

Basel II.5
TABLE OF CONTENTS

| <u>A. Pillar 1</u> | <u>Page</u> |
|---|--------------------|
| 1. Background and Approach to Implementation of Basel II.5 | 3 |
| 2. General Guidelines for Credit Risk and Market Risk | 7 |
| 3. Specific Guidelines for Adjustment to Credit Risk Under Basel II.5 | 8 |
| 4. General and Specific Guidelines for Adjustment to Market Risk (under Basel II.5) | 17 |
| • Standardized Approach | |
| - Specific Guidelines for Market Risk Adjustment – Standardized Approach | |
| 5. Package Prudential Returns Q17 (Basel II.5) | 29 |
| 5.1 Standardized Approach – 17 (Basel II.5) Series A to D-1 | |
| 5.2 IRB Approach – 17 (Basel II.5) Series E to H-1 | |
| <u>B. Pillar 2</u> | |
| 6. Basel II.5 Amendments to SAMA Basel II Methodology for Pillar 2 Requirements and Internal Capital Adequacy Assessment Plans (ICAAPs) | 42 |
| <u>C. Pillar 3</u> | |
| 7. Enhancements under Basel II.5 with regard to Pillar 3 | 44 |
| Annex - 1 | |
| • Relevant Sections of BCBS Document of June 2006 with regard to Securitization which provide the Definitions and Clarifications Relevant to Basel II.5 Guidance Document | 48 |
| Annex – 2 | |
| • Market Risk Standardized Approach – BCBS Document of June 2006 Entitled "International Convergence of Capital Measurement and Capital Standards" | 67 |
| Annex – 3 | |
| • Details on ABCP (Asset Based Commercial Paper) program in the context of resecuritization exposures. (Credit Risk) | 106 |

Pillar 1
Basle II.5
SAMA's Guidance Document Concerning
Implementation

Guidelines and Prudential Returns
Credit Risk and Market Risk

Saudi Arabian Monetary Agency
Banking Supervision Department
October 2012

1. Background and Approach to Implementation of Basel II.5

A. Background

The recent financial crises which started in 2007 closely affected the resiliency of International banking system where it became evident that the BCBS Basel II Framework as a whole was inadequate with regard to its Risk Coverage specifically concerning complex securitization and resecuritization activities. Consequently, Basel II.5 was issued only on an interim basis and is focused on only additional risks concerning banks securitization and resecuritization activities with regard to credit risk and market risk. While Basel III addressed the inadequacies of the Basel II Framework at a more comprehensive level i.e. by including both reforms to i) Regulatory Capital ii) Additional Risks.

Accordingly, this package concerning Basel II.5 contains two main components as given below comprising of i) Guidance Material ii) Prudential returns.

1. Credit Risk based on BCBS document "Enhancements to the Basel II Framework of July 2009" for both the Standardized and Internal Rating Based (IRB) Approaches. (Document A)
2. Market Risk based on BCBS document entitled "Revisions to the Basel II Market Risk Framework" of December 2010. (Document B)

B. SAMA's Approach to Implement Basel II.5

SAMA will adjust and amend its Basel II regulatory Prudential Returns concerning regulatory capital (Q17.3) and Risk Weighted Assets (Q17.2) with the Basel II.5 refinements concerning Banks' securitization and resecuritization activities.

1. Credit Risk (Banking Book)

SAMA in its Basel II Framework assigned a simple 100% risk weight for bank investments in securitization and resecuritization assets due to the limited activities of Saudi banks in these products. This was done under its regulatory discretion, notwithstanding BCBS Basel II Framework calling for a granular Risk Weighting structure.

In specific, the BCBS document entitled "Enhancement to the Basel II Framework of July 2009" added further refinements and enhancements by introducing additional granularity and a risk weighting structure for resecuritized assets, and further refinements to off-balance sheet activities concerning liquidity facilities, market disruption lines, etc.

2. Market Risk (Trading Book)

The 1996 BCBS Market Risk Framework was implemented by SAMA in December 2004 and it was adopted for its Basel II purposes in January 2008. This is because the BCBS framework of Basel II (June 2004 and 2006 versions) was almost identical at the

Standardized Level to the 1996 document and Saudi banks carried a limited Trading book (at less than 10% of total book. The BCBS document "Revision to the Basel II Market Risk Framework" of December 2010 introduced other changes to the Market Risk framework with regard to Standardized and IRB Approaches including Internal Models.

SAMA has implemented Basel II.5 Market Risk at the Standardized and IRB level (where SAMA's IRB regulatory approval is given). ~~However, Basel II.5, Internal model enhancement have been postponed until the resolution of the significant issues raised recently by the BCBS document of May 2010 entitled "Fundamental Review of Trading Book".~~

Basel II.5 Operational risk is the same as in Basel II, as there no changes under Basel II.5.

The attached Basel II.5 Guidance document and Prudential returns are made on the following basis:

- **Regulatory Capital (Basel II.5)**
Basel II regulatory capital (Tier-1 and Tier-2) is adjusted for Basel II.5 (Tier-1 and Tier-2) changes.
- **Risk Weighted Asset (Basel II.5)**
Basel II regulatory RW assets concerning Credit and Market risks are amended for Basel II.5 changes.

Regulatory Capital and Regulatory Pillar 1 Risk Weighted Assets

Regulatory Capital

- The Basel II.5 amendment to Basel II regulatory capital is going to be from the following (4) sources related to securitization and resecuritization activities.

Credit Risk Amendment to

1. Standardized Approach
2. IRB Approaches

Market Risk Amendment (Specific Risk) – Standardized Approach

3. Standardized method to calculate specific risk
4. IRB method to calculate specific risk.

Basel II.5 adjustment to Basel II regulatory capital are on the following basis:

- 50% from Tier 1
- 50% from Tier 2

The source of the above adjustment are from the following:

1. High risk (low ratings) securitization in the Banking book

Specific risk

2. High risk (Low ratings) securitization in the Trading book emanating from specific risk.

Regulatory P1 Risk Weighted Assets

- Major Basel II.5 refinements relates to the credit risk and market risk component of securitized and resecuritized assets.
- Credit risk component is derived from the BCBS document "Enhancement to the Basel II Framework of July 2009.
- Market risk (specific and general market risk) is derived from BCBS document "Revise to the Basel II Market Risk Framework" of December 2010.
- With regard to Credit Risk, the major refinements are to enhanced RWA due to increased Risk Weighted Assets for securitized and resecuritized assets.
- These enhanced RWA are applicable for Standardized approach and IRB approaches. Each approach having a different set of risk weights (**para 3.2 of this document on page 10 for Standardized approach, and para 3.3 of this document on page 11 for IRB approaches.**)
- Similarly for Basel II.5 Market Risk component, the adjustments are for specific risk only. General market risk remains the same for Basel II.5 as under Basel II.
- ~~RWA for Market Risk on the basis of models has been postponed due to significant issues described in the BCBS document of May 2012 entitled "Fundamental Review of the Trading Book"~~
- In this respect, it is important to note that the Credit Risk amendments relates to securitized and resecuritized positions including sukuks¹ in banking book which under Basel II SAMA had given a RW of 100% unless externally rated or qualified as GCC Sovereign risk in which case applicable Risk Weights as per SAMA Guidelines are used. These are to be modified with Basel II.5 amendment comprising of a more granular risk weight structures concerning securitized and resecuritized assets.

Market Risk amendment relates to securitized and resecuritized position including sukuks in the Trading Book.

Attachment 1 and 2 relate to the relevant sections concerning Credit Risk and Market risk regarding Securitized Assets respectively as described in BCBS Basel II document of June 2006. The purpose is to add further clarifications to the Basel II.5 Guidance document and prudential returns.

¹Obtain SAMA approval if a given investment is in a Sukuk products that qualifies as a securitized instruments under the Basel Credit Risk Securitization Framework.

Basel II.5

- **Credit Risk**
 - **Standardized Approach**
 - **IRB Approaches**

2. General Guidelines for Credit Risk and Market Risk

- The Basle II.5 is to be reported through Prudential Returns package as attached. (pages 27)
- Q17 – Basel II.5 – Subsection "A" to "D-1"- Standardized Approach
- Q17 – Basel II.5 – Subsection "E" to "H-1" – IRB Approach
- There are specific implementation guidelines for the aforementioned Prudential returns included in this package.
- Annex – 1 entitled "Relevant Sections of BCBS Document of June 2006 with regard to Securitization" provides the Definitions and Clarifications Relevant to Basle II.5". It is identical to the section entitled "Credit Risk – Securitization Framework "(P.27 to P.39)" of the BCBS document entitled "International Convergence of Capital Measurement and Capital Standards – Revised framework comprehensive version of June 2006 where relevant.
- Annex – 2: Market Risk Standardized Approach – BCBS document entitled "International Convergence of Capital Measurement and Capital Standards".
- The Q17 series (Basel II) are adjusted with Basel II.5 adjustments with regard to credit and market risks as per the respective BCBS Basel II.5 documents as given below.
 - "Enhancement to the Basle II Framework" of July 2009 – Basle II.5 "A"
 - Revision to the Basel II Market risk framework of December 2010. "B"
- These Prudential returns concerning Basle II.5 are cross referenced to SAMA's current Basle II Prudential Returns Q17 series.
- These Prudential returns are Quarterly returns and are due in SAMA one month following each quarter end to be sent as a part of the Q17 series.
- These Prudential returns are effective from January 1, 2013. Consequently, the first return is due 30 April 2013 for data as of 31 March 2013.
- Going forward, these SAMA Guidance notes and Prudential returns will supplement the existing Basle II Prudential returns and the two together will represent the full SAMA regulatory return package for Basle II and II.5.

3. Specific Guidelines for Adjustments to Credit Risk under Basel II.5

Source: BCBS Document "Enhancement to Basel II Framework of July 2009" (Document A)

The following is a summary of changes and additions in Basle II.5 concerning Credit risk (Pillar 1) under Standardized and IRB Approach.

- Standardized Approach and IRB Approach enhanced Risk Weights for securitization and resecuritization exposure and adjustments to regulatory capital are given on P.10 (standardized) and P.11 for (IRB).
- Use of Ratings Subject to Self-guarantee – Banks will not be permitted to use ratings for exposures subject to self-guarantees so that a bank cannot recognize ratings – either in the Standardized Approach (SA) or in the IRB Approach – that are based on guarantees or similar support provided by the bank itself. (Not the case in Basle II). Refer to P.11. (Para 34 of this document)
- Operational Requirements for Credit Analysis – Banks will be required to meet specific operational criteria in order to use the risk weights specified in the Basel II securitization framework **under para 565¹ of Annex – 1 and as described on P.12² para 3.6 of this document**. These criteria are intended to ensure that banks perform their own due diligence and do not simply rely on rating agency credit ratings. Failure to meet these criteria for a given securitization exposure would result in its deduction.
- Liquidity Facilities (LFs) in the Standardized Approach – The credit conversion factor (CCF) for all eligible liquidity facilities (LFs) in the SA securitization framework will be made uniform at 50%, regardless of the maturity of the LF. Currently, eligible LFs under one year receive a 20% CCF in the SA.
- Liquidity facilities in the IRB Approach revised language clarify when LFs maybe treated as senior securitized exposures.
- General Market Disruption LFs in the Standardized & IRB Approaches – Favorable capital treatment afforded general market disruption LFs under the Standardized Approach and under the Supervisory Formula Approach (SFA) in the IRB Approach is eliminated. – **refer to page P.15** of the document.

¹Cross referenced to Annex-1 of this document.

3.1 Definition

- Securitization Exposures
- Resecuritization exposures

Definition of Securitized Exposures

- Securitized exposures are defined in **(Para 538 to 544, 552 for SPE's and paragraphs 553 to 559 of Annex – 1.)**

For further details regarding Asset Based Commercial Program (ABCP program) in the context of resecuritization, refer to Annex 3.

Definition of Resecuritized Assets

The following elements need to be satisfied for resecuritization exposures:

- A resecuritization exposure is a securitization exposure in which the risk associated with an underlying pool of exposures is tranced and at least one of the underlying exposures is a securitization exposure.
- An exposure to one or more resecuritization exposures is a resecuritization exposure.
- Furthermore, when an instrument's performance is linked to one or more resecuritization exposures, generally that instrument is a resecuritization exposure. Thus, a credit derivative providing credit protection for a Collateralized Debt Obligation (CDO) tranche is a resecuritization exposure (akin to synthetic securitization).

The definition of a resecuritization exposure captures collateralized debt obligations (CDOs) of asset-backed securities (ABS) including, for example, a CDO backed by residential mortgage-backed securities (RMBS). Moreover, it also captures a securitization exposure where the pool contains many individual mortgage loans and a single RMBS. In other words, even if only one of the underlying exposures is a securitization exposure, any tranced position (eg senior/subordinated ABS) exposed to that pool is considered a resecuritization exposure.

Definition of Senior Resecuritization Exposures

Senior resecuritization exposures are defined as resecuritization exposure satisfying the following two conditions: (a) the exposure is a senior position, and (b) none of the underlying exposures are themselves resecuritization exposures. This would preclude the situation whereby a bank took a mezzanine resecuritization exposure, created two tranches (eg a junior tranche of 0.1% and a senior tranche of 99.9%), and claimed that the senior tranche should qualify for the senior column of resecuritization risk weights.

Any resecuritization exposure where the underlying exposure includes resecuritization exposures is categorized as non-senior resecuritization positions for the purpose of the ratings-based approach (RBA).

To maintain consistency between Risk Based Approach (the RBA) and Supervisory Formula Approach (the SFA), the SFA floor risk weight is set at 20% for resecuritization exposures. It remains at 7% for other securitization exposures. In this way, senior resecuritization exposures would not be able to avoid the higher risk weight applicable in the RBA for resecuritizations by using the SFA.

3.2 Standardized Approach Risk Weights for Securitized and Re-Securitized Exposures (Refer to para 571 of Annex-1)

The rationale for applying higher risk weights to resecuritizations in the IRB Approach is equally applicable to the SA (Standardized Approach). While the RBA risk weight tables in the SA are less granular and differentiate risk to a lesser extent than those used in the IRB Approach, the magnitude of difference in risk weights implied by the empirical analysis suggests that separate risk weights are warranted within the SA as well for resecuritizations.

The following risk weights will be applied in the standardized approach **(P.5 of BCBS document of July 2009)**

| Long-term Rating | Securitization Exposures | Resecuritization Exposures |
|------------------------------|---------------------------------|-----------------------------------|
| AAA to AAA- | 20 | 40 |
| A+ to A- | 50 | 100 |
| BBB+ to BBB- | 100 | 225 |
| BB+ to BB- | 350 | 650 |
| B+ and below or unrated | Deduction | |
| | | |
| Short-term Rating | Securitization Exposures | Resecuritization Exposures |
| A-1/P-1 | 20 | 40 |
| A-2/P-2 | 50 | 100 |
| A-3/P-3 | 100 | 225 |
| All other ratings or unrated | Deduction | |

3.3 IRB Approach Risk Weights for Securitized and Resecuritized Assets

As indicated below, the IRB based approach risk weight tables indicates higher weights. **(P.3 of BCBS document of July, 2009) (Document A)**

Risk Weighted Under IRB Approach

For Securitization and Resecuritization Exposures

| | Securitization Exposures | | | Resecuritization Exposures | |
|-------------------|--------------------------|----------------------|--------------|----------------------------|------------|
| Long-Term Rating | Senior, Granular | Non-Senior, Granular | Non-Granular | Senior | Non-senior |
| AAA | 7 | 12 | 20 | 20 | 30 |
| AA | 8 | 15 | 25 | 25 | 40 |
| A+ | 10 | 18 | 35 | 35 | 50 |
| A | 12 | 20 | 35 | 40 | 65 |
| A- | 20 | 35 | 35 | 60 | 100 |
| BBB+ | 35 | 50 | 50 | 100 | 150 |
| BBB | 60 | 75 | 75 | 150 | 225 |
| BBB- | 100 | 100 | 100 | 200 | 350 |
| BB+ | 250 | 250 | 250 | 300 | 500 |
| BB | 425 | 425 | 425 | 500 | 650 |
| BB- | 650 | 650 | 650 | 750 | 850 |
| Below | Deduction | | | | |
| | | | | | |
| | Securitization Exposures | | | Resecuritization Exposures | |
| Short-term Rating | Senior Granular | Non-senior, Granular | Non-Granular | Senior | Non-senior |
| A1 | 7 | 12 | 20 | 20 | 30 |
| A2 | 12 | 20 | 35 | 40 | 65 |
| A3 | 60 | 75 | 75 | 150 | 225 |
| Below | Deduction | | | | |

3.4. Ratings resulting from self guarantees (P4 of the BCBS Document "A")

During the recent market turmoil, several banks that provided LFs to ABCP programmes chose to purchase commercial paper issued by the ABCP conduit instead of having the conduit draw on its LF. The LF provider then risk weighted the ABCP based on the paper's external rating. As a result, the LF provider benefited from the external rating on the commercial paper when assigning a risk weight to that paper, even though the rating was due in large part to the bank's own support of the conduit in the form of the LF. **(ABCP refer to para 544 of Annex 3)**

The Basel Committee has added language to the Basel II framework so that a bank cannot recognize ratings – either in the SA or in the IRB Approach – that are based on guarantees or similar support provided by the bank itself. In other words, banks should not be allowed to recognize external ratings when those ratings are based on support provided by the same bank. For example, if a securitization exposure is rated AAA, and that rating is based on a guarantee provided by a bank, the bank should not benefit from a lower risk weight on the securitization exposure when the bank holds that AAA-rated exposure.

3.5. Other Aspects Related to Rating i) Liquidity facilities or credit enhancement and ii) Overlaps

The Basle Committee has added the following three paragraphs to the Basle II securitization framework.

565 (g)(i)¹ A bank is not permitted to use any external credit assessment for risk weighting purposes where the assessment is at least partly based on unfunded support provided by the bank. For example, if a bank buys ABCP where it provides an unfunded securitization exposure extended to the ABCP programme (eg 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 securitization exposures it provides (eg against the liquidity facility and/or credit enhancement). **565 (g)(ii)**The treatment described in **565(g)(i)**¹ is also applicable to exposures held in the trading book. A bank's capital requirement for such exposures held in the trading book can be no less than the amount required under the banking book treatment.

