a failure of the securities leg of a transaction in such a mechanism at the end of the window for settlement in the settlement mechanism, then this transaction and its matching cash leg must be split out from the netting set and treated gross.

45. A bank must add a measure of CCR for SFTs to the adjusted gross SFT assets as calculated per the previous paragraph. The CCR measure is calculated as current exposure without an add-on for PFE, with current exposure calculated as follows:

- Where a qualifying MNA is in place, the current exposure (E^*) is the greater of zero and the total fair value of securities and cash lent to a counterparty for all transactions included in the qualifying MNA ($\sum E_i$), less the total fair value of cash and securities received from the counterparty for those transactions ($\sum C_i$). This is illustrated in the following formula:

$$E^* = \max \{0, [\sum E_i - \sum C_i]\}$$

Where, E^* = current exposure,

$\sum E_i$ = total fair value of securities and cash lent to counterparty "i" and

$\sum C_i$ = total fair value of securities and cash received from "i"

- Where no qualifying MNA is in place, the current exposure for transactions with a counterparty must be calculated on a transaction-by-transaction basis – that is, each transaction is treated as its own netting set, as shown in the following formula:

$$E^* = \max \{0, [E - C]\}$$

where E^* = current exposure,

E = total fair value of securities and cash lent in the transaction, and C = total fair value of securities and cash received in the transaction.

E^* may be set to zero if E is the cash lent to a counterparty, the transaction is treated as its own netting set, and the associated cash receivable is not eligible for the

netting treatment in paragraph 44. For the purposes of this subparagraph, the term “counterparty” includes not only the counterparty of the bilateral repo transactions but also triparty repo agents that receive collateral in deposit and manage the collateral in the case of triparty repo transactions. Therefore, securities deposited at triparty repo agents are included in “total value of securities and cash lent to a counterparty”

(E) up to the amount effectively lent to the counterparty in a repo transaction. However, excess collateral that has been deposited at triparty agents but that has not been lent out may be excluded.

3.b. Sale Accounting Transactions

46. Where sale accounting is achieved for an SFT under the bank’s operative accounting framework, the bank must reverse all sales-related accounting entries, and then calculate its exposure as if the SFT had been treated as a financing transaction under the operative accounting framework (i.e. the bank must include the sum of amounts in paragraphs 44 and 4544 for such an SFT) for the purpose of determining its leverage ratio exposure measure.

3.c. Bank Acting as Agent

47. If a bank acting as agent in an SFT provides an indemnity or guarantee to only one of the two parties involved, and only for the difference between the value of the security or cash its customer has lent and the value of collateral the borrower has provided, the bank is exposed to the counterparty of its customer for the difference in values rather than to the full exposure to the underlying security or cash of the transaction.

48. Where a bank acting as agent in an SFT provides an indemnity or guarantee to a customer or counterparty for any difference between the value of the security or cash the customer has lent and the value of collateral the borrower has provided and the bank does not own or control the underlying cash or security resource, then the bank will be required to include a measure of CCR in its leverage ratio exposure measure by applying paragraph 45.

49. A bank acting as agent in an SFT and providing an indemnity or guarantee to a customer or counterparty will be considered eligible for the exceptional treatment set out in the paragraph above only if the bank’s exposure to the transaction is limited to the guaranteed difference between the value of the security or cash its customer has lent and the value of the collateral the borrower has provided. In situations where the bank is further economically exposed (i.e. beyond the guarantee for the difference) to the underlying security or cash in the transaction, a further exposure equal to the full amount of the security or cash must be included in the leverage ratio exposure measure.

50. Where a bank acting as agent provides an indemnity or guarantee to both parties involved in an SFT (i.e. securities lender and securities borrower), the bank will be required to calculate its leverage ratio exposure measure separately for each party involved in the transaction.