565 (g)(iii)¹ Banks are permitted to recognize overlap in their exposures, consistent with paragraph 581 of Basle II. For example, a bank providing a liquidity facility supporting 100% of the ABCP issued by an ABCP programme and purchasing 20% of the outstanding ABCP of that programme could recognize an overlap of 20% (100% liquidity facility + 20% CP held – 100% CP issued = 20%). **(For Overlaps, refer to para 581 of Annex 1)**. If a bank provided a liquidity facility that covered 90% of the outstanding ABCP and purchased 20% of the ABCP, the two exposures would be treated as if 10% of the two exposures overlapped (90% liquidity facility + 20% CP held – 100% CP issued = 10%). If a bank provided a liquidity facility that covered 50% of the outstanding ABCP and purchased 20% of the ABCP, the two exposures would be treated as if there were no overlap. Such overlap could also be recognized between specific risk capital charges for exposures in the trading book and capital charges for exposures in the banking book, provided that the bank is able to calculate and compare the capital charges for the relevant exposures. **(Annex-1 refer to para 573)**.

3.6. Operational Criteria for credit analysis (refer to P.5 of BCBS document of July, 2009 "A")¹

The securitization section of the Basel II framework incorporates operational requirements for traditional and synthetic securitizations that a bank would have to meet to recognize risk transference of exposures. The securitization section also incorporates operational requirements for the use of external credit ratings, the Internal Assessment Approach (IAA) for ABCP conduit exposures, and inferred ratings. However, the RBA does not include specific operational requirements for banks to assess or conduct a credit analysis of a securitization exposure. **(Refer to para 565)**

¹Refer to BCBS document "A" of December 2010.

This applies to both the SA and the IRB Approach and are equally applicable to the banking book and trading book. A bank needs to meet these requirements in order to

use any of the approaches specified in the securitization framework. If a bank does not perform the level of due diligence specified, it will have to deduct the securitization exposure.

Information on the underlying collateral supporting securitization exposures

In order for a bank to use the securitization framework, it must have the information specified in paragraph 565 (ii) through 565 (iv). **(Also, refer Para 585 to 589 of Annex 1.)**

565 (ii) As a general rule, a bank must, on an ongoing basis, have a comprehensive understanding of the risk characteristics of its individual securitization exposures, whether on balance sheet or off balance sheet, as well as the characteristics of the pools underlying its securitization exposures.

565 (iii) Banks must be able to access performance information on the underlying pools on an on-going 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 geographic diversification. For resecuritizations, banks should have information not only on the underlying securitization tranches, such as the issuer name and credit quality, but also on the characteristics and performance of the pools underlying the securitization tranches.

565 (iv) A bank must have a thorough understanding of all structural features of a securitization transaction that would materially impact 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.

3.7. Securitization liquidity facilities – Standardized Approach (Refer to P.6 and 7 of BCBS Document of July 2009 "A")

The SA of the Basel II framework applies a 20% CCF to commitments with a maturity under one year and a 50% CCF to commitments over one year (Refer to **para 576-580**). Similarly, eligible liquidity facilities¹ under one year in the SA securitization framework receive a 20% CCF, while those over one year receive a 50% CCF (**paragraph 579**). All other commitments that are securitization exposures receive a 100% CCF. Most commitments in the securitization framework are in the form of liquidity facilities to ABCP programmes. These liquidity facilities are comparable to other types of business commitments to lend or purchase assets, and thus receive the same CCFs based on maturity. **(Refer to para 576-580 of Annex 1)**

In theory, there is greater certainty as to the credit strength of a counterparty and the likelihood of draw over the short term than there is over a longer period; consequently, a commitment that is outstanding for only a few months should represent less risk than a commitment that is outstanding for several years. The Basel II SA framework, like the Basel I framework, continues to distinguish between short-

and long-term commitments – including liquidity facilities within the securitization framework – in order to recognize the lower risk of being exposed to a draw by the counterparty over a shorter period of time.

The CCF for short-term eligible liquidity facilities within the securitization framework would be changed from 20% to 50% to be consistent with the CCF applied to long-term eligible liquidity facilities have been made.

In addition the following changes to paragraph 579 have also been made:

579. Where these conditions are met, the bank may apply a 50% CCF to the eligible liquidity facility regardless of the maturity of the facility. However, if an external rating of the facility itself is used for risk-weighting the facility, a 100% CCF must be applied. **(New language to para 579 is underlined)¹ – Annex-1**

639. When it is not practical for the bank to use either the bottom-up approach or the top-down approach for calculating KIRB, the bank may, on an exceptional basis and subject to supervisory consent, temporarily be allowed to apply the following method. If the liquidity facility meets the definition in paragraph 578 or 580, the highest risk weight assigned under the standardized approach to any of the underlying individual exposures covered by the liquidity facility can be applied to the liquidity facility. If the liquidity facility meets the definition in paragraph 578, the CCF must be 100%. In all other cases, the notional amount of the liquidity facility must be deducted.

3.8. Securitization liquidity facilities – IRB Approach

Under the IRB Approach, liquidity facilities are treated as any other securitization exposure and receive a CCF of 100% unless the facility is considered a general market disruption facility. If the facility is externally rated, the bank may rely on the external rating and use the RBA risk weights. Thus, the notional amount of the securitization exposure to the ABCP programme must be assigned to the risk weight in the RBA appropriate to the credit rating equivalent assigned to the bank's exposure. If the facility is not rated (which is generally the case) the bank must apply either the Internal Assessment Approach (IAA) or the Supervisory Formula Approach (SFA). If neither approach can be used, then the facility must be deducted from capital.

Under the IAA, a bank may use its internal assessments (ie internal ratings) of the credit quality of the securitization exposures the bank extends to ABCP programmes (eg liquidity facilities and credit enhancements) if the bank's internal assessment process meets certain operational requirements (**paragraph 620**). Internal assessments of exposures provided to ABCP programmes¹ must be mapped to equivalent external ratings. Those rating equivalents are used to determine the appropriate risk weights under the RBA.

The existing language in paragraph **[613(c)]¹** has been modified to clarify the distinction between LFs that should be treated as senior and those that should not. The revisions to paragraph 613(c) below are meant as a clarification of existing treatment, not a change to existing treatment.

Usually a liquidity facility supporting an ABCP programme would not be the most senior position within the programme; the commercial paper, which benefits from the liquidity support, typically would be the most senior position. However, a liquidity facility may be viewed as covering all losses on the underlying receivables pool that exceed the amount of over-collateralisation/reserves provided by the seller and as being most senior only if it is sized to cover all of the outstanding commercial paper and other senior debt supported by the pool, so that no cash flows from the underlying pool could be transferred to other creditors until any liquidity draws were repaid in full. In such a case, the RBA risk weights in the left-most column can be used. If these conditions are not satisfied, or if for other reasons the liquidity facility constitutes a mezzanine position in economic substance rather than a senior position in the underlying pool, then the “Base risk weights” column is applicable. [Note: new language is underlined.] **(Definition of ABCP program Para 544)**

Any bank utilizing the Internal Assessment Approach would have to comply with the guidelines of this document, read together with the SAMA and BCBS Basel II guidelines. In addition, it is further clarified that the requirement of Para 619 and 620 of BCBS Basel II guidelines would apply for the Internal Assessment Approach.

If a bank’s internal assessment process is no longer considered adequate, SAMA may preclude the bank from applying the internal assessment approach to its ABCP (Asset Backed Commercial Paper) exposures, both existing and newly originated, for determining the appropriate capital treatment until the bank has remedied the deficiencies. In this instance, the bank must revert to the Supervisory Formula or, if not available, to the method described in paragraph 639, International Convergence of Capital Measurement and Capital Standards. (Refer to Paragraph 622 of International Convergence of Capital Measurement and Capital Standards – June 2006)

3.8 A Supervisory Formula

Banks are required to refer to Paragraph 623 to 636 of BCBS Basel II guidelines, for the above-captioned approach.

3.8 B Liquidity Facility

Liquidity facilities are treated as any other securitization exposure and receive a CCF of 100% unless specified differently in paragraphs 638 to 641 of International Convergence of Capital Measurement and Capital Standards – June 2006. If the facility is externally rated, the bank may rely on the external rating under the RBA. If the facility is not rated and an inferred rating is not available, the bank must apply the SF2, unless the IAA can be applied.

When it is not practical for the bank to use either the bottom-up approach or the top-down approach for calculating K_{RBA} , the bank may, on an exceptional basis and subject to supervisory consent, temporarily be allowed to apply the following method. If the liquidity facility meets the definition in paragraph 578, the highest risk weight assigned under the standardised approach to any of the underlying individual exposures covered by the liquidity facility can be applied to the liquidity facility. If the liquidity facility meets the definition in paragraph 578, the CCF must be 100%. In all other cases, the notional amount of the liquidity facility must be deducted.

(Refer to Paragraph 637 and 639 of International Convergence of Capital Measurement and Capital Standards – June 2006). In addition, please refer to the amendments made by the “Enhancements to the Basel II framework, 2009” for the amendment to Para 639

Treatment of credit risk mitigation for securitization exposures

As with the RBA, banks are required to apply the CRM techniques as specified in the foundation IRB approach of Section III when applying the SF. The bank may reduce the capital charge proportionally when the credit risk mitigant covers first losses or losses on a proportional basis. For all other cases, the bank must assume that the credit risk mitigant covers the most senior portion of the securitization exposure (i.e. that the most junior portion of the securitization exposure is uncovered). Examples for recognizing collateral and guarantees under the SF are provided in Annex 7 of International Convergence of Capital Measurement and Capital Standards – June 2006.

(Refer to Paragraph 642 of International Convergence of Capital Measurement and Capital Standards – June 2006)

Capital requirement for early amortization provision

An originating bank must use the methodology and treatment described in paragraphs 590 to 605 of International Convergence of Capital Measurement and Capital Standards – June 2006, for determining if any capital must be held against the investors’ interest. For banks using the IRB approach to securitization, investors’ interest is defined as investors’ drawn balances related to securitization exposures and EAD associated with investors’ undrawn lines related to securitization exposures. For determining the EAD, the undrawn balances of securitised exposures would be allocated between the seller’s and investors’ interests on a pro rata basis, based on the proportions of the seller’s and investors’ shares of the securitised drawn balances. For IRB purposes, the capital charge attributed to the investors’ interest is determined by the product of (a) the investors’ interest, (b) the appropriate CCF, and (c) KIRB.

(Refer to Paragraph 643 of International Convergence of Capital Measurement and Capital Standards – June 2006)

3.9. Market disruption lines – Standardized and IRB Approaches (Refer to P.8 of BCBS Document "A" of July 2009 and to para 580)

The securitization framework identified liquidity lines that carried unique limitations on their ability to be drawn that differed from other liquidity lines. The Basel II securitization framework was designed to apply a preferential conversion factor of 0% (rather than 20% for other short-term LFs) under the SA securitization framework. A preferential conversion factor of 20% (rather than 100% for other LFs) was also permitted under the SFA in the IRB securitization framework.

More specifically, paragraph 580 states that banks may apply a 0% CCF to eligible liquidity facilities that are only available in the event of a general market disruption (ie where more than one SPE across different transactions are unable to roll over maturing commercial paper, and that inability is not the result of an impairment in the SPEs' credit quality or in the credit quality of the underlying exposures). Paragraph 638 states that an eligible liquidity facility that can only be drawn in the event of a general market disruption is assigned a 20% CCF under the SF. That is, an IRB bank is to recognize 20% of the capital charge generated under the SF for the facility.

The framework has been changed to eliminate paragraphs **(580 and 638)**, in the SA and IRB Approach, respectively. This eliminates any favourable treatment accorded to market disruption liquidity facilities under Basel II. The paragraphs that have been eliminated are shown below.

580. Banks may apply a 0% CCF to eligible liquidity facilities that are only available in the event of a general market disruption (ie whereupon more than one SPE across different transactions are unable to roll over maturing commercial paper, and that inability is not the result of an impairment in the SPEs' credit quality or in the credit quality of the underlying exposures). To qualify for this treatment, the conditions provided in **paragraph 578** must be satisfied. Additionally, the funds advanced by the bank to pay holders of the capital market instruments (eg commercial paper) when there is a general market disruption must be secured by the underlying assets, and must rank at least pari passu with the claims of holders of the capital market instruments.

638. An eligible liquidity facility that can only be drawn in the event of a general market disruption as defined in **paragraph 580** is assigned a 20% CCF under the SF. That is, an IRB Approach bank is to recognize 20% of the capital charge generated under the SF for the facility. If the eligible facility is externally rated, the bank may rely on the external rating under the RBA provided it assigns a 100% CCF rather than a 20% CCF to the facility.

**4. General and Specific Guidelines for
Adjustment with regard to
Market Risk (Basel II.5)**

Market Risk

1. Standardized Approach Only

General Guidance to Implement Changes under Basel II.5 to the Market Risk Framework

Introduction

These implementation guidelines reflect the Basel II.5 adjustment to the Basel II Market Risk framework at the Standardized level.

- These Implementation Guidelines are based on BCBS document - Revision to the Basel II Market Risk framework – December 2010. (B)
- These represent SAMA Basel II Market risk at the standardized level as per Basel II.5.

Major Changes under Basel II.5 Vs Basel II are reflected below with regard to Market Risk

A. General Changes with regard to Market Risk under Basel II.5

- At the standardized level, only changes to the specific Market Risk, and no changes at the General Market Risk
- The standardized method should be used to calculate capital charges for incremental risks in all securitized and resecuritized products.
- Specific risk rules for positions covered under the securitization framework are added to the document.
- The correlation trading portfolio is defined and there is a new requirement to determine the specific risk capital charge such as portfolio which includes securitized exposures and nth to default credit derivatives.
- Specific risk capital charge for equity positions is fixed at 8%. Previously it was possible to reduce it to 4% if the portfolio is liquid and well diversified.
- Basel II.5 adjusted to RWA (securitized and resecuritized assets are only for the specific risk component of the Market risk.
- Basel II.5 adjustment to RWA (securitized and resecuritized assets) are different as given below.
 - Standardized method for calculating specific risk **(para 712 IV)¹**
 - IRB method for calculating specific risk **(para 712 V)¹**

- These Basel II.5 regulatory amendments to regulatory capital will vary according to;
 - Standardized method for calculating specific risk (**para 712 IV**)¹ of above BCBS document
 - IRB method for calculating specific risk (**para 712 V**)¹ of above BCBS document.
- All references are to made to paragraphs of the following BCBS document

¹Based on BCBS document "B" above of December 2010.

B. Specific Changes with regard to Market Risk Under Basel II.5

1. Specific Risk (Market Risk)

- **New Risk Weight Assets (Basel II.5)**
 - **Para 712 IV**¹ – Standardized Approach (P.23 of this document)
 - **Para 712 V**¹ – IRB Approaches (P.23 of this document)
- **Co-relation Trading Portfolio – securitized exposure** (Refer to pages 21-22 of this document)
 - **Applies to securitized exposures and nth-to-default credit derivatives subject to criteria in para 689 IV¹ of Basel Framework – December 2010**
- **Other Amendment to Basel II Specific Risk – Securitized Exposures**

709(ii). 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 (termed “general market risk”) where long and short positions in different securities or instruments can be offset. The bank must, however, determine the specific risk capital charge for the correlation trading portfolio as follows: The bank computes (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 total amounts is then the specific risk capital charge for the correlation trading portfolio.

709(ii-1-). During a transitional period until 31 December 2013, the bank may exclude positions in securitization instruments which are not included in the correlation trading portfolio from the calculation according to paragraph 709(ii) and determine

the specific risk capital charge as follows: The bank computes (i) the total specific risk capital charge that would apply just to the net long positions in securitization instruments in the trading book, and (ii) the total specific risk capital charge that would apply just to the net short positions in securitization instruments in the trading book. The larger of these total amounts is then the specific risk capital charge for the securitization positions in the trading book. This calculation must be undertaken separately from the calculation for the correlation trading portfolio.

709(iii). The capital charge for specific risk is designed to protect against an adverse movement in the price of an individual security owing to factors related to the individual issuer. In measuring the risk, offsetting will be restricted to matched positions in the identical issue (including positions in derivatives). Even if the issuer is the same, no offsetting will be permitted between different issues since differences in coupon rates, liquidity, call features, etc. mean that prices may diverge in the short run.

712(ii). However, since this may in certain cases considerably underestimate the specific risk for debt instruments which have a high yield to redemption relative to government debt securities, SAMA will have the discretion:

- To apply a higher specific risk charge to such instruments; and/or
- To disallow offsetting for the purposes of defining the extent of general market risk between such instruments and any other debt instruments.

(Refer to Paragraph 709(ii), 709(ii-1-), and 712(ii) of Revisions to the Basel II Market Risk Framework – Dec 2010.)

(Refer to Paragraph 709(iii) International Convergence of Capital Measurement and Capital Standards – June 2006)

- **Other Amendment to Specific Risk Only**

- Refer to **para 718** (a, b, c and d) of the BCBS document "B" relating to specific risk relating to various default credit derivatives.

2. General Risk (Market Risk)

- No change.

3. Other Importance Aspect relating to Basel II.5

- Para **718 (xxi)** of Basel II.5 document notes the capital charge for specific risk and general market risk will be only 8% - regardless of the portfolio being diversified.

Specific Guidelines
Standardized Approach for Market Risk

Specific Risk

A. **Definition of Trading Book**

- No major change to the definition of Trading Book in Basel II.
- It focuses on policies and procedures that banks must have in place to include exposures in their trading books.
- Open equity stakes in hedge funds, private equity investments, positions in a securitization warehouse and real estate holdings do not meet the definition of the trading book, owing to significant constraints on the ability of banks to liquidate these positions and value them reliably on a daily basis.

B. **Further Explanation on Correlation Trading Portfolio (as attached)**

The following definition of the correlation trading portfolio will be added to paragraph 689(iii)³ of the Basel II framework.

- 689(iv). For the purposes of this framework, the correlation trading portfolio incorporates securitization exposures and n-th-to-default credit derivatives that meet the following criteria:
- The positions are neither resecuritization positions, nor derivatives of securitization exposures that do not provide a pro-rata share in the proceeds of a securitization tranche (this therefore excludes options on a securitization tranche, or a synthetically leveraged super-senior tranche);
- All references are to single-name products, including single-name credit derivatives, for which a liquid two-way market exists. This will include commonly traded indices based on these reference entities. 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 customs.
- Positions which reference to 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 which reference to a claim on a special purpose entity are not included either.
- A bank may also include in the correlation trading portfolio positions that hedge the positions described above and which are neither securitization exposures nor n-th-to-default credit derivatives and where a liquid two-way market as described above exists for the instrument or its underlyings.

Paragraph 709(ii)² of the Basel II Framework will be changed as follows, and a new **paragraph 709¹(ii-1-)** will be introduced. Changed and new wording is underlined.

¹Annex 2

²BCBS document "B" of December 2010 "Revision to Basel II Market Risk Framework".

709(ii)². 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 (termed "general market risk") where long and short positions in different securities or instruments can be offset. The bank must, however, determine the specific risk capital charge for the correlation trading portfolio as follows: The bank computes (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 total amounts is then the specific risk capital charge for the correlation trading portfolio.

C. **Supervisory Discretion**

Paragraph 712(ii)² of the Basel II Framework will be changed as follows.

712(ii). However, since this may in certain cases considerably underestimate the specific risk for debt instruments which have a high yield to redemption relative to government debt securities, each national supervisor will have the discretion:

- To apply a higher specific risk charge to such instruments; and/or
- To disallow offsetting for the purposes of defining the extent of general market risk between such instruments and any other debt instruments.

D. **Transitional Period**

After paragraph 712(ii)^{1,2} of the Basel II Framework, the treatment of specific risk will be amended as follows:

709(ii-1-)². During a transitional period until 31 December 2013, the bank may exclude positions in securitization instruments which are not included in the correlation trading portfolio from the calculation according to paragraph 709(ii) and determine the specific risk capital charge as follows: The bank computes (i) the total specific risk capital charge that would apply just to the net long positions in securitization instruments in the trading book, and (ii) the total specific risk capital charge that would apply just to the net short positions in securitization instruments in the trading book. The larger of these total amounts is then the specific risk capital charge for the

securitization positions in the trading book. This calculation must be undertaken separately from the calculation for the correlation trading portfolio.

E. Specific risk rules for positions covered under the securitization framework¹

712(iii)². The specific risk of securitization positions as defined in paragraphs 538² to 542² which are held in the trading book is to be calculated according to the method used for such positions in the banking book unless specified otherwise below.

¹These are reference to BCBS document "B" "Revision to Basel II Market Risk Framework" of December 2010.

²Annex "2"

X³Annex-1

To that effect, the risk weight has to be calculated as specified below and applied to the net positions in securitization instruments in the trading book. The total specific risk capital charge for n-th-to-default credit derivatives is to be computed according to **paragraph 718**¹, and the total specific risk capital charge for securitization exposures is to be computed according to paragraph 709(ii).

F. Standardized Approach (RWA)

712(iv)¹. The specific risk capital charges for positions covered under the standardized approach for securitization exposures are defined in the table below. These charges must be applied by banks using the standardized approach for credit risk. For positions with long-term ratings of B+ and below and short-term ratings other than A-1/P-1, A-2/P-2, A-3/P-3, deduction from capital as defined in **paragraph 561**² is required. Deduction is also required for unrated positions with the exception of the circumstances described in **paragraphs 571**² to **575**². The operational requirements for the recognition of external credit assessments outlined in **paragraph 565**² apply.

| Specific risk capital charges under the standardized approach based on external credit ratings | | | | | |
|---|--------------------------|------------------------|----------------------------|-------------------|---|
| External Credit Assessment | AAA to AA-A-1/P-1 | A+ to A-A-2/P-2 | BBB+ to BBB-A-3/P-3 | BB+ to BB- | Below BB- and below A-3/P-3 or unrated |
| Securitization Exposures | 1.6% | 4% | 8% | 28% | Deduction |
| Resecuritization exposures | 3.2% | 8% | 18% | 52% | Deduction |

G. IRB Approaches

712(v)¹. The specific risk capital charges for rated positions covered under the internal ratings-based approach for securitization exposures are defined in the table below. For positions with long-term ratings of B+ and below and short-term ratings other than A-1/P-1, A-2/P-2, A-3/P-3, deduction from capital as defined in paragraph 561 is required. The operational requirements for the recognition of external credit assessments outlined in paragraph 565 apply.

- (a) For securitization exposures, banks may apply the capital charges defined in the table below for senior granular positions if the effective number of underlying exposures (N, as defined in **paragraph 633**)¹ is 6 or more and the position is senior as defined in **paragraph 613**¹. When N is less than 6, the capital charges for non-granular securitization exposures of the table below apply. In all other cases, the capital charges for non-senior granular securitization exposures of the table below apply.

¹BCBS Document "B" of December 2010 "Revision to Basel II Market Risk Framework".

²Refer to Annex-1

- (b) Resecuritization exposures as defined in paragraph 541(i) are subject to specific risk capital charges depending on whether or not the exposure is senior as defined in paragraph 613.

| Specific risk capital charges based on external credit ratings | | | | | |
|--|--------------------------|-------------------------|------------------|----------------------------|----------------|
| External rating (illustrative) | Securitization Exposures | | | Resecuritization exposures | |
| | Senior, granular | Non-senior, granular | Non- granular | Senior | Non- senior |
| AAA/A-1/P-1 | 0.56% | 0.96% | 1.60% | 1.60% | 2.40% |
| AA | 0.64% | 1.20% | 2.00% | 2.00% | 3.20% |
| A+ | 0.80% | 1.44% | 2.80% | 2.80% | 4.00% |
| A/A-2/P-2 | 0.96% | 1.60% | | 3.20% | 5.20% |
| A- | 1.60% | 2.80% | | 4.80% | 8.00% |
| BBB+ | 2.80% | 4.00% | | 8.00% | 12.00% |
| BBB/A-3/P-3 | 4.80% | 6.00% | | 12.00% | 18.00% |
| BBB- | 8.00% | | | 16.00% | 28.00% |
| BB+ | 20.00% | | | 24.00% | 40.00% |
| BB | 34.00% | | | 40.00% | 52.00% |
| BB- | 52.00% | | | 60.00% | 68.00% |
| Below BB-/A-3/P-3 | Deduction | | | | |

712(vi). The specific risk capital charges for unrated positions covered under the securitization framework as defined in paragraphs 538 to 542 will be calculated as set out below, subject to supervisory approval.

- (a) If a bank has approval for the internal ratings-based approach for the asset classes which include the underlying exposures, the bank may apply the supervisory formula approach (paragraphs 623 to 636). When estimating PDs and LGDs for calculating KIRB, the bank must meet the minimum requirements for the IRB approach.
- (b) To the extent that a bank has approval to apply the internally developed approach referred to in **paragraph 718(Lxxxvii-1)**¹ to the underlying exposures and the bank derives estimates for PDs and LGDs from the internally developed approach specified in **paragraphs 718(xcii)**¹ and **718(xciii)**¹ that are in line with the quantitative standards for the internal ratings-based approach, the bank may use these estimates for calculating KIRB and, consequently, for applying the supervisory formula approach (paragraphs 623 to 636).
- (c) In all other cases the capital charge can be calculated as 8% of the weighted-average risk weight that would be applied to the securitized exposures under the standardized approach, multiplied by a concentration ratio. If the

concentration ratio is 12.5 or higher the position has to be deducted from capital as defined in **paragraph 561**². This concentration ratio is equal to the sum of the nominal amounts of all the tranches divided by the sum of the nominal amounts of the tranches junior to or pari passu with the tranche in which the position is held including that tranche itself.

¹BCBS document "B" of December 2010.

²Annex-1

The resulting specific risk capital charge must not be lower than any specific risk capital charge applicable to a rated more senior tranche. If a bank is unable to determine the specific risk capital charge as described above or prefers not to apply the treatment described above to a position, it must deduct that position from capital.

712¹(vii). A position subject to deduction according to paragraph 712(iv) to 712(vi) may be excluded from the calculation of the capital charge for general market risk whether the bank applies the standardized measurement method or the internal models method for the calculation of its general market risk capital charge.

Limitation of the specific risk capital charge to the maximum possible loss

712(viii)¹. Banks may limit the capital charge for an individual position in a credit derivative or securitization instrument to the maximum possible loss. For a short risk position this limit could be calculated as a 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.

Paragraph 718¹ of the Basel II Framework will be replaced as follows.

718¹. An n-th-to-default credit derivative is a contract where the payoff is based on the n-th asset to default in a basket of underlying reference instruments. Once the n-th default occurs the transaction terminates and is settled.

- (a) 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 is allowed to 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.

- (b) The capital charge for specific risk for an n-th-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. For n-th-to-default credit derivatives with n greater than 1 no offset of the capital charge for specific risk with any underlying reference credit instrument is allowed.
- (c) If a first or other n-th-to-default credit derivative is externally rated, then the protection seller must calculate the specific risk capital charge using the rating of the derivative and apply the respective securitization risk weights as specified in paragraphs 712(iv)¹ or 712(v)¹, as applicable.
- (d) The capital charge against each net n-th-to-default credit derivative position applies irrespective of whether the bank has a long or short position, i.e. obtains or provides protection.

Paragraph 718(xxi)¹ with regard to the specific risk capital charge for equities of the Basel II Framework will be changed as follows. Changed wording is underlined.

The capital charge for *specific risk* and for *general market risk* will each be 8%.

¹Refer to BCBS document "B" of December 2010.

Liquidity Facility

~~Liquidity facilities are treated as any other securitization exposure and receive a CCF of 100% unless specified differently in paragraphs 638 to 641 of International Convergence of Capital Measurement and Capital Standards – June 2006. If the facility is externally rated, the bank may rely on the external rating under the RBA. If the facility is not rated and an inferred rating is not available, the bank must apply the SF², unless the IAA can be applied.~~

~~An eligible liquidity facility that can only be drawn in the event of a general market disruption as defined in paragraph 580 of International Convergence of Capital Measurement and Capital Standards – June 2006, is assigned a 20% CCF under the SF². That is, an IRB bank is to recognize 20% of the capital charge generated under the SF² for the facility. If the eligible facility is externally rated, the bank may rely on the external rating under the RBA provided it assigns a 100% CCF rather than a 20% CCF to the facility.~~

~~When it is not practical for the bank to use either the bottom-up approach or the topdown approach for calculating KIRB, the bank may, on an exceptional basis and subject to SAMA's consent, temporarily be allowed to apply the following method. If the liquidity facility meets the definition in paragraph 578 or 580 of International Convergence of Capital Measurement and Capital Standards – June 2006, the highest risk weight assigned under the standardized approach to any of the underlying individual exposures covered by the liquidity facility can be applied to the liquidity facility. If the liquidity facility meets the definition in paragraph 578 of International~~

~~Convergence of Capital Measurement and Capital Standards—June 2006, the CCF must be 50% for a facility with an original maturity of one year or less, or 100% if the facility has an original maturity of more than one year. If the liquidity facility meets the definition in paragraph 580 of International Convergence of Capital Measurement and Capital Standards—June 2006, the CCF must be 20%. In all other cases, the notional amount of the liquidity facility must be deducted.~~

~~²SF: Supervisory Formula~~

~~(Refer to Paragraph 637–639 of International Convergence of Capital Measurement and Capital Standards—June 2006)~~

~~**Treatment of credit risk mitigation for securitization exposures**~~

~~As with the RBA, banks are required to apply the CRM techniques as specified in the foundation IRB approach of Section III when applying the SF. The bank may reduce the capital charge proportionally when the credit risk mitigant covers first losses or losses on a proportional basis. For all other cases, the bank must assume that the credit risk mitigant covers the most senior portion of the securitization exposure (i.e. that the most junior portion of the securitization exposure is uncovered). Examples for recognizing collateral and guarantees under the SF are provided in Annex 7 of International Convergence of Capital Measurement and Capital Standards—June 2006.~~

~~(Refer to Paragraph 642 of International Convergence of Capital Measurement and Capital Standards—June 2006)~~

~~**Capital requirement for early amortization provision**~~

~~An originating bank must use the methodology and treatment described in paragraphs 590 to 605 of International Convergence of Capital Measurement and Capital Standards—June 2006, for determining if any capital must be held against the investors' interest. For banks using the IRB approach to securitization, investors' interest is defined as investors' drawn balances related to securitization exposures and EAD associated with investors' undrawn lines related to securitization exposures.~~

~~(Refer to Paragraph 643 of International Convergence of Capital Measurement and Capital Standards—June 2006)~~

5. Package of Prudential Return
Q17 (Basel II.5)
Q17 Basel II.5 (from A to H-1)

October 2012

Prudential Return (Q17 Basel II.5 from A to D.1)
Q17 – Basel II.5 – Standardized Approach

Q17 (Basel II.5) A.
Standardized Approach
(SR 000's)

STANDARDIZED APPROACH

Basle II.5
Capital Adequacy Ratio (P1)
Quarter Ending
(SR 000)

Standardized Approach

| | |
|--|-------|
| A. Regulatory Capital under Basle II.5 | _____ |
| B. RWA Under Basle II.5 | _____ |
| CAR P1 (A/B) Under Basle II.5 | _____ |

Q17 (Basel II.5) B.
Standardized Approach
(SR 000's)

Standardized Approach
Regulatory Capital

| | | |
|---|-----------|-----------|
| A. Regulatory Capital under Basel II Standardized approach | | _____ |
| Q17.3. | | |
| - Tier 1 | _____ | |
| - Tier 2 | _____ | |
| - Tier 3 | _____ | |
| B. Amendment due to Basel II.5 ^{1,2} | | _____ |
| Deductions for high risk securities ¹ | | |
| (Q17 – Basel II.5) D. as attached ³ | | |
| - Tier 1 (50%) | _____ | |
| - Tier 2 (50%) | _____ | |
| - Tier 3 | _____ | |
| - Market Risk Amendment | _____ | |
| • Standardized Approach | | |
| Deductions for high risk securities relating to specific risk | | |
| (Q17 – Basel II.5) D-1 as attached | | |
| - Tier 1 (50%) | _____ | |
| - Tier 2 (50%) | _____ | |
| - Tier 3 | _____ | |
| C. Regulatory Capital under Basel II.5 | | _____ |
| (Standardized Approach) net of A and B by respective Tiers | | |
| - Tier 1 | _____ | |
| - Tier 2 | _____ | |
| - Tier 3 | _____ | |

¹Based on BCBS document of July 2009 "Enhancement to Basel II Framework"

²Based on BCBS document of December 2010 "Revision to Basel II Market Risk Framework"

³Use long term or short term ratings.

Q17 (Basel II.5)C
Standardized Approach
(SR 000's)

Risk Weighted Assets (RWA)
Securitized and Resecuritized Assets
Standardized Approach

| | |
|---|-------|
| 1. RWA as per Basel II concerning Credit risk only | _____ |
| - Securitized Asset Q17.2 at 100% | |
| 2. RWA Amendment due to Basel II.5 to Securitized and Resecuritized Assets ^{1,2} | |
| A. Credit risk¹ | _____ |
| • On-Balance sheet | |
| Q17 (Basel II.5) D. (attached) | |
| ▪ Long term rating or | _____ |
| Short term rating | _____ |
| • Off-Balance sheet | |
| - RWA or liquidity facilities ³ | _____ |
| B. Market Risk² | |
| <u>Specific Risk</u> | |
| • Specific Risk Charges | _____ |
| Q17 (Basel II.5) D-1 as attached | |
| • Correlation Trading Portfolio related to ⁴ | |
| Securitized exposure and n th to default credit | _____ |
| Derivatives ² | |
| • Credit derivative items ⁴ | _____ |
| • Specific risk on Equity ⁴ | _____ |
| - Total (A+B) Basel II.5 Adjustments | _____ |
| 3. Basel II.5 RWA | |
| Basel II Total RWA ⁵ | _____ |
| Less Total RWA under Basel II (Securitized) – Line 1 above | _____ |
| • Add Basel II.5 adjustment (Credit Market Risk) – Line 2 above | _____ |
| • Total RWA under Basel II.5 | _____ |

¹Based on BCBS document of July 2009 "Enhancement to Basel II Framework" (A)

²Based on BCBS document of December 2010 "Revision to Basel II Market Risk Framework" (B)

³Based on pages 1 and 6 of document "A"

⁴Refer to page # 4, 5 and 9 in BCBS document "B"

⁵Based on Q17.2

Q17 (Basel II.5) D
(SR 000's)

STANDARDIZED APPROACH
Basle II.5

Detailed Risk Weighted Asset (RWA) Calculation
For Pillar 1

A. **On Balance Sheet**

| Long-term Rating | Securitization Exposures (SE) | Resecuritization Exposures (RE) | Amount | | RW | |
|------------------------------|-------------------------------|---------------------------------|--------|----|----|----|
| | | | SE | RE | SE | RE |
| AAA to AAA- | 20 | 40 | | | | |
| A+ to A- | 50 | 100 | | | | |
| BBB+ to BBB- | 100 | 225 | | | | |
| BB+ to BB- | 350 | 650 | | | | |
| Total | | | | | | |
| B+ and below or unrated | Deduction ¹ | | | | | |
| Short-term Rating | Securitization Exposures | Resecuritization Exposures | | | | |
| A-1/P-1 | 20 | 40 | | | | |
| A-2/P-2 | 50 | 100 | | | | |
| A-3/P-3 | 100 | 225 | | | | |
| Total On Balance Sheet | | | | | | |
| All other ratings or unrated | Deduction ¹ | | | | | |

¹These deductions are at 50% each from Basle II Tier 1 and Tier 2 capital

²In the calculation of OnBalance Sheet RWA ensure that self guarantee are not permitted as Risk Mitigants

Q17 (Basel II.5-D-1)
(SR 000's)

Prudential Return
Market Risk (Specific Risk)

Standardized Approach (RWA)

712(v)¹. The specific risk capital charges for rated positions covered under the internal ratings-based approach for securitization exposures are defined in the table below. For positions with long-term ratings of B+ and below and short-term ratings other than A-1/P-1, A-2/P-2, A-3/P-3, deduction from capital as defined in paragraph 561 is required. The operational requirements for the recognition of external credit assessments outlined in paragraph 565 apply.

| Specific risk capital charges under the standardized approach based on external credit ratings | | | | | | Amt. | | RWA | |
|---|--------------------------|------------------------|----------------------------|-------------------|---|-------------|-----------|------------|-----------|
| External Credit Assessment | AAA to AA-A-1/P-1 | A+ to A-A-2/P-2 | BBB+ to BBB-A-3/P-3 | BB+ to BB- | Below BB- and below A-3/P-3 or unrated | RE | SE | RE | SE |
| Securitization Exposures (SE) | 1.6% | 4% | 8% | 28% | Deduction | | | | |
| Resecuritization exposures (RE) | 3.2% | 8% | 18% | 52% | Deduction | | | | |

Prudential Return (Q17 – Basel II.5 E to H-1)
Q17 (Basel II.5) IRB Approaches

Only Applicable to those Banks Where
SAMA has provided its Regulatory
Approval to use IRB Approach

October 2012

Internal Rating Based Approaches

- 1. CAR P1 Basel II.5
 - A. Regulatory Capital under Basel II.5 _____
 - B. RWA under Basel II.5 _____
 - C. CAR (P1) A/B % _____

Q17 (Basel II.5) - F

SR 000's

IRB APPROACHES
Basle II.5
Regulatory Capital
Tier 1, Tier 2 and Tier 3
For Quarter Ending

A. Basle II Regulatory Capital (Q17.2)

- Tier 1 _____
- Tier 2 _____
- Tier 3 _____

B. Basle II.5 (Adjustment)^{1,2}

Deduction for high risk securities

Q17 (Basel II.5) H – attached³

- Tier 1 (50%) _____
- Tier 2 (50%) _____
- Tier 3 _____

- Market Risk amendment² (IRB) _____
 - Deduction for high risk securities relating to specific risk
 - Q17 (Basel II.5) H-1 - attached
 - Tier 1 (50%) _____
 - Tier 2 (50%) _____
 - Tier 3 _____

C. Regulatory Basle II.5 Capital (A-B) – IRB Approaches _____

Net of A and B by respective Tiers

- Tier 1 _____
- Tier 2 _____
- Tier 3 _____

¹BCBS document of July 2009 "Enhancement to Basel II Framework"

²BCBS document of December 2010 "Revision to Basel II Market Risk Framework"

³Use long term or short term ratings

Q17 (Basel II.5) – G
(SR 000's)

IRB Approaches
Basle II.5
Risk Weighted Assets (Pillar 1)
For Quarter Ending

1. Basle II

Pillar 1 risk Weighted Assets (Q17.2A) _____
 - Securitized assets only

2. Basle II.5 Adjustments to securitized and resecuritized assets^{1,2}

2.1 Credit risk¹

On-Balance sheet securitized and resecuritized assets
 - RWA Securitized
 (Standardized approach) Q17 (Basel II.5) – H attached _____
 (Long term or Short term)

- Off-Balance sheet
 - RWA on securitized liquidity facilities³ _____
 (P.7 of BCBS) July 2009 under IRB

2.2 Market Risk²

BCBS Document of December 2010²
 - Specific Risk charges
 Q17 (Basel II.5-H-1) - attached _____
 Total (2.1 + 2.2)

- 3. Total RWA Asset under Basel II _____
- 4. Less item 1 above _____
- 5. Add item 2 above _____
- 6. Total RWA under Basel II.5 _____

¹BCBS document of July 2009 "Enhancement to Basel II Framework"

²BCBS document of December 2010 "Revision to Market Risk Framework"

³If applicable and based on page 7 and 8 of document (1) footnote # 1 above.