3.d. Netting for SFTs

51. The effects of bilateral netting agreements for covering SFTs will be recognized on a counterparty-by-counterparty basis if the agreements are legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of whether the counterparty is insolvent or bankrupt. In addition, netting agreements must:

- provide the non-defaulting party with the right to terminate and close out in a timely manner all transactions under the agreement upon an event of default, including in the event of insolvency or bankruptcy of the counterparty;

- provide for the netting of gains and losses on transactions (including the value of any collateral) terminated and closed out under it so that a single net amount is owed by one party to the other;
- allow for the prompt liquidation or setoff of collateral upon the event of default; and
- be legally enforceable in each relevant jurisdiction upon the occurrence of an event of default regardless of the counterparty's insolvency or bankruptcy.

52. Netting across positions held in the banking book and trading book will only be recognized when all netted transactions are marked to market daily, and the collateral instruments used in the transactions are recognized as eligible financial collateral in the banking book.

4. Off-balance-sheet items

53. Off-balance sheet items include commitments (including liquidity facilities), whether or not unconditionally cancellable, direct credit substitutes, acceptances, standby letters of credit and trade letters of credit. If the off-balance sheet item is treated as a derivative exposure per the bank's relevant accounting standards, then the item must be measured as a derivative exposure for the purpose of the leverage ratio exposure measure.

54. For the purposes of the leverage ratio, off-balance sheet items will be converted into credit exposures by multiplying the committed but undrawn amount by a credit conversion factor (CCF).

55. A 100% CCF will be applied to the following items:

- direct credit substitutes;
- forward asset purchases, forward deposits and partly paid shares and securities, which represent commitments with certain drawdown;
- the exposure amount associated with unsettled financial asset purchases (i.e. the commitment to pay) where regular-way unsettled trades are accounted for at settlement date. Banks may offset commitments to pay for unsettled purchases and cash to be received for unsettled sales provided that the following conditions are met:
 - (i) the financial assets bought and sold that are associated with cash payables and receivables are fair valued through income and included in the bank's regulatory trading book; and (ii) the transactions of the financial assets are settled on a delivery-versus-payment basis; and
- Off-balance sheet items that are credit substitutes not explicitly included in any other category.

56. A 50% CCF will be applied to note issuance facilities and revolving underwriting facilities regardless of the maturity of the underlying facility.

57. A 50% CCF will be applied to certain transaction-related contingent items (e.g. performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions).

58. A 40% CCF will be applied to commitments, regardless of the maturity of the underlying facility, unless they qualify for a lower CCF.

59. A 20% CCF will be applied to both the issuing and confirming banks of short-term (i.e. with a maturity below one year), self-liquidating trade letters of credit arising

from the movement of goods.

60. A 10% CCF will be applied to commitments that are unconditionally cancellable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness. As appropriate, the Central Bank may apply a higher CCF to certain commitments provided that constraints on a bank's ability to cancel such commitments are observed.

61. Where there is an undertaking to provide a commitment on an off-balance-sheet item, banks are to apply the lower of the two applicable CCFs.

62. Off-balance sheet securitization exposures must be treated in accordance with the Central Bank's requirements on securitizations as stated in applicable regulations and standards.

63. In addition, specific and general provisions set aside against off-balance sheet exposures that have decreased Tier 1 capital may be deducted from the credit exposure equivalent amount of those exposures (i.e. the exposure amount after the application of the relevant CCF). However, the resulting total off-balance-sheet equivalent amount for off-balance sheet exposures cannot be less than zero.

IV. Review and Audit Requirements

64. Bank calculations under this Standard and associated bank processes must be subject to appropriate levels of independent review and challenge. Reviews must cover material aspects of the calculations under this Standards, including but not limited to the computation of Tier 1 capital, the measurement of on-balance-sheet, derivative, SFT, and off-balance-sheet exposures, any netting, deductions, or offsets applied in the process, and the accuracy for all components of the leverage calculation reported to the Central Bank as part of regulatory reporting.