Q17 (Basel II.5) H
(SR 000's)

Prudential Return
Risk Weighted Under IRB Approach
For Securitization and Resecuritization Exposures

| Long-Term Rating | Securitization Exposures (SE) | | | Resecuritization Exposures (RE) | | Amount | | RWA | |
|-------------------|---|----------------------|--------------|---------------------------------|------------|--------|----|-----|----|
| | Senior, Granular | Non-Senior, Granular | Non-Granular | Senior | Non-senior | SE | RE | Se | RE |
| AAA | 7 | 12 | 20 | 20 | 30 | | | | |
| AA | 8 | 15 | 25 | 25 | 40 | | | | |
| A+ | 10 | 18 | 35 | 35 | 50 | | | | |
| A | 12 | 20 | 35 | 40 | 65 | | | | |
| A- | 20 | 35 | 35 | 60 | 100 | | | | |
| BBB+ | 35 | 50 | 50 | 100 | 150 | | | | |
| BBB | 60 | 75 | 75 | 150 | 225 | | | | |
| BBB- | 100 | 100 | 100 | 200 | 350 | | | | |
| BB+ | 250 | 250 | 250 | 300 | 500 | | | | |
| BB | 425 | 425 | 425 | 500 | 650 | | | | |
| BB- | 650 | 650 | 650 | 750 | 850 | | | | |
| Below | Deduction from Capital¹ | | | | | | | | |
| | | | | | | | | | |
| | Securitization Exposures | | | Resecuritization Exposures | | | | | |
| Short-term Rating | Senior Granular | Non-senior, Granular | Non-Granular | Senior | Non-senior | | | | |
| A1 | 7 | 12 | 20 | 20 | 30 | | | | |
| A2 | 12 | 20 | 35 | 40 | 65 | | | | |
| A3 | 60 | 75 | 75 | 150 | 225 | | | | |
| Below | Deduction from Capital¹ | | | | | | | | |

¹Tier 1 – 50%

¹Tier 2 – 50%

Q17 (Basel II.5) H-1

(SR 000's)

IRB Approaches

712(v)¹. The specific risk capital charges for rated positions covered under the internal ratings-based approach for securitization exposures are defined in the table below. For positions with long-term ratings of B+ and below and short-term ratings other than A-1/P-1, A-2/P-2, A-3/P-3, deduction from capital as defined in paragraph 561 is required. The operational requirements for the recognition of external credit assessments outlined in paragraph 565 apply.

| Specific risk capital charges based on external credit ratings | | | | | | Amount | | RWA | |
|---|---|---------------------------------|--------------------------|-----------------------------------|-------------------|---------------|-----------|------------|-----------|
| External rating (illustrative) | Securitization Exposures | | | Resecuritization exposures | | SE | RE | SE | RE |
| | Senior, granular | Non-senior, granular | Non- granular | Senior | Non-senior | | | | |
| AAA/A-1/P-1 | 0.56% | 0.96% | 1.60% | 1.60% | 2.40% | | | | |
| AA | 0.64% | 1.20% | 2.00% | 2.00% | 3.20% | | | | |
| A+ | 0.80% | 1.44% | 2.80% | 2.80% | 4.00% | | | | |
| A/A-2/P-2 | 0.96% | 1.60% | | 3.20% | 5.20% | | | | |
| A- | 1.60% | 2.80% | | 4.80% | 8.00% | | | | |
| BBB+ | 2.80% | 4.00% | | 8.00% | 12.00% | | | | |
| BBB/A-3/P-3 | 4.80% | 6.00% | | 12.00% | 18.00% | | | | |
| BBB- | 8.00% | | | 16.00% | 28.00% | | | | |
| BB+ | 20.00% | | | 24.00% | 40.00% | | | | |
| BB | 34.00% | | | 40.00% | 52.00% | | | | |
| BB- | 52.00% | | | 60.00% | 68.00% | | | | |
| Below BB-/A-3/P-3 | Deduction from Capital¹ | | | | | | | | |

¹Tier 1 – 50%

¹Tier 2 – 50%

6. Basel II.5 Amendments to SAMA Basel II Methodology for Pillar 2 Requirements and Capital Adequacy Assessment Plans

Basel II.5 Pillar II

Credit Risk

1. SAMA has already issued its Basel II.5 amendments to Basel II Pillar through its circular # BCS 27835 of 10 November 2011 entitled "Enhancements to the ICAAP Document at the end of 2011".

Market Risk

2. Given below¹ are charges to the Supervisory Review Process concerning Market Risk . These Pillar 2 amendment are related to Internal Model option. SAMA intends to issue its Basel II.5 Guidance with regard to Market Risk (Internal Models Option) once BCBS has fully addressed the extensive Trading Book reforms as per its document "Fundamental Review of the Trading Book" of May 2012.

¹Changes to the supervisory review process for market risk under Basel II.5

22. In order to ensure consistency with the revised name of the incremental risk capital charge, paragraph 778(iv) of the Basel II Framework will be changed as follows. Changed wording is underlined.

778(iv). For banks wishing to model the specific risk arising from their trading activities, additional criteria have been set out including conservatively assessing the risk arising from less liquid positions and/or positions with limited price transparency under realistic market scenarios. Where supervisors consider that limited liquidity or price transparency undermines the effectiveness of a bank's model to capture the specific risk, they will take appropriate measures, including requiring the exclusion of positions from the bank's specific risk model. Supervisors should review the adequacy of the bank's measure of the incremental risk capital charge; where the bank's approach is inadequate, the use of the standardized specific risk charges will be required.

7. Enhancement under Basel II.5
With regard to Pillar 3

Basel II.5
Pillar 3 (Revision)

SAMA Document issued to implement Basel II.5 (Pillar 3)

A. Credit Risk

SAMA has issued the following Circulars with regard to implementing Basel II.5 Pillar 3 in conjunction with securitized and resecuritized products on the basis of the BCBS document entitled "Enhancement to the Basel II Framework" of July 2009. These circulars cover Prudential return (Pillar 3) and Guidance notes for the credit risk for Securitized and Resecuritized assets.

1. SAMA Circular # BCS 13134 of 11 May 2010 entitled "Enhancement to SAMA Bank Disclosure requirements under Basel II Framework Pillar 3 components.
2. Circular # BCS 3229 of 31 December 2011 "Enhancement # 1 to SAMA's Disclosures Requirements under Basel II Framework Pillar 3 component.

B. Market Risk Standardized Approach Only

SAMA is issuing a Prudential returns on page 44. The basis of the return is given below as described in BCBS document "Revision to the Basel II Market Risk Framework"

Market Risk Table 10 (Under Basel II.5)

Enhancement to Basel II for Basel II.5 are underlined.

Market risk: disclosures for banks using the standardized approach²⁴

| | | |
|---------------------------------|-----|--|
| Qualitative disclosures | (a) | The general qualitative disclosure requirement (paragraph 824) for market risk including the portfolios covered by the standardized approach. |
| Quantitative disclosures | (b) | The capital requirements for: <ul style="list-style-type: none"> • interest rate risk;²⁵ • equity position risk; • foreign exchange risk; and • commodity risk. |

²⁴ The standardized approach here refers to the "standardized measurement method" as defined in Part 2, Section VI C.

²⁵ Separate disclosures are required for the capital requirements on securitization positions under Table 10 (Standardized Approach)

All the above Basel II.5 are covered under Basel II with the exception of requirement related to capital requirements for interest rate risk where as underlined there should be a separate disclosure for securitized assets as attached prudential returns.

Prudential Return

Basel II.5
Pillar 3 Standardized Approach
Market Risk

| | | | | | |
|--|---------------------------------------|-----------------------------|------------------------------|-----------------------|--------------|
| Frequency: SA Location: W | | | | | |
| TABLE 10: MARKET RISK: DISCLOSURES FOR BANKS USING THE STANDARDIZE APPROACH | | | | | |
| Level of Market Risks In Terms of Capital Requirements (Table 10, (b)) | | | | | |
| | Interest rate risk¹ | Equity position risk | Foreign exchange risk | Commodity risk | Total |
| Capital Requirements | | | | | |

¹of which related to Securitized Assets is SR _____.

Table 11

Market risk: disclosures for banks using the internal models approach (IMA) for trading portfolios

| | | |
|--------------------------|------|---|
| Qualitative Disclosures | (a) | The general qualitative disclosure requirement (paragraph 824) for market risk including the portfolios covered by the IMA. In addition, a discussion of the extent of and methodologies for compliance with the “Prudent valuation guidance” for positions held in the trading book (paragraphs 690 to 701). |
| | (b) | The discussion should include an articulation of the soundness standards on which the bank’s internal capital adequacy assessment is based. It should also include a description of the methodologies used to achieve a capital adequacy assessment that is consistent with the soundness standards. |
| | (c) | For each portfolio covered by the IMA: the characteristics of the models used; a description of stress testing applied to the portfolio; and a description of the approach used for backtesting/validating the accuracy and consistency of the internal models and modelling processes. |
| | (d) | The scope of acceptance by the supervisor. |
| | (e) | <u>For the incremental risk capital charge and the comprehensive risk capital charge the methodologies used and the risks measured through the use of internal models. Included in the qualitative description should be:</u> <u>the approach used by the bank to determine liquidity horizons;</u> <u>the methodologies used to achieve a capital assessment that is consistent with the required soundness standard; and</u> <u>the approaches used in the validation of the models.</u> |
| Quantitative disclosures | (ef) | For trading portfolios under the IMA: The high, mean and low VaR values over the reporting period and period-end; <u>The high, mean and low stressed VaR values over the reporting period and period-end;</u> <u>The high, mean and low incremental and comprehensive risk capital charges over the reporting period and period-end;</u> and A comparison of VaR estimates with actual gains/losses experienced by the bank, with analysis of important “outliers” in backtest results. |

Internal Models: Not to be implemented until BCBS Trading Book issues are resolved.

**Relevant Sections of BCBS Document
of June 2006 with regard to Securitization
which provide the Definitions and Clarifications
Relevant to Basle II.5 Guidance Document**

**Saudi Arabian Monetary Agency
Banking Supervision Department**

Definition and Clarification to Securitization Framework

The following are the major elements of a Securitized Framework.

- (1) 538. Banks must apply the securitization framework for determining regulatory capital requirements on exposures arising from traditional and synthetic securitizations or similar structures that contain features common to both. Since securitizations may be structured in many different ways, the capital treatment of a securitization exposure must be determined on the basis of its economic substance rather than its legal form. Banks may consult with SAMA when there is uncertainty about whether a given transaction should be considered a securitization. **(Refer to Section 3.1 Guidance document)**
- (2) 539. A *traditional securitization* is a structure where 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. Payments to the investors depend upon the performance of the specified underlying exposures, as opposed to being derived from an obligation of the entity originating those exposures. The stratified/tranched structures that characterise securitizations differ from ordinary senior/subordinated debt instruments in that junior securitization tranches can absorb losses without interrupting contractual payments to more senior tranches, whereas subordination in a senior/subordinated debt structure is a matter of priority of rights to the proceeds of liquidation. **(Refer to Section 3.1 of Guidance document)**
- (3) 540. A *synthetic securitization* 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 (e.g. credit-linked notes) or unfunded (e.g. credit default swaps) credit derivatives or guarantees that serve to hedge the credit risk of the portfolio. Accordingly, the investors' potential risk is dependent upon the performance of the underlying pool. **(Refer to Section 3.1 of Guidance document)**
- (4) 541. Banks' exposures to a securitization are hereafter referred to as "securitization exposures". Securitization exposures can include but are not restricted to the following: asset-backed securities, mortgage-backed securities, credit enhancements, liquidity facilities, interest rate or currency swaps, credit derivatives and tranched cover as described in paragraph 199. Reserve accounts, such as cash collateral accounts, recorded as an asset by the originating bank must also be treated as securitization exposures. **(Refer to Section 3.1 of Guidance document)**

- (5) 542. Underlying instruments in the pool being securitized 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. The underlying pool may include one or more exposures. **(Refer to Section 3.1 of Guidance document)**

Originating Bank

- (6) 543. For risk-based capital purposes, a bank is considered to be an originator with regard to a certain securitization if it meets either of the following conditions: **(Refer to Section 3.1 of Guidance document)**
- (a) The bank originates directly or indirectly underlying exposures included in the securitization; or
 - (b) The bank serves as a sponsor of an asset-backed commercial paper (ABCP) conduit or similar programme that acquires exposures from third-party entities. In the context of such programmes, a bank would generally be considered a sponsor and, in turn, an originator if it, in fact or in substance, manages or advises the programme, places securities into the market, or provides liquidity and/or credit enhancements.

Asset-backed commercial paper (ABCP) programme

- (7) 544. An asset-backed commercial paper (ABCP) programme predominately issues commercial paper with an original maturity of one year or less that is backed by assets or other exposures held in a bankruptcy-remote, special purpose entity. **(Refer to Section 3.1 of Guidance Document)**

Clean-up call

- (8) 545. A clean-up call is an option that permits the securitization exposures (e.g. assetbacked securities) to be called before all of the underlying exposures or securitization exposures have been repaid. In the case of traditional securitizations, this is generally accomplished by repurchasing the remaining securitization exposures once the pool balance or outstanding securities have fallen below some specified level. In the case of a synthetic transaction, the clean-up call may take the form of a clause that extinguishes the credit protection.

Credit enhancement

- (9) 546. A credit enhancement is a contractual arrangement in which the bank retains or assumes a securitization exposure and, in substance, provides some degree of added protection to other parties to the transaction.

Credit-enhancing interest-only strip

- (10) 547. A credit-enhancing interest-only strip (*I/O*) is an on-balance sheet asset that (i) represents a valuation of cash flows related to future margin income, and (ii) is subordinated.

Early amortization

- (11) 548. Early amortization provisions are mechanisms that, once triggered, allow investors to be paid out prior to the originally stated maturity of the securities issued. For risk-based capital purposes, an early amortization provision will be considered either controlled or noncontrolled. A controlled early amortization provision must meet all of the following conditions.

(a) The bank must have an appropriate capital/liquidity plan in place to ensure that it has sufficient capital and liquidity available in the event of an early amortization.

(b) Throughout the duration of the transaction, including the amortization period, there is the same pro rata sharing of interest, principal, expenses, losses and recoveries based on the bank's and investors' relative shares of the receivables outstanding at the beginning of each month.

(c) The bank must set a period for amortization that would be sufficient for at least 90% of the total debt outstanding at the beginning of the early amortization period to have been repaid or recognized as in default; and

(d) The pace of repayment should not be any more rapid than would be allowed by straight-line amortization over the period set out in criterion (c).

- (12) 549. An early amortization provision that does not satisfy the conditions for a controlled early amortization provision will be treated as a non-controlled early amortization provision.

Excess spread

- (13) 550. Excess spread is generally defined as gross finance charge collections and other income received by the trust or special purpose entity (SPE, specified in paragraph 552) minus certificate interest, servicing fees, charge-offs, and other senior trust or SPE expenses.

Implicit support

- (14) 551. Implicit support arises when a bank provides support to a securitization in excess of its predetermined contractual obligation.

Special purpose entity (SPE)

- (15) 552. An SPE is a corporation, trust, or other entity organised 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. SPEs are commonly used as financing vehicles in which exposures are sold to a trust or similar entity in exchange for cash or other assets funded by debt issued by the trust. **(Refer to section 3.1 of this Guidance document)**

C. Operational requirements for the recognition of risk transference

- (16) 553. The following operational requirements are applicable to both the standardized and IRB approaches of the securitization framework.

Specific Guidance on Definitions

Operational requirements for traditional and synthetic securitizations

- (17) 554. An originating bank may exclude securitized exposures from the calculation of risk weighted assets only if all of the following conditions have been met. Banks meeting these conditions must still hold regulatory capital against any securitization exposures they retain. **(Refer to section 3.1 of this Guidance document)**

(a) Significant credit risk associated with the securitized exposures has been transferred to third parties.

(b) The transferor does not maintain effective or indirect control over the transferred exposures. The assets 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. These conditions must be supported by an opinion provided by a qualified legal counsel.

The transferor is deemed to have maintained effective control over the transferred credit risk exposures if it: (i) is able to repurchase from the transferee the previously transferred exposures in order to realize their benefits; or (ii) is obligated to retain the risk of the transferred exposures. The transferor's retention of servicing rights to the exposures will not necessarily constitute indirect control of the exposures.

(c) The securities issued are not obligations of the transferor. Thus, investors who purchase the securities only have claim to the underlying pool of exposures.

(d) 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.

- (e) Clean-up calls must satisfy the conditions set out in paragraph 557.
- (f) The securitization does not contain clauses that (i) require the originating bank to alter systematically the underlying exposures such that the pool's weighted average credit quality is improved unless this is achieved by selling assets 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.

2. Operational requirements for synthetic securitizations

(18) 555. For synthetic securitizations, the use of 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: **(Refer to section 3.1 of this Guidance document)**

(a) Credit risk mitigants must comply with the requirements as set out in Section II.D of this Framework.

(b) Eligible collateral is limited to that specified in paragraphs 145 and 146. Eligible collateral pledged by SPEs may be recognized.

(c) Eligible guarantors are defined in paragraph 195. Banks may not recognize SPEs as eligible guarantors in the securitization framework.

(d) Banks must transfer significant credit risk associated with the underlying exposure to third parties.

(e) The instruments used to transfer credit risk may not contain terms or conditions that limit the amount of credit risk transferred, such as those provided below:

- Clauses that materially limit the credit protection or credit risk transference (e.g. significant materiality thresholds below which credit protection is deemed not to be triggered even if a credit event occurs or those that allow for the termination of the protection due to deterioration in the credit quality of the underlying exposures);
- Clauses that require the originating bank to alter the underlying exposures to improve the pool's weighted average credit quality;
- Clauses that increase the banks' cost of credit protection in response to deterioration in the pool's quality;
- Clauses that 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 reference pool; and
- Clauses that provide for increases in a retained first loss position or credit enhancement provided by the originating bank after the transaction's inception.

(f) An opinion must be obtained from a qualified legal counsel that confirms the enforceability of the contracts in all relevant jurisdictions.

(g) Clean-up calls must satisfy the conditions set out in paragraph below [in Paragraph \(20\) 557. Refer Paragraph 555 of BCBS Basel II Guidelines](#)

(19) 556. For synthetic securitizations, the effect of applying CRM techniques for hedging the underlying exposure are treated according to paragraphs 109 to 210. In case there is a maturity mismatch, the capital requirement will be determined in accordance with paragraphs 202 to 205. When the exposures in the underlying pool have different maturities, the longest maturity must be taken as the maturity of the pool. Maturity mismatches may arise in the context of synthetic securitizations when, for example, a bank uses credit derivatives to transfer part or all of the credit risk of a specific pool of assets to third parties. When the credit derivatives unwind, the transaction will terminate. This implies that the effective maturity of the tranches of the synthetic securitization may differ from that of the underlying exposures. Originating banks of synthetic securitizations must treat such maturity mismatches in the following manner. A bank using the standardized approach for securitization must deduct all retained positions that are unrated or rated below investment grade. A bank using the IRB approach must deduct unrated, retained positions if the treatment of the position is deduction specified in paragraphs 609 to 643. Accordingly, when deduction is required, maturity mismatches are not taken into account. For all other securitization exposures, the bank must apply the maturity mismatch treatment set forth in paragraphs 202 to 205. **(Refer to section 3.1 of this Guidance document)**

Operational requirements and treatment of clean-up calls

(20) 557. For securitization transactions that include a clean-up call, no capital will be required due to the presence of a clean-up call if the following conditions are met: (i) the exercise of the clean-up call must not be mandatory, in form or in substance, but rather must be at the discretion of the originating bank; (ii) the clean-up call must not be structured to avoid allocating losses to credit enhancements or positions held by investors or otherwise structured to provide credit enhancement; and (iii) the clean-up call must only be exercisable when 10% or less of the original underlying portfolio, or securities issued remain, or, for synthetic securitizations, when 10% or less of the original reference portfolio value remains. **(Refer to section 3.1 of this Guidance document)**

(21) 558. Securitization transactions that include a clean-up call that does not meet all of the criteria stated in paragraph 557 result in a capital requirement for the originating bank. For a traditional securitization, the underlying exposures must be treated as if they were not securitized. Additionally, banks must not recognize in regulatory capital any gain-on-sale, as defined in paragraph 562. For synthetic securitizations, 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. If a synthetic securitization incorporates a call (other than a cleanup call) that effectively terminates the transaction and the purchased credit protection on a specific date, the bank must treat the transaction in accordance with paragraph 556 and paragraphs 202 to 205. **(Refer to section 3.1 of this Guidance document)**

- (22) 559. 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 in accordance with the supervisory guidance pertaining to securitization transactions. **(section 553-559) refer to section 3.1 of Guidance document)**

D. Treatment of securitization exposures

Calculation of capital requirements

- (23) 560. Banks are required to hold regulatory capital against all of their securitization exposures, including those arising from the provision of credit risk mitigants to a securitization transaction, investments in asset-backed securities, retention of a subordinated tranche, and extension of a liquidity facility or credit enhancement, as set forth in the following sections. Repurchased securitization exposures must be treated as retained securitization exposures. **(Refer to RWA calculations under Basle II.5 returns)**
(Refer to Regulatory Capital calculations under Basle II.5 returns Q17 (Basel II.5) Series A to H-1)

(i) Deduction

- (24) 561. When a bank is required to deduct a securitization exposure from regulatory capital, the deduction must be taken 50% from Tier 1 and 50% from Tier 2 with the one exception noted in paragraph 562. Credit enhancing I/Os (net of the amount that must be deducted from Tier 1 as in paragraph 562) are deducted 50% from Tier 1 and 50% from Tier 2. Deductions from capital may be calculated net of any specific provisions taken against the relevant securitization exposures. **(Refer to Regulatory Capital calculations under Basle II.5 returns Q17 (Basel II.5) Series A to H-1)**
- (25) 562. Banks must deduct from Tier 1 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 that is recognized in regulatory capital. Such an increase in capital is referred to as a “gain-on-sale” for the purposes of the securitization framework – **Prudential return Q17 (Basel II.5) Series A to H-1 under Regulatory Capital calculation.**
- (26) 563. For the purposes of the EL-provision calculation as set out in Section III.G, securitization exposures do not contribute to the EL amount. Similarly, any specific provisions against securitization exposures are not to be included in the measurement of eligible provisions.

(ii) Implicit support

(27) 564. When a bank provides implicit support to a securitization, it must, at a minimum, hold capital against all of the exposures associated with the securitization transaction as if they had not been securitized. Additionally, banks would not be permitted to recognize in regulatory capital any gain-on-sale, as defined in paragraph 562. Furthermore, the bank is required to disclose publicly that (a) it has provided non-contractual support and (b) the capital impact of doing so. **(Refer to RWA calculations under Basle II.5 – Prudential returns) (Refer to Regulatory Capital calculations under Basle II.5 returns Q17 (Basel II.5) Series A to H-1)**

Operational requirements for use of external credit assessments

(28) 565. The following operational criteria concerning the use of external credit assessments apply in the standardized and IRB approaches of the securitization framework: **(Refer to item 3.5 of Guidance document)**

(a) To be eligible for risk-weighting purposes, the external credit assessment must take into account and reflect the entire amount of credit risk exposure the bank has with regard to all payments owed to it. For example, if a bank is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with timely repayment of both principal and interest.

(b) The external credit assessments must be from an eligible ECAI as recognized by the bank's national supervisor in accordance with paragraphs 90 to 108 with the following exception. In contrast with bullet three of paragraph 91, an eligible credit assessment must be publicly available. In other words, a rating must be published in an accessible form and included in the ECAI's transition matrix. Consequently, ratings that are made available only to the parties to a transaction do not satisfy this requirement. **(Refer to section 3.6 of Guidance document)**

(c) Eligible ECAIs must have a demonstrated expertise in assessing securitizations, which may be evidenced by strong market acceptance.

(d) A bank must apply external credit assessments from eligible ECAIs consistently across a given type of securitization exposure. Furthermore, a bank cannot use the credit assessments issued by one ECAI for one or more tranches and those of another ECAI for other positions (whether retained or purchased) within the same securitization structure that may or may not be rated by the first ECAI. Where two or more eligible ECAIs can be used and these assess the credit risk of the same securitization exposure differently, paragraphs 96 to 98 will apply.

(e) Where CRM is provided directly to an SPE by an eligible guarantor defined in paragraph 195 and is reflected in the external credit assessment assigned to a securitization exposure(s), the risk weight associated with that external credit assessment should be used. In order to avoid any double counting, no additional capital recognition is permitted. If the CRM provider is not recognized as an eligible

guarantor in paragraph 195, the covered securitization exposures should be treated as unrated.

(f) In the situation where a credit risk mitigant is not obtained by the SPE but rather applied to a specific securitization exposure within a given structure (e.g. ABS tranche), the bank must treat the exposure as if it is unrated and then use the CRM treatment outlined in Section II.D or in the foundation IRB approach of Section III, to recognize the hedge.

E. Standardized approach for securitization exposures

(i) Scope

(29) 566. Banks that apply the standardized approach to credit risk for the type of underlying exposure(s) securitized must use the standardized approach under the securitization framework.

(ii) Risk weights

(30) 567. The risk-weighted asset amount of a securitization exposure is computed by multiplying the amount of the position by the appropriate risk weight determined in accordance with the following tables. For off-balance sheet exposures, banks must apply a CCF and then risk weight the resultant credit equivalent amount. If such an exposure is rated, a CCF of 100% must be applied. For positions with long-term ratings of B+ and below and short-term ratings other than A-1/P-1, A-2/P-2, A-3/P-3, deduction from capital as defined in paragraph 561 is required. Deduction is also required for unrated positions with the exception of the circumstances described in paragraphs 571 to 575. **(Refer to section 3.2 of Guidance Document)**

Long-Term Rating Category

| External Credit Assessment | AAA to AA- | A+ to A- | BBB+ to BBB- | BB+ to BB- | B+ and below or unrated |
|----------------------------|------------|----------|--------------|------------|-------------------------|
| Risk Weight | 20% | 50% | 100% | 350% | Deduction |

Short-Term Rating Category

| External Credit Assessment | A-1/P-1 | A-2/P-2 | A-3/P-3 | All other ratings or unrated |
|----------------------------|---------|---------|---------|------------------------------|
| Risk Weight | 20% | 50% | 100% | Deduction |

(31) 568. The capital treatment of positions retained by originators, liquidity facilities, credit risk mitigants, and securitizations of revolving exposures are identified separately. The treatment of clean-up calls is provided in paragraphs 557 to 559.

Investors may recognize ratings on below-investment grade exposures

- (32) 569. Only third-party investors, as opposed to banks that serve as originators, may recognize external credit assessments that are equivalent to BB+ to BB- for risk weighting purposes of securitization exposures.

Originators to deduct below-investment grade exposures

- (33) 570. Originating banks as defined in paragraph 543 must deduct all retained securitization exposures rated below investment grade (i.e. BBB-).

(iii) Exceptions to general treatment of unrated securitization exposures

- (34) 571. As noted in the tables above, unrated securitization exposures must be deducted with the following exceptions: (i) the most senior exposure in a securitization, (ii) exposures that are in a second loss position or better in ABCP programmes and meet the requirements outlined in paragraph 574, and (iii) eligible liquidity facilities. **(Refer to Guidance Document item 3.2)**

Treatment of unrated most senior securitization exposures (Refer to Guidance Document item 3.3)

- (35) 572. If the most senior exposure in a securitization of a traditional or synthetic securitization is unrated, a bank that holds or guarantees such an exposure may determine the risk weight by applying the “look-through” treatment, provided the composition of the underlying pool is known at all times. Banks are not required to consider interest rate or currency swaps when determining whether an exposure is the most senior in a securitization for the purpose of applying the “look-through” approach.
- (36) 573. In the look-through treatment, the unrated most senior position receives the average risk weight of the underlying exposures subject to supervisory review. Where the bank is unable to determine the risk weights assigned to the underlying credit risk exposures, the unrated position must be deducted.

Treatment of exposures in a second loss position or better in ABCP programmes

- (37) 574. Deduction is not required for those unrated securitization exposures provided by sponsoring banks to ABCP programmes that satisfy the following requirements:
- (a) The exposure is economically in a second loss position or better and the first loss position provides significant credit protection to the second loss position;
- (b) The associated credit risk is the equivalent of investment grade or better; and

(c) The bank holding the unrated securitization exposure does not retain or provide the first loss position.

(38) 575. Where these conditions are satisfied, the risk weight is the greater of (i) 100% or (ii) the highest risk weight assigned to any of the underlying individual exposures covered by the facility.

Risk weights for eligible liquidity facilities

(39) 576. For eligible liquidity facilities as defined in paragraph 578 and where the conditions for use of external credit assessments in paragraph 565 are not met, the risk weight applied to the exposure's credit equivalent amount is equal to the highest risk weight assigned to any of the underlying individual exposures covered by the facility.

(iv) Credit conversion factors for off-balance sheet exposures

(40) 577. For risk-based capital purposes, banks must determine whether, according to the criteria outlined below, an off-balance sheet securitization exposure qualifies as an 'eligible liquidity facility' or an 'eligible servicer cash advance facility'. All other off-balance sheet securitization exposures will receive a 100% CCF.

Eligible liquidity facilities

(41) 578. Banks are permitted to treat off-balance sheet securitization exposures as eligible liquidity facilities if the following minimum requirements are satisfied:

(a) The facility documentation must clearly identify and limit the circumstances under which it may be drawn. Draws under the facility must be limited to the amount that is likely to be repaid fully from the liquidation of the underlying exposures and any seller-provided credit enhancements. In addition, the facility must not cover any losses incurred in the underlying pool of exposures prior to a draw, or be structured such that draw-down is certain (as indicated by regular or continuous draws);

(b) The facility must be subject to an asset quality test that precludes it from being drawn to cover credit risk exposures that are in default as defined in paragraphs 452 to 459. In addition, if the exposures that a liquidity facility is required to fund are externally rated securities, the facility can only be used to fund securities that are externally rated investment grade at the time of funding;

(c) The facility cannot be drawn after all applicable (e.g. transaction-specific and programme-wide) credit enhancements from which the liquidity would benefit have been exhausted; and

(d) Repayment of draws on the facility (i.e. assets acquired under a purchase agreement or loans made under a lending agreement) must not be subordinated to any interests of any note holder in the programme (e.g. ABCP programme) or subject to deferral or waiver.

- (42) 579. Where these conditions are met, the bank may apply a 20% CCF to the amount of eligible liquidity facilities with an original maturity of one year or less, or a 50% CCF if the facility has an original maturity of more than one year. However, if an external rating of the facility itself is used for risk-weighting the facility, a 100% CCF must be applied. (Item 3.7 of Guidance document)

Eligible liquidity facilities available only in the event of market disruption

- (43) 580. Banks may apply a 0% CCF to eligible liquidity facilities that are only available in the event of a general market disruption (i.e. whereupon more than one SPE across different transactions are unable to roll over maturing commercial paper, and that inability is not the result of an impairment in the SPEs' credit quality or in the credit quality of the underlying exposures). To qualify for this treatment, the conditions provided in paragraph 578 must be satisfied. Additionally, the funds advanced by the bank to pay holders of the capital market instruments (e.g. commercial paper) when there is a general market disruption must be secured by the underlying assets, and must rank at least *pari passu* with the claims of holders of the capital market instruments.
(Refer to item # 3.9 of Guidance Document)

Treatment of overlapping exposures

- (44) 581. A bank may provide several types of facilities that can be drawn under various conditions. The same bank may be providing two or more of these facilities. Given the different triggers found in these facilities, it may be the case that a bank provides duplicative coverage to the underlying exposures. In other words, the facilities provided by a bank may overlap since a draw on one facility may preclude (in part) a draw under the other facility. In the case of overlapping facilities provided by the same bank, the bank does not need to hold additional capital for the overlap. Rather, it is only required to hold capital once for the position covered by the overlapping facilities (whether they are liquidity facilities or credit enhancements). Where the overlapping facilities are subject to different conversion factors, the bank must attribute the overlapping part to the facility with the highest conversion factor. However, if overlapping facilities are provided by different banks, each bank must hold capital for the maximum amount of the facility. **(Refer to section 3.5 of Guidance document)**

Eligible servicer cash advance facilities

- (45) 582. Subject to national discretion, if contractually provided for, servicers may advance cash to ensure an uninterrupted flow of payments to investors so long as the servicer is entitled to full reimbursement and this right is senior to other claims on cash flows from the underlying pool of exposures. At national discretion, such undrawn servicer cash advances or facilities that are unconditionally cancellable without prior notice may be eligible for a 0% CCF. Refer to section 3.6 of Guidance document.

(v) Treatment of credit risk mitigation for securitization exposures

- (46) 583. The treatment below applies to a bank that has obtained a credit risk mitigant on a securitization exposure. Credit risk mitigants include guarantees, credit derivatives, collateral and on-balance sheet netting. Collateral in this context refers to that used to hedge the credit risk of a securitization exposure rather than the underlying exposures of the securitization transaction.
- (47) 584. When a bank other than the originator provides credit protection to a securitization exposure, it must calculate a capital requirement on the covered exposure as if it were an investor in that securitization. If a bank provides protection to an unrated credit enhancement, it must treat the credit protection provided as if it were directly holding the unrated credit enhancement. **(refer to section # 3.6 of Guidance Document)**

Collateral

- (48) 585. Eligible collateral is limited to that recognized under the standardized approach for CRM (paragraphs 145 and 146). Collateral pledged by SPEs may be recognized. **(Refer to section # 3.6 of Guidance Document)**

Guarantees and credit derivatives

- (49) 586. Credit protection provided by the entities listed in paragraph 195 may be recognized. SPEs cannot be recognized as eligible guarantors. **(Refer to section # 3.6 of Guidance Document)**
- (50) 587. Where guarantees or credit derivatives fulfil the minimum operational conditions as specified in paragraphs 189 to 194, banks can take account of such credit protection in calculating capital requirements for securitization exposures. **(Refer to section # 3.6 of Guidance Document)**
- (51) 588. Capital requirements for the guaranteed/protected portion will be calculated according to CRM for the standardized approach as specified in paragraphs 196 to 201.

Maturity mismatches

- (52) 589. For the purpose of setting regulatory capital against a maturity mismatch, the capital requirement will be determined in accordance with paragraphs 202 to 205. When the exposures being hedged have different maturities, the longest maturity must be used.