65. Banks must meet the minimum leverage ratio requirement at all times. For the purpose of disclosure requirements, banks must calculate the leverage ratio on a quarter-end basis to prevent potential regulatory arbitrage by banks and temporary reductions of transaction volumes in key financial markets around reference dates with the aim of reporting and publicly disclosing elevated leverage ratios. Such leverage ratios are misleading, suggesting that a bank's reliance on debt to fund its activities is deceptively less than the actual amounts between the reference dates. This misleads stakeholders about its true resilience, and risks disrupting the operations of financial markets.

Accordingly, in evaluating its leverage ratio exposure, a bank should assess the volatility of transaction volumes throughout reporting periods, and the effect on its leverage ratio requirements. Banks should also desist from undertaking transactions with the sole purpose of reporting and disclosing higher leverage ratios at reporting days only.

V. Shari'ah Implementation

66. Banks offering Islamic financial services engaging in Shari'ah compliant leverage practices as approved by their internal Shari'ah control committees should calculate the leverage ratio capital in accordance with provisions set out in these standards & guidance and in the manner acceptable by Shari'ah. This is applicable until relevant standards and/or guidance in respect of these transactions are issued specifically for banks offering Islamic financial services

VI. List of Abbreviations

ABCP:	Asset-Backed Commercial Paper
AED:	Arab Emirates Dirham
AIIB:	Asian Infrastructure Investment Bank (AIIB)
ASA:	Alternative Standardised Approach
Avg RW_{fund} :	Average Risk Weight for an investment fund
BCBS:	Basel Committee on Banking Supervision
BIA:	Basic Indicator Approach
CBR:	Combined Buffer Requirement
CCF	Credit Conversion Factor
CCP	Central Counterparty
CCR:	Counterparty Credit Risk
CDO	Collateralized Debt Obligation
CDS	Credit Default Swap
CM	Clearing Member
CPMI	Committee on Payments and Market Infrastructures
CRM:	Credit Risk Mitigation
CVA:	Credit Valuation Adjustment
DvP:	Delivery-Versus-Payment
EAD:	Exposure at Default
ECAI:	External Credit Assessment Institution
EIF:	European Investment Fund
ESFS:	European Financial Stability Facility
ESM:	European Stability Mechanism
FBA:	Fall-back Approach
FRA:	Forward Rate Agreements
GRE:	Government related Entities
IBRD:	International Bank for Reconstruction and Development
ICA	Independent Collateral Amount
IDA:	International Development Association
IFC:	International Finance Corporation
IFFIm:	International Finance Facility for Immunization
IFRS:	International Financial Reporting Standards
IOSCO	International Organization of Securities Commissions
LTA:	Look-Through Approach
LTV:	Loan to Value Ratio
MBA:	Mandate-Based Approach
MDBs:	Multilateral Development Banks
MF	Maturity Factor
MIGA:	Multilateral Investment Guarantee Agency
MNA	Master Netting Agreement
MPOR	Margin Period of Risk
NCV	Net Current Value
NIB:	Nordic Investment Bank
NICA	Net Independent Collateral Amount
OTC:	Over the Counter
PFE:	Potential Future Exposure
PSEs:	Public Sector Entities
PvP:	Payment-Versus-Payment
QCCP	Qualifying Central Counterparty
RC	Replacement Cost
RWA:	Risk Weighted Assets
SA:	Standardised Approach
SA-CCR:	Standardized Approach - Counterparty Credit Risk

SD	Supervisory Duration
SDR:	Special Drawing Rights
SEC-ERBA:	Securitisation External Ratings Based Approach
SEC-SA:	Securitisation Standardized Approach
SFT	Securities Financing Transaction
SME:	Small- and Medium-sized Entities
SNE	Single-Name Exposure
SPE:	Special Purpose Entity
STC:	Simple, Transparent, and Comparable
UAE:	United Arab Emirates
UCITS:	Undertakings for Collective Investments in Transferable Securities
VM	Variation Margin
VU:	Variation of the Underlying of an option