(vi) Capital requirement for early amortization provisions

Scope

- (53) 590. As described below, an originating bank is required to hold capital against all or a portion of the investors' interest (i.e. against both the drawn and undrawn balances related to the securitized exposures) when:
- (a) It sells exposures into a structure that contains an early amortization feature; and

(b) The exposures sold are of a revolving nature. These involve exposures where the borrower is permitted to vary the drawn amount and repayments within an agreed limit under a line of credit (e.g. credit card receivables and corporate loan commitments).

(54) 591. The capital requirement should reflect the type of mechanism through which an early amortization is triggered.

(55) 592. For securitization structures wherein the underlying pool comprises revolving and term exposures, a bank must apply the relevant early amortization treatment (outlined below in paragraphs 594 to 605) to that portion of the underlying pool containing revolving exposures.

(56) 593. Banks are not required to calculate a capital requirement for early amortizations in the following situations:

(a) Replenishment structures where the underlying exposures do not revolve and the early amortization ends the ability of the bank to add new exposures;

(b) Transactions of revolving assets containing early amortization features that mimic term structures (i.e. where the risk on the underlying facilities does not return to the originating bank);

(c) Structures where a bank securitizes one or more credit line(s) and where investors remain fully exposed to future draws by borrowers even after an early amortization event has occurred;

(d) The early amortization clause is solely triggered by events not related to the performance of the securitized assets or the selling bank, such as material changes in tax laws or regulations.

Maximum capital requirement

(57) 594. For a bank subject to the early amortization treatment, the total capital charge for all of its positions will be subject to a maximum capital requirement (i.e. a 'cap') equal to the greater of (i) that required for retained securitization exposures, or (ii) the capital requirement that would apply had the exposures not been securitized. In addition, banks must deduct the entire amount of any gain-on-sale and credit enhancing I/Os arising from the securitization transaction in accordance with paragraphs 561 to 563.

Mechanics

(58) 595. The originator's capital charge for the investors' interest is determined as the product of (a) the investors' interest, (b) the appropriate CCF (as discussed below), and (c) the risk weight appropriate to the underlying exposure type, as if the exposures had not been securitized. As described below, the CCFs depend upon whether the early amortization repays investors through a controlled or

non-controlled mechanism. They also differ according to whether the securitized exposures are uncommitted retail credit lines (e.g. credit card receivables) or other credit lines (e.g. revolving corporate facilities). A line is considered uncommitted if it is unconditionally cancellable without prior notice.

(vii) Determination of CCFs for controlled early amortization features

(59) 596. An early amortization feature is considered controlled when the definition as specified in paragraph 548 is satisfied.

Uncommitted retail exposures

(60) 597. For uncommitted retail credit lines (e.g. credit card receivables) in securitizations containing controlled early amortization features, banks must compare the three-month average excess spread defined in paragraph 550 to the point at which the bank is required to trap excess spread as economically required by the structure (i.e. excess spread trapping point).

(61) 598. In cases where such a transaction does not require excess spread to be trapped, the trapping point is deemed to be 4.5 percentage points.

(62) 599. The bank must divide the excess spread level by the transaction's excess spread trapping point to determine the appropriate segments and apply the corresponding conversion factors, as outlined in the following table.

Controlled early amortization features

| | Uncommitted | Committed |
|-------------------------|---|-----------|
| Retail Credit lines | <p>3-month average excess spread Credit Conversion Factor (CCF)</p> <p>133.33% of trapping point or more 0% CCF</p> <p>less than 133.33% to 100% of trapping point 1% CCF</p> <p>less than 100% to 75% of trapping point 2% CCF</p> <p>less than 75% to 50% of trapping point 10% CCF</p> <p>less than 50% to 25% of trapping point 20% CCF</p> <p>less than 25% 40% CCF</p> | 90% CCF |
| Non-retail credit lines | 90% CCF | 90% CCF |

(63) 600. Banks are required to apply the conversion factors set out above for controlled mechanisms to the investors' interest referred to in paragraph 595.

Other exposures

(64) 601. All other securitized revolving exposures (i.e. those that are committed and all nonretail exposures) with controlled early amortization features will be subject to a CCF of 90% against the off-balance sheet exposures.

(viii) Determination of CCFs for non-controlled early amortization features

(65) 602. Early amortization features that do not satisfy the definition of a controlled early amortization as specified in paragraph 548 will be considered non-controlled and treated as follows.

Uncommitted retail exposures

(66) 603. For uncommitted retail credit lines (e.g. credit card receivables) in securitizations containing non-controlled early amortization features, banks must make the comparison described in paragraphs 597 and 598:

(67) 604. The bank must divide the excess spread level by the transaction's excess spread trapping point to determine the appropriate segments and apply the corresponding conversion factors, as outlined in the following table.

Non-Controlled early amortization features

| | Uncommitted | Committed |
|-------------------------|---|-----------|
| Retail Credit lines | <p>3-month average excess spread Credit Conversion Factor (CCF)</p> <p>133.33% of trapping point or more 0% CCF</p> <p>less than 133.33% to 100% of trapping point 5% CCF</p> <p>less than 100% to 75% of trapping point 15% CCF</p> <p>less than 75% to 50% of trapping point 50% CCF</p> <p>less than 50% of trapping point 100% CCF</p> | 100% CCF |
| Non-retail credit lines | 100% CCF | 100% CCF |

Other exposures

- (68) 605. All other securitized revolving exposures (i.e. those that are committed and all nonretail exposures) with non-controlled early amortization features will be subject to a CCF of 100% against the off-balance sheet exposures.

F. Internal ratings-based approach for securitization exposures

(i) Scope

- (69) 606. Banks that have received approval to use the IRB approach for the type of underlying exposures securitized (e.g. for their corporate or retail portfolio) must use the IRB approach for securitizations. Conversely, banks may not use the IRB approach to securitization unless they receive approval to use the IRB approach for the underlying exposures from their national supervisors.
- (70) 607. If the bank is using the IRB approach for some exposures and the standardized approach for other exposures in the underlying pool, it should generally use the approach corresponding to the predominant share of exposures within the pool. The bank should consult with its national supervisors on which approach to apply to its securitization exposures. To ensure appropriate capital levels, there may be instances where the supervisor requires a treatment other than this general rule.
- (71) 608. Where there is no specific IRB treatment for the underlying asset type, originating banks that have received approval to use the IRB approach must calculate capital charges on their securitization exposures using the standardized approach in the securitization framework, and investing banks with approval to use the IRB approach must apply the RBA.

(ii) Hierarchy of approaches

- (72) 609. The Ratings-Based Approach (RBA) must be applied to securitization exposures that are rated, or where a rating can be inferred as described in paragraph 617 [of the BCBS Basel II guidelines](#). Where an external or an inferred rating is not available, either the Supervisory Formula (SF) or the Internal Assessment Approach (IAA) must be applied. The IAA is only available to exposures (e.g. liquidity facilities and credit enhancements) that banks (including third-party banks) extend to ABCP programmes. Such exposures must satisfy the conditions of paragraphs 619 and 620 [of the BCBS Basel II guidelines](#). For liquidity facilities to which none of these approaches can be applied, banks may apply the treatment specified in paragraph 639 [of the BCBS Basel II guidelines](#). Exceptional treatment for eligible servicer cash advance facilities is specified in paragraph 641 [of the BCBS Basel II guidelines](#). Securitization exposures to which none of these approaches can be applied must be deducted.

(iii) Maximum capital requirement

- (73) 610. For a bank using the IRB approach to securitization, the maximum capital requirement for the securitization exposures it holds is equal to the IRB capital requirement that would have been assessed against the underlying exposures had they not been securitized and treated under the appropriate sections of the IRB framework including Section III.G. In addition, banks must deduct the entire amount of any gain-on-sale and credit enhancing I/Os arising from the securitization transaction in accordance with paragraphs 561 to 563. **(Section 2.1)**

(iv) Ratings-Based Approach (RBA)

- (74) 611. Under the RBA, the risk-weighted assets are determined by multiplying the amount of the exposure by the appropriate risk weights, provided in the tables below. **(Section 2.1)**
- (75) 612. The risk weights depend on (i) the external rating grade or an available inferred rating, (ii) whether the credit rating (external or inferred) represents a long-term or a short-term credit rating, (iii) the granularity of the underlying pool and (iv) the seniority of the position. **(Section 2.1)**
- (76) 613. For purposes of the RBA, a securitization exposure is treated as a senior tranche if it is effectively backed or secured by a first claim on the entire amount of the assets in the underlying securitized pool. While this generally includes only the most senior position within a securitization transaction, in some instances there may be some other claim that, in a technical sense, may be more senior in the waterfall (e.g. a swap claim) but may be disregarded for the purpose of determining which positions are subject to the “senior tranches” column. **(Section 2.1)**

Examples:

- In a typical synthetic securitisation, the “super-senior” tranche would be treated as a senior tranche, provided that all of the conditions for inferring a rating from a lower tranche are fulfilled.
- In a traditional securitisation where all tranches above the first-loss piece are rated, the most highly rated position would be treated as a senior tranche. However, when there are several tranches that share the same rating, only the most senior one in the waterfall would be treated as senior.
- In a traditional securitisation where all tranches above the first-loss piece are rated.”
- Usually a liquidity facility supporting an ABCP programme would not be the most senior position within the programme; the commercial paper, which benefits from the liquidity support, typically would be the most senior position. However, a liquidity facility may be viewed as covering all losses on the underlying receivables pool that exceed the amount of over-

collateralisation/reserves provided by the seller and as being most senior only if it is sized to cover all of the outstanding commercial paper and other senior debt supported by the pool, so that no cash flows from the underlying pool could be transferred to other creditors until any liquidity draws were repaid in full. In such a case, the RBA risk weights in the left-most column can be used. If these conditions are not satisfied, or if for other reasons the liquidity facility constitutes a mezzanine position in economic substance rather than a senior position in the underlying pool, then the “Base risk weights” column is applicable. (This particular example has also been mentioned earlier in this guidelines and has been reproduced here to provide a further context).

Annex 2

MARKET RISK
STANDARDIZED APPROACH

BCBS Document of June 2006 Entitled
"International Convergence of Capital
Measurement and Capital Standards"
Concerning Market Risk – Standardized Approach

Annex – 2

This represents SAMA's Market Risk related guidance of SAMA on the basis of the relevant extracts from the BCBS document of June 2006 on Credit Risk entitled "International Convergence of Capital Measurement and Capital Standards". (P.157-P.191)

VI. Market Risk

A. The risk measurement framework

683(i). Market risk is defined as the risk of losses in on and off-balance-sheet positions arising from movements in market prices. The risks subject to this requirement are:

- The risks pertaining to interest rate related instruments and equities in the trading book;
- Foreign exchange risk and commodities risk throughout the bank.

1. Scope and coverage of the capital charges

683(ii). The capital charges for interest rate related instruments and equities will apply to the current trading book items prudently valued by banks, alongside paragraphs 690 to 701 below. The definition of trading book is set out in paragraphs 685 to 689(iii) below.

683(iii). The capital charges for foreign exchange risk and for commodities risk will apply to banks' total currency and commodity positions, subject to some discretion to exclude structural foreign exchange positions. It is understood that some of these positions will be reported and hence evaluated at market value, but some may be reported and evaluated at book value.

683(iv). For the time being, the Committee does not believe that it is necessary to allow any de minimis exemptions from the capital requirements for market risk, except for those for foreign exchange risk set out in paragraph 718(xLii) below, because this Framework applies only to internationally active banks, and then essentially on a consolidated basis; all of these banks are likely to be involved in trading to some extent.

683(v). In the same way as for credit risk, the capital requirements for market risk are to apply on a worldwide consolidated basis. Where appropriate, national authorities may permit banking and financial entities in a group which is running a global consolidated book and whose capital is being assessed on a global basis to report short and long positions in exactly the same instrument (e.g. currencies, commodities, equities or bonds), on a net basis, no matter where they are booked.¹¹¹ Moreover, the offsetting rules as set out in this section may also be applied on a consolidated basis. Nonetheless, there will be circumstances in which supervisory authorities demand that the individual positions be taken into the measurement system without any offsetting or netting against positions in the remainder of the group. This may be needed, for example, where there are obstacles to the quick repatriation of profits from a foreign subsidiary or where there are legal and procedural difficulties in carrying out the timely management of risks on a consolidated basis. Moreover, all national authorities will retain the right to continue to monitor the market risks of individual entities on a non-consolidated basis to ensure that significant imbalances within a group do not escape supervision. Supervisory authorities will be especially vigilant in ensuring that banks do not pass positions on reporting dates in such a way as to escape measurement.

684. (Deleted)

¹¹¹ The positions of less than wholly-owned subsidiaries would be subject to the generally accepted accounting principles in the country where the parent company is supervised.

685. A trading book consists of positions in financial instruments and commodities held either with trading intent or in order to hedge other elements of the trading book. To be eligible for trading book capital treatment, financial instruments must either be free of any restrictive covenants on their tradability or able to be hedged completely. In addition, positions should be frequently and accurately valued, and the portfolio should be actively managed.

686. 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 both primary financial instruments (or cash instruments) and derivative financial instruments. 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 favourable terms, or an equity instrument. A financial liability is the contractual obligation to deliver cash or another financial asset or to exchange financial liabilities under conditions that are potentially unfavourable.

687. Positions held with trading intent are those held intentionally for short-term resale and/or with the intent of benefiting from actual or expected short-term price movements or to lock in arbitrage profits, and may include for example proprietary positions, positions arising from client servicing (e.g. matched principal broking) and market making.

687(i). 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 Section and taking into account the bank's risk management capabilities and practices. Compliance with these policies and procedures must be fully documented and subject to periodic internal audit.

687(ii). These policies and procedures should, at a minimum, address the general considerations listed below. The list below is not intended to provide a series of tests that a product or group of related products must pass to be eligible for inclusion in the trading book. Rather, the list provides a minimum set of key points that must be addressed by the policies and procedures for overall management of a firm's trading book:

- 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:
 - (i) Identify the material risks of the exposure;
 - (ii) Hedge the material risks of the exposure and the extent to which hedging instruments would have an active, liquid two-way market;
 - (iii) 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.

688. 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.
- 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.

689. (deleted)

689(i). 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 of paragraph 191 vis a vis the banking book exposure. 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.

689(ii). 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 national supervisor for such assets held in the banking book, which in many cases is deduction from capital. Where a bank demonstrates that it is an active market maker then a national supervisor 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.

689(iii). Term trading-related repo-style transactions that a bank accounts for in its banking book may be included in the bank's trading book for regulatory capital purposes so long as all such repo-style transactions are included. For this purpose, trading-related repo-style transactions are defined as only those that meet the requirements of paragraphs 687 and 688 and both legs are in the form of either cash or securities includable in the trading book. Regardless of where they are booked, all repo-style transactions are subject to a banking book counterparty credit risk charge.

2. Prudent valuation guidance

690. This section provides banks with guidance on prudent valuation for positions that are accounted for at fair value, whether they are in the trading book or in the banking book. This guidance is especially important for positions without actual market prices or observable inputs to valuation, as well as less liquid positions which, raise supervisory concerns about prudent valuation. The valuation guidance set forth below is not intended to require banks to change valuation procedures for financial reporting purposes. SAMA would assess a bank's valuation procedures for consistency with this guidance. One factor in a supervisor's

assessment of whether a bank must take a valuation adjustment for regulatory purposes under paragraphs 718(cx) to 718(cxii) of International Convergence of Capital Measurement and Capital Standards – June 2006, should be the degree of consistency between the bank's valuation procedures and these guidelines.

(Refer to revisions to the Basel II Market Risk Framework 2010 (718 c))

691. A framework for prudent valuation practices should at a minimum include the following:

(i). Systems and controls

692. Banks must establish and maintain adequate systems and controls sufficient to give management and SAMA the 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 (ie 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.

(Refer to revisions to the Basel II Market Risk Framework 2010 (718 cii))

(ii). Valuation methodologies

Marking to market

693. Marking-to-market is at least the 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.

694. Banks must mark-to-market as much as possible. The more prudent side of bid/offer 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 maximise the use of relevant observable inputs and minimise the use of unobservable inputs when estimating fair value using a valuation technique. However, 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.

(Refer to revisions to the Basel II Market Risk Framework 2010 (718 civ))

695. 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 which has to be benchmarked, extrapolated or otherwise calculated from a market input. When marking to model, an extra degree of conservatism is appropriate. Supervisory authorities 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 which 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 model is developed by the institution itself, it should be based on appropriate assumptions, which 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. It should be independently tested. This includes validating 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 of the models used and how best to reflect those in the valuation output.
- The model should be subject to periodic review to determine the accuracy of its performance (eg 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 (see also valuation adjustments in 698 to 701).
(Refer to revisions to the Basel II Market Risk Framework 2010 (718 cv))

Independent price verification

696. Independent price verification is distinct from daily mark-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 mark-to-market, since the objective, i.e. independent, marking of positions, should reveal any error or bias in pricing, which should result in the elimination of inaccurate daily marks.

697. 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 in between reporting dates. For independent price verification, where pricing sources are more subjective, e.g. only one available broker quote, prudent measures such as valuation adjustments may be appropriate.

(iii). Valuation adjustments or reserves

698. As part of their procedures for marking to market, banks must establish and maintain procedures for considering valuation adjustments/reserves. Supervisory authorities expect banks using third-party valuations to consider whether valuation adjustments are necessary. Such considerations are also necessary when marking to model.

(Refer to revisions to the Basel II Market Risk Framework 2010 (718 cviii))

699. Supervisory authorities expect the following [\(see following page\)](#) 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.

~~700. Bearing in mind that the underlying 10-day assumption in paragraph 718 (Lxxvi) (c) may not be consistent with the bank's ability to sell or hedge out positions under normal market conditions, banks must make downward valuation adjustments/reserves for these less liquid positions, and to review their continued appropriateness on an on-going basis. Reduced liquidity could arise from market events. Additionally, close-out prices for concentrated positions and/or stale positions should be considered in establishing those valuation adjustments/reserves. Banks must consider all relevant factors when determining the appropriateness of valuation adjustments/reserves 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, market concentrations, the aging of positions, the extent to which valuation relies on marking-to-model, and the impact of other model risks.~~

~~701. Valuation adjustments/reserves made under paragraph 700 must impact Tier 1 regulatory capital and may exceed those made under financial accounting standards.~~

3. Methods of measuring market risks

701(i). In measuring their market risks, a choice between two broad methodologies (described in paragraphs 709 to 718(Lxix) and 718(Lxx) to 718(XCix), respectively) will be permitted, subject to the approval of the national authorities. One alternative will be to measure the risks in a standardized manner, using the measurement frameworks described in paragraphs 709 to 718(Lxix) below. Paragraphs 709 to 718(Lv) deal with the four risks addressed in this section, i.e. interest rate, equity position, foreign exchange and commodities risk. Paragraphs 718(Lvi) to 718(Lxix) set out a number of possible methods for measuring the price risk in options of all kinds. The capital charge under the standardized measurement method will be the measures of risk obtained from paragraphs 709 to 718(Lxix), summed arithmetically.

Adjustment to the current valuation of less liquid positions for regulatory capital purposes

701 A. 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. SAMA expect banks to 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, third-party valuations or marked to model.

Bearing in mind that 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. Reduced liquidity may have arisen from market events. Additionally, close-out 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 not included in paragraph 718 (cx), the Basel II Market Risk Framework 2010.

For complex products including, but not limited to, securitization exposures and n-th-to-default credit derivatives, banks must explicitly assess the need for valuation adjustments to reflect two forms of model risk: 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.

The adjustment to the current valuation of less liquid positions made under paragraph 718 (cxi), the Basel II Market Risk Framework 2010, must impact Tier 1 regulatory capital and may exceed those valuation adjustments made under financial reporting standards and paragraphs 718 (cviii) and 718 (cix), the Basel II Market Risk Framework 2010

(Refer to revisions to the Basel II Market Risk Framework 2010 (718 cx))

701(ii). The alternative methodology, which is subject to the fulfilment of certain conditions and the use of which is therefore conditional upon the explicit approval of the bank's supervisory authority, is set out in 718(Lxx) to 718(XCix). This method allows banks to use risk measures derived from their own internal risk management models, subject to seven sets of conditions, namely:

- certain general criteria concerning the adequacy of the risk management system;
- qualitative standards for internal oversight of the use of models, notably by management;
- guidelines for specifying an appropriate set of market risk factors (i.e. the market rates and prices that affect the value of banks' positions);
- quantitative standards setting out the use of common minimum statistical parameters for measuring risk;

- guidelines for stress testing;
- validation procedures for external oversight of the use of models;
- rules for banks which use a mixture of models and the standardized approach.

701(iii). The standardized methodology uses a “building-block” approach in which specific risk and the general market risk arising from debt and equity positions are calculated separately. The focus of most internal models is a bank’s general market risk exposure, typically leaving specific risk (i.e. exposures to specific issuers of debt securities or equities¹¹²) to be measured largely through separate credit risk measurement systems. Banks using models should be subject to capital charges for the specific risk not captured by their models. Accordingly, a separate capital charge for specific risk will apply to each bank using a model to the extent that the model does not capture specific risk. The capital charge for banks which are modelling specific risk is set out in paragraphs 718(Lxxvii) to 718(XCviii) of this Framework.¹¹³

701(iv). In measuring the price risk in options under the standardized approach, where a number of alternatives with varying degrees of sophistication are provided (see paragraphs 718(Lvi) to 718(Lxix)), supervisory authorities will apply the rule that the more a bank is engaged in writing options, the more sophisticated its measurement method needs to be. In the longer term, banks which are significant traders in options will be expected to move to comprehensive value-at-risk models and become subject to the full range of quantitative and qualitative standards set out in paragraphs 718(Lxx) to 718(XCIX).

¹¹² Specific risk includes the risk that an individual debt or equity security moves by more or less than the general market in day-to-day trading (including periods when the whole market is volatile) and event risk (where the price of an individual debt or equity security moves precipitously relative to the general market, e.g. on a takeover bid or some other shock event; such events would also include the risk of “default”).

¹¹³ Banks that already have received specific risk model recognition for particular portfolios or lines of business according to the original version of the 1996 Market Risk Amendment should agree a timetable with their supervisors to bring their model in line with the new standards in a timely manner as is practicable, with an end date of 1 January 2010. Following that transition period, banks that have been unable to develop an acceptable methodology will have to use the standardized rules for specific risk.

701(v). Each bank subject to capital charges for market risk will be expected to monitor and report the level of risk against which a capital requirement is to be applied. The bank’s overall minimum capital requirement will be:

- (a) the credit risk requirements laid down in this Framework, excluding debt and equity securities in the trading book and all positions in commodities, but including the credit counterparty risk on all over-the-counter derivatives whether in the trading or the banking books; plus
- (b) the capital charges for operational risk described in paragraphs 644 to 683 of this Framework; plus
- (c) either the capital charges for market risks described in paragraphs 709 to 718(Lxix), summed arithmetically; or
- (d) the measure of market risk derived from the models approach set out in paragraphs 718(Lxx) to 718(XCix); or
- (e) a mixture of (c) and (d) summed arithmetically.

701(vi). All transactions, including forward sales and purchases, shall be included in the calculation of capital requirements as from the date on which they were entered into. Although regular reporting will in principle take place only at intervals (in most countries quarterly), banks are expected to manage the market risk in their trading book in such a way that the capital requirements are being met on a continuous basis, i.e. at the close of each

business day. Supervisory authorities have at their disposal a number of effective measures to ensure that banks do not “window-dress” by showing significantly lower market risk positions on reporting dates. Banks will also, of course, be expected to maintain strict risk management systems to ensure that intra-day exposures are not excessive. If a bank fails to meet the capital requirements, the national authority shall ensure that the bank takes immediate measures to rectify the situation.

4. Treatment of counterparty credit risk in the trading book

702. Banks will be required to calculate the counterparty credit risk charge for OTC derivatives, repo-style and other transactions booked in the trading book, separate from the capital charge for general market risk and specific risk.¹¹⁴ The risk weights to be used in this calculation must be consistent with those used for calculating the capital requirements in the banking book. Thus, banks using the standardized approach in the banking book will use the standardized approach risk weights in the trading book and banks using the IRB approach in the banking book will use the IRB risk weights in the trading book in a manner consistent with the IRB roll out situation in the banking book as described in paragraphs 256 to 262. For counterparties included in portfolios where the IRB approach is being used the IRB risk weights will have to be applied.

¹¹⁴The treatment for unsettled foreign exchange and securities trades is set forth in paragraph 88.

703. In the trading book, for repo-style transactions, all instruments, which are included in the trading book, may be used as eligible collateral. Those instruments which fall outside the banking book definition of eligible collateral shall be subject to a haircut at the level applicable to non-main index equities listed on recognized exchanges (as noted in paragraph 151). However, where banks are using the own estimates approach to haircutting they may also apply it in the trading book in accordance with paragraphs 154 and 155. Consequently, for instruments that count as eligible collateral in the trading book, but not in the banking book, the haircuts must be calculated for each individual security. Where banks are using a VaR approach to measuring exposure for repo-style transactions, they also may apply this approach in the trading book in accordance with paragraphs 178 to 181 (i) and Annex 4.

704. The calculation of the counterparty credit risk charge for collateralised OTC derivative transactions is the same as the rules prescribed for such transactions booked in the banking book.

705. The calculation of the counterparty charge for repo-style transactions will be conducted using the rules in paragraphs 147 to 181 (i) and Annex 4 spelt out for such transactions booked in the banking book. The firm-size adjustment for SMEs as set out in paragraph 273 shall also be applicable in the trading book.

Credit derivatives

706. (deleted)

707. The counterparty credit risk charge for single name credit derivative transactions in the trading book will be calculated using the following potential future exposure add-on factors:

| | Protection buyer | Protection seller |
|-----------------------------------|------------------|-------------------|
| Total Return Swap | | |
| “qualifying” reference obligation | 5% | 5% |
| “Non-qualifying” reference | 10% | 10% |

| | | |
|---------------------------------------|-----|-------|
| obligation | | |
| Credit Default Swap | | |
| “qualifying” reference obligation | 5% | 5%** |
| “Non-qualifying” reference obligation | 10% | 10%** |

There will be no difference depending on residual maturity.

The definition of “qualifying” is the same as for the “qualifying” category for the treatment of specific risk under the standardized measurement method in paragraph 711(i) and 711(ii).

** The protection seller of a credit default swap shall only be subject to the add-on factor where it is subject to closeout upon the insolvency of the protection buyer while the underlying is still solvent. Add-on should then be capped to the amount of unpaid premiums.

708. Where the credit derivative is a first to default transaction, the add-on will be determined by the lowest credit quality underlying in the basket, i.e. if there are any nonqualifying items in the basket, the non-qualifying reference obligation add-on should be used. For second and subsequent to default transactions, underlying assets should continue to be allocated according to the credit quality, i.e. the second lowest credit quality will determine the add-on for a second to default transaction etc.

5. Transitional arrangements

708(i). Banks will on a transitional basis be free to use a combination of the standardized measurement method and the internal models approach to measure their market risks. As a general rule, any such “partial” models should cover a complete risk category (e.g. interest rate risk or foreign exchange risk), i.e. a combination of the two methods will not be permitted within the same risk category.¹¹⁵ However, as most banks are at present still implementing or further improving their risk management models, the Committee believes that the banks should be given – even within risk categories – some flexibility in including all their operations on a worldwide basis; this flexibility will be subject to approval by the national authority and reviewed by the Committee in the future (supervisory authorities will take precautions against “cherry-picking” between the standardized approach and the models approach within a risk factor category). Banks which adopt the modelling alternative for any single risk category will be expected over time to include all their operations, subject to the exceptions mentioned below, and to move towards a comprehensive model (i.e. one which captures all market risk categories). Banks which adopt a model will not be permitted, save in exceptional circumstances, to revert to the standardized approach. Notwithstanding these general principles, even banks using comprehensive models to measure their market risk may still incur risks in positions which are not captured by their internal trading risk management models, for example, in remote locations, in minor currencies or in negligible business areas¹¹⁶. Any such risks that are not included in a model should be separately measured and reported using the methodologies described in paragraphs 709 to 718(xviii) below.

¹¹⁵ This does not, however, apply to pre-processing techniques which are used to simplify the calculation and whose results become subject to the standardized methodology.

¹¹⁶ For example, if a bank is hardly at all engaged in commodities it would not necessarily be expected to model its commodities risk.

B. The capital requirement

1. Definition of capital

708(ii). The definition of capital to be used for market risk purposes is set out in paragraphs 49(xiii) and 49(xiv) of this Framework.

708(iii). In calculating eligible capital, it will be necessary first to calculate the bank's minimum capital requirement for credit and operational risks, and only afterwards its market risk requirement, to establish how much Tier 1 and Tier 2 capital is available to support market risk. Eligible capital will be the sum of the whole of the bank's Tier 1 capital, plus all of its Tier 2 capital under the limits imposed in paragraph 49(iii) of this Framework. Tier 3 capital will be regarded as eligible only if it can be used to support market risks under the conditions set out in paragraphs 49(xxi) and 49(xxii) above. The quoted capital ratio will thus represent capital that is available to meet credit risk, operational risk, and market risk. Where a bank has Tier 3 capital, within the limits set out in paragraph 49(xxi), which is not at present supporting market risks, it may report that excess as unused but eligible Tier 3 alongside its standard ratio.

C. Market risk – The standardized measurement method

1. Interest rate risk

709. (Deleted)

709(i). This section describes the standard 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.¹¹⁷ Convertible bonds, i.e. debt issues or preference shares that are convertible, at a stated price, into common shares of the issuer, will be treated as debt securities if they trade like debt securities and as equities if they trade like equities. The basis for dealing with derivative products is considered in paragraphs 718(ix) to 718(xviii) below.

709(ii). 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 (termed "*general market risk*") where long and short positions in different securities or instruments can be offset.

¹¹⁷ Traded mortgage securities and mortgage derivative products possess unique characteristics because of the risk of pre-payment. Accordingly, for the time being, no common treatment will apply to these securities, which will be dealt with at national discretion. A security which is the subject of a repurchase or securities lending agreement will be treated as if it were still owned by the lender of the security, i.e. it will be treated in the same manner as other securities positions.

(i) Specific risk

709(iii). The capital charge for specific risk is designed to protect against an adverse movement in the price of an individual security owing to factors related to the individual issuer. In measuring the risk, offsetting will be restricted to matched positions in the identical issue (including positions in derivatives). Even if the issuer is the same, no offsetting will be permitted between different issues since differences in coupon rates, liquidity, call features, etc. mean that prices may diverge in the short run.

Specific risk capital charges for issuer risk

710. The new capital charges for “government” and “other” categories will be as follows.

| Categories | External credit assessment | Specific risk capital charge |
|------------|--|---|
| Government | AAA to AA- A+ to BBB- | 0% 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- Below B- Unrated | 8.00% 12.00% 8.00% |
| Qualifying | | 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 | Similar to credit risk charges under the standardized approach of this Framework, e.g.: | |
| | BB+ to BB- Below BB- Unrated | 8.00% 12.00% 8.00% |

710(i). The category “government” will include all forms of government¹¹⁸ paper including bonds, Treasury bills and other short-term instruments, but national authorities reserve the right to apply a specific risk weight to securities issued by certain foreign governments, especially to securities denominated in a currency other than that of the issuing government.

711. When the government paper is denominated in the domestic currency and funded by the bank in the same currency, at national discretion a lower specific risk charge may be applied.

711(i). The “qualifying” category includes securities issued by public sector entities and multilateral development banks, plus other securities that are:

- rated investment-grade¹¹⁹ by at least two credit rating agencies specified by the national authority; or
- rated investment-grade by one rating agency and not less than investment-grade by any other rating agency specified by the national authority (subject to supervisory oversight); or
- subject to supervisory approval, unrated, but deemed to be of comparable investment quality by the reporting bank, *and* the issuer has securities listed on a recognized stock exchange.

Each supervisory authority will be responsible for monitoring the application of these qualifying criteria, particularly in relation to the last criterion where the initial classification is essentially left to the reporting banks. National authorities will also have discretion to include within the qualifying category debt securities issued by banks in countries which have implemented this Framework, subject to the express understanding that supervisory authorities in such countries undertake prompt remedial action if a bank fails to meet the capital standards set forth in this Framework. Similarly, national authorities will have discretion to include within the qualifying category debt securities issued by securities firms that are subject to equivalent rules.

711(ii). Furthermore, the “qualifying” category shall include securities issued by institutions that are deemed to be equivalent to investment grade quality and subject to supervisory and regulatory arrangements comparable to those under this Framework.

¹¹⁸ Including, at national discretion, local and regional governments subject to a zero credit risk weight in this Framework.

¹¹⁹ E.g. rated Baa or higher by Moody’s and BBB or higher by Standard and Poor’s.

Specific risk rules for unrated debt securities

712. Unrated securities may be included in the “qualifying” category when they are subject to supervisory approval, unrated, but deemed to be of comparable investment quality by the reporting bank, and the issuer has securities listed on a recognized stock exchange. This will remain unchanged for banks using the standardized approach. For banks using the IRB approach for a portfolio, unrated securities can be included in the “qualifying” category if both of the following conditions are met:

- the securities are rated equivalent¹²⁰ to investment grade under the reporting bank’s internal rating system, which the national supervisor has confirmed complies with the requirements for an IRB approach; and
- the issuer has securities listed on a recognized stock exchange.

Specific risk rules for non-qualifying issuers

712(i). Instruments issued by a non-qualifying issuer will receive the same specific risk charge as a non-investment grade corporate borrower under the standardized approach for credit risk under this Framework.

712(ii). However, since this may in certain cases considerably underestimate the specific risk for debt instruments which have a high yield to redemption relative to government debt securities, each national supervisor will have the discretion:

- To apply a higher specific risk charge to such instruments; and/or
- To disallow offsetting for the purposes of defining the extent of general market risk between such instruments and any other debt instruments.

In that respect, securitization exposures that would be subject to a deduction treatment under the securitization framework set forth in this Framework (e.g. equity tranches that absorb first loss), as well as securitization exposures that are unrated liquidity lines or letters of credit should be subject to a capital charge that is no less than the charge set forth in the securitization framework.

Specific risk capital charges for positions hedged by credit derivatives

713. Full allowance will be recognized when the values of two legs (i.e. long and short) always move in the opposite direction and broadly to the same extent. This would be the case in the following situations:

- (a) the two legs consist of completely identical instruments, or
- (b) 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 exposure (i.e. the cash position).¹²¹

In these cases, no specific risk capital requirement applies to both sides of the position.

¹²⁰ Equivalent means the debt security has a one-year PD equal to or less than the one year PD implied by the long-run average one-year PD of a security rated investment grade or better by a qualifying rating agency.

¹²¹ The maturity of the swap itself may be different from that of the underlying exposure.

714. An 80% offset will be recognized when the value of two legs (i.e. long and short) always moves in the opposite direction but not 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 (e.g. credit event definitions, settlement mechanisms) 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 (i.e. taking account of restrictive payout provisions such as fixed payouts and materiality thresholds), an 80% specific risk offset will be applied to the side of the transaction with the higher capital charge, while the specific risk requirement on the other side will be zero.

715. Partial allowance will be recognized when the value of the two legs (i.e. long and short) usually moves in the opposite direction. This would be the case in the following situations:

- (a) the position is captured in paragraph 713 under (b), but there is an asset mismatch between the reference obligation and the underlying exposure. Nonetheless, the position meets the requirements in paragraph 191 (g).
- (b) The position is captured in paragraph 713 under (a) or 714 but there is a currency or maturity mismatch¹²² between the credit protection and the underlying asset.

- (c) The position is captured in paragraph 714 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.

716. In each of these cases in paragraphs 713 to 715, the following rule applies. Rather than adding the specific risk capital requirements for each side of the transaction (i.e. the credit protection and the underlying asset) only the higher of the two capital requirements will apply.

717. In cases not captured in paragraphs 713 to 715, a specific risk capital charge will be assessed against both sides of the position.

718. With regard to banks' first-to-default and second-to-default products in the trading book, the basic concepts developed for the banking book will also apply. Banks holding long positions in these products (e.g. buyers of basket credit linked notes) would be treated as if they were protection sellers and would be required to add the specific risk charges or use the external rating if available. Issuers of these notes would be treated as if they were protection buyers and are therefore allowed to off-set specific risk for one of the underlyings, i.e. the asset with the lowest specific risk charge.

¹²² Currency mismatches should feed into the normal reporting of foreign exchange risk.

(ii) General market risk

718(i). The capital requirements for general market risk are designed to capture the risk of loss arising from changes in market interest rates. A choice between two principal methods of measuring the risk is permitted, a "maturity" method and a "duration method. In each method, the capital charge is the sum of four components:

- 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");
- A net charge for positions in options, where appropriate (see paragraphs 718(Lxvi) to 718(Lxix)).

718(ii). 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 between positions of opposite sign. In the case of those currencies in which business is insignificant, separate maturity ladders for each currency are not required. Rather, 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 are to be summed within

each time-band, irrespective of whether they are long or short positions, to produce a gross position figure.

718(iii). In the maturity method (see paragraph 718(vii) for the duration 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 should 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 well as closely matched swaps, forwards, futures and FRAs which meet the conditions set out in paragraphs 718(xiii) and 718(xiv) below.

718(iv). The first step in the calculation is to weight the positions in each time-band by a factor 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 table below. 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 second column of the table.

Maturity method: time-bands and weights

| Coupon 3% or more | Coupon less than 3% | Risk weight | Assumed changes in yield |
|--------------------------|----------------------------|--------------------|---------------------------------|
| 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 |
| 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 |
| 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 |

718(v). 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. Since, however, each band would include different instruments and different maturities, a 10% capital charge to reflect basis risk and gap risk will be levied on the smaller of the offsetting positions, be it long or short. Thus, if the sum of the weighted longs in a time-band is \$100 million and the sum of the weighted shorts \$90 million, the so-called “vertical disallowance” for that timeband would be 10% of \$90 million (i.e. \$9.0 million).

718(vi). The result of the above calculations is to produce two sets of weighted positions, the net long or short positions in each time-band (\$10 million long in the example above) and the vertical disallowances, which have no sign. In addition, however, banks will be allowed to conduct two rounds of “horizontal offsetting”, first between the net positions in each of three zones (zero to one year, one year to four years and four years and over),¹²³ and subsequently between the net positions in the three different zones. The offsetting will be subject to a scale of disallowances expressed as a fraction of the matched positions, as set out in the table below. The weighted long and short positions in each of three zones may be offset, subject to the matched portion attracting a disallowance factor that is part of the capital charge. 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.

Horizontal disallowances

| Zones ¹²⁴ | Time-band | within the zone | between adjacent zones | between zones 1 and 3 |
|----------------------|---|-----------------|------------------------|-----------------------|
| Zone 1 | 0 - 1 month 1 - 3 months 3 - 6 months 6 - 12 months | 40% | 40% | 100% |
| Zone 2 | 1 - 2 years 2 - 3 years 3 - 4 years 5 - 7 years 4 - 5 years | 30% | | |
| Zone 3 | 5 - 7 years 7 - 10 years 10 - 15 years 15 - 20 years over 20 years | 30% | | |

718(vii). Under the alternative duration method, banks with the necessary capability may, with their supervisors' consent, use a more accurate method of measuring all of their general market risk by calculating the price sensitivity of each position separately. Banks must elect and use the method on a continuous basis (unless a change in method is approved by the national authority) and will be subject to supervisory monitoring of the systems used. The mechanics of this method are as follows:

- First 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 (see the table below);
- Slot the resulting sensitivity measures into a duration-based ladder with the fifteen time-bands set out in the table below;

¹²³ The zones for coupons less than 3% are 0 to 1 year, 1 to 3.6 years, and 3.6 years and over.

¹²⁴ The zones for coupons less than 3% are 0 to 1 year, 1 to 3.6 years, and 3.6 years and over.

- Subject long and short positions in each time-band to a 5% vertical disallowance designed to capture basis risk;
- Carry forward the net positions in each time-band for horizontal offsetting subject to the disallowances set out in table paragraph 718(vi) above.

Duration method: time-bands and assumed changes in yield

| Assumed change in yield | | Assumed change in yield | |
|--------------------------------|------|--------------------------------|------|
| Zone 1 | | Zone 3 | |
| 1 month or less | 1.00 | 3.6 to 4.3 years | 0.75 |
| 1 to 3 months | 1.00 | 4.3 to 5.7 years | 0.70 |
| 3 to 6 months | 1.00 | 5.7 to 7.3 years | 0.65 |
| 6 to 12 months | 1.00 | 7.3 to 9.3 years | 0.60 |
| Zone 2 | | 9.3 to 10.6 years | 0.60 |
| 1.0 to 1.9 years | 0.90 | 10.6 to 12 years | 0.60 |
| 1.9 to 2.8 years | 0.80 | 12 to 20 years | 0.60 |
| 2.8 to 3.6 years | 0.75 | over 20 years | 0.60 |

718(viii). In the case of residual currencies (see paragraph 718(ii) above) the gross positions in each time-band will be subject to either the risk weightings set out in paragraph 718(iv), if positions are reported using the maturity method, or the assumed change in yield set out in paragraph 718(vii), if positions are reported using the duration method, with no further offsets.

(iii) Interest rate derivatives

718(ix). The measurement system should include all interest rate derivatives and offbalance-sheet instruments in the trading book which react to changes in interest rates, (e.g. forward rate agreements (FRAs), other forward contracts, bond futures, interest rate and cross-currency swaps and forward foreign exchange positions). Options can be treated in a variety of ways as described in paragraphs 718(Lvi) to 718(Lxix) below. A summary of the rules for dealing with interest rate derivatives is set out in paragraph 718(xviii) below.

Calculation of positions

718(x). The derivatives should be converted into positions in the relevant underlying and become subject to specific and general market risk charges as described above. In order to calculate the standard formula described above, the amounts reported should be the market value of the principal amount of the underlying or of the notional underlying resulting from the prudent valuation guidance set out in paragraphs 690 to 701 above.¹²⁵

Futures and forward contracts, including forward rate agreements

718(xi). These instruments are treated as a combination of a long and a short position in a notional government security. The maturity of a future or a FRA will be the period until delivery or exercise of the contract, plus - where applicable - the life of the underlying

¹²⁵ For instruments where the apparent notional amount differs from the effective notional amount, banks must use the effective notional amount.

instrument. For example, a long position in a June three month interest rate future (taken in April) is to be reported as a long position in a government security with a maturity of five months and a short position in a government security with a maturity of two months. Where a range of deliverable instruments may be delivered to fulfil the contract, the bank has flexibility to elect which deliverable security goes into the maturity or duration ladder but should take account of any conversion factor defined by the exchange. In the case of a future on a corporate bond index, positions will be included at the market value of the notional underlying portfolio of securities.

Swaps

718(xii). Swaps will be treated as two notional positions in government securities with relevant maturities. For example, an interest rate swap under which a bank is receiving floating rate interest and paying fixed will be treated as a long position in a floating rate instrument of maturity equivalent to the period until the next interest fixing and a short position in a fixed-rate instrument of maturity equivalent to the residual life of the swap. For swaps that pay or receive a fixed or floating interest rate against some other reference price, e.g. a stock index, 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.

Calculation of capital charges for derivatives under the standardized methodology *Allowable offsetting of matched positions*

718(xiii). Banks may exclude from the interest rate maturity framework altogether (for both specific and general market risk) long and short positions (both actual and notional) in identical instruments with exactly the same issuer, coupon, currency and maturity. A matched position in a future or forward and its corresponding underlying may also be fully offset,¹²⁶ and thus excluded from the calculation. When the future or the 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 which is most profitable for the trader with a short position to deliver. The price of this security, sometimes called the “cheapest-to-deliver”, and the price of the future or forward contract should in such cases move in close alignment. No offsetting will be 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.

718(xiv). In addition, opposite positions in the same category of instruments¹²⁷ can in certain circumstances be regarded as matched and allowed to offset fully. To qualify for this treatment the positions must relate to the same underlying instruments, be of the same nominal value and be denominated in the same currency.¹²⁸ In addition:

¹²⁶ The leg representing the time to expiry of the future should, however, be reported.

¹²⁷ This includes the delta-equivalent value of options. The delta equivalent of the legs arising out of the treatment of caps and floors as set out in paragraph 718(Lx) can also be offset against each other under the rules laid down in this paragraph.

¹²⁸ The separate legs of different swaps may also be “matched” subject to the same conditions.

- (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 (i.e. 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 within the following limits:
 - less than one month hence: same day;
 - between one month and one year hence: within seven days;
 - over one year hence: within thirty days.

718(xv). Banks with large swap books may use alternative formulae for these swaps to calculate the positions to be included in the maturity or duration ladder. One method would be to first convert the payments required by the swap into their present values. For that purpose, each payment should be discounted using zero coupon yields, and a single net figure for the present value of the cash flows entered into the appropriate time-band using procedures that apply to zero (or low) coupon bonds; these figures should be slotted into the general market risk framework as set out above. An alternative method would be to calculate the sensitivity of the net present value implied by the change in yield used in the maturity or duration method and allocate these sensitivities into the time-bands set out in paragraph

718(iv) or paragraph 718(vii). Other methods which produce similar results could also be used. Such alternative treatments will, however, only be allowed if:

- the supervisory authority is fully satisfied with the accuracy of the systems being used;
- the positions calculated fully reflect the sensitivity of the cash flows to interest rate changes and are entered into the appropriate time-bands;
- the positions are denominated in the same currency.

Specific risk

718(xvi). Interest rate and currency swaps, FRAs, forward foreign exchange contracts and interest rate futures will not be subject to a specific risk charge. This exemption also applies to futures on an interest rate index (e.g. LIBOR). However, in the case of futures contracts where the underlying is a debt security, or an index representing a basket of debt securities, a specific risk charge will apply according to the credit risk of the issuer as set out in paragraphs 709(iii) to 718 above.

General market risk

718(xvii). General market risk applies to positions in all derivative products in the same manner as for cash positions, subject only to an exemption for fully or very closely matched positions in identical instruments as defined in paragraphs 718(xiii) and 718(xiv). The various categories of instruments should be slotted into the maturity ladder and treated according to the rules identified earlier.

718(xviii). The table below presents a summary of the regulatory treatment for interest rate derivatives, for market risk purposes.

Summary of treatment of interest rate derivatives

| Instrument | Specific risk charge^{e129} | General market risk charge |
|--|--|--|
| Exchange-traded future | | |
| - Government debt security | Yes ¹³⁰ | Yes, as two positions |
| - Corporate debt security | Yes | Yes, as two positions |
| - Index on interest rates (e.g. LIBOR) | No | Yes, as two positions |
| OTC forward | | |
| - Government debt security | Yes ¹³⁰ | Yes, as two positions |
| - Corporate debt security | Yes | Yes, as two positions |
| - Index on interest rates | No | Yes, as two positions |
| FRAs, Swaps | No | Yes, as one position in each Currency |
| Forward foreign exchange | No | |
| Options | | Either |
| - Government debt security | Yes ¹³⁰ | (a) Carve out together with the associated hedging positions |
| | | - simplified approach |
| | | - scenario analysis |
| | | - internal models (Part B) |
| - Corporate debt security | Yes | |
| - Index on interest rates | No | (b) General market risk charge |
| - FRAs, Swaps | | |

| | | |
|--|----|---|
| | No | according to the delta-plus method (gamma and vega should receive separate capital charges) |
|--|----|---|

2. Equity position risk

718(xix). This section sets out a minimum capital standard to cover the risk of holding or taking positions in equities in the trading book. It applies to long and short positions in all instruments that exhibit market behaviour similar to equities, but not to non-convertible preference shares (which are covered by the interest rate risk requirements described in paragraphs 709 to 718(xviii)). Long and short positions in the same issue may be reported on a net basis. The instruments covered include common stocks, whether voting or non-voting, convertible securities that behave like equities, and commitments to buy or sell equity securities. The treatment of derivative products, stock indices and index arbitrage is described in paragraphs 718(xxii) to 718(xxix) below.

¹²⁹ This is the specific risk charge relating to the issuer of the instrument. Under the existing credit risk rules, there remains a separate capital charge for the counterparty risk.

¹³⁰ The specific risk capital charge only applies to government debt securities that are rated below AA- (see paragraphs 710 and 710 (i)).

(i). Specific and general market risk

718(xx). As with debt securities, the minimum capital standard for equities is expressed in terms of two separately calculated charges for the “specific risk” of holding a long or short position in an individual equity and for the “general market risk” of holding a long or short position in the market as a whole. Specific risk is defined as the bank’s gross equity positions (i.e. the sum of all long equity positions and of all short equity positions) and general market risk as the difference between the sum of the longs and the sum of the shorts (i.e. the overall net position in an equity market). The long or short position in the market must be calculated on a market-by-market basis, i.e. a separate calculation has to be carried out for each national market in which the bank holds equities.

718 (xxi) The capital charge for specific risk and for general market risk will each be 8%. (Refer to Paragraph 718(xxi) of Revisions to the Basel II Market Risk Framework – Dec 2010.)

(ii). Equity derivatives

718(xxii). Except for options, which are dealt with in paragraphs 718(Lvi) to 718(Lxix), equity derivatives and off-balance-sheet positions which are affected by changes in equity prices should be included in the measurement system.¹³¹ This includes futures and swaps on both individual equities and on stock indices. The derivatives are to be converted into positions in the relevant underlying. The treatment of equity derivatives is summarised in paragraph 718(xxix) below.

Calculation of positions

718(xxiii). In order to calculate the standard formula for specific and general market risk, positions in derivatives should be converted into notional equity positions:

- Futures and forward contracts relating to individual equities should in principle 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 are to be treated as two notional positions;¹³²
- Equity options and stock index options should be either “carved out” together with the associated underlyings or be incorporated in the measure of general market risk described in this section according to the delta-plus method.

¹³¹ Where equities are part of a forward contract, a future or an option (quantity of equities 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 in paragraphs 709 to 718(xviii) and 718(xxx) to 718(xLii).

¹³² For example, an equity swap in which a bank is receiving an amount based on the change in value of one particular equity or stock index and paying a different index will be treated as a long position in the former and a short position in the latter. Where one of the legs involves receiving/paying a fixed or floating interest rate, that exposure should be slotted into the appropriate repricing time-band for interest rate related instruments as set out in paragraphs 709 to 718(xviii). The stock index should be covered by the equity treatment.

Calculation of capital charges

Measurement of specific and general market risk

718(xxiv). 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.¹³³

Risk in relation to an index

718(xxv). Besides general market risk, a further capital charge of 2% will apply to the net long or short position in an index contract comprising a diversified portfolio of equities. This capital charge is intended to cover factors such as execution risk. National supervisory authorities will take care to ensure that this 2% risk weight applies only to well-diversified indices and not, for example, to sectoral indices.

Arbitrage

718(xxvi). In the case of the futures-related arbitrage strategies described below, the additional 2% capital charge described above may be applied to only one index with the opposite position exempt from a capital charge. The strategies are:

- When the bank takes an opposite position in exactly the same index at different dates or in different market centres;

- When the bank has an opposite position in contracts at the same date in different but similar indices, subject to supervisory oversight that the two indices contain sufficient common components to justify offsetting.

718(xxvii). Where a bank engages in a deliberate arbitrage strategy, in which a futures contract on a broadly-based index matches a basket of stocks, it will be allowed to carve out both positions from the standardized methodology on condition that:

- The trade has been deliberately entered into and separately controlled;
- 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 minimum capital requirement will be 4% (i.e. 2% of the gross value of the positions on each side) to reflect divergence and execution risks. This 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 is to be treated as an open long or short position.

718(xxviii). If a bank takes a position in depository receipts against an opposite position in the underlying equity or identical equities in different markets, it may offset the position (i.e.

¹³³ The interest rate risk arising out of the future, however, should be reported as set out in paragraphs 709 to 718(xviii).

bear no capital charge) but only on condition that any costs on conversion are fully taken into account.¹³⁴

718(xxix). The table below summarises the regulatory treatment of equity derivatives for market risk purposes.

Summary of treatment of equity derivatives

| Instrument | Specific risk ¹³⁵ | General market risk |
|------------|------------------------------|---------------------|
|------------|------------------------------|---------------------|

- The net delta-based equivalent of the total book of foreign currency options.¹³⁷

718(xxxiii). Positions in composite currencies need to be separately reported but, for measuring banks' open positions, may be either treated as a currency in their own right or split into their component parts on a consistent basis. Positions in gold should be measured in the same manner as described in paragraph 718(xLix).¹³⁸

718(xxxiv). Three aspects call for more specific comment: the treatment of interest, other income and expenses; the measurement of forward currency positions and gold; and the treatment of "structural" positions.

The treatment of interest, other income and expenses

718(xxxv). Interest accrued (i.e. earned but not yet received) should be included as a position. Accrued expenses should also be included. Unearned but expected future interest and anticipated expenses may be excluded unless the amounts are certain and banks have taken the opportunity to hedge them. If banks include future income/expenses they should do so on a consistent basis, and not be permitted to select only those expected future flows which reduce their position.

The measurement of forward currency and gold positions

718(xxxvi). Forward currency and gold positions will normally be valued at current spot market exchange rates. Using forward exchange rates would be inappropriate since it would result in the measured positions reflecting current interest rate differentials to some extent. However, banks which base their normal management accounting on net present values are expected to use the net present values of each position, discounted using current interest rates and valued at current spot rates, for measuring their forward currency and gold positions.

¹³⁷ Subject to a separately calculated capital charge for gamma and vega as described in paragraphs 718(Lix) to 718(Lxii); alternatively, options and their associated underlyings are subject to one of the other methods described in paragraphs 718(Lvi) to 718(Lxix).

¹³⁸ 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 in paragraphs 709 to 718(xviii) and 718(xxxii) above.

The treatment of structural positions

718(xxxvii). A matched currency position will protect a bank against loss from movements in exchange rates, but will not necessarily protect its capital adequacy ratio. If a bank has its capital denominated in its domestic currency and has a portfolio of foreign currency assets and liabilities that is completely matched, its capital/asset ratio will fall if the domestic currency depreciates. By running a short position in the domestic currency the bank can protect its capital adequacy ratio, although the position would lead to a loss if the domestic currency were to appreciate.

718(xxxviii). Supervisory authorities are free to allow banks to protect their capital adequacy ratio in this way. Thus, any positions which a bank has deliberately taken in order to hedge partially or totally against the adverse effect of the exchange rate on its capital ratio may be

excluded from the calculation of net open currency positions, subject to each of the following conditions being met:

- Such positions need to be of a “structural”, i.e. of a non-dealing, nature (the precise definition to be set by national authorities according to national accounting standards and practices);
- The national authority needs to be satisfied that the “structural” position excluded does no more than protect the bank’s capital adequacy ratio;
- Any exclusion of the position needs to be applied consistently, with the treatment of the hedge remaining the same for the life of the assets or other items.

718(xxxix). No capital charge need apply to positions related to items that are deducted from a bank’s capital when calculating its capital base, such as investments in non consolidated subsidiaries, nor to other long-term participations denominated in foreign currencies which are reported in the published accounts at historic cost. These may also be treated as structural positions.

(ii). Measuring the foreign exchange risk in a portfolio of foreign currency positions and gold

718(xL). Banks will have a choice between two alternative measures at supervisory discretion; a “shorthand” method which treats all currencies equally; and the use of internal models which takes account of the actual degree of risk dependent on the composition of the bank’s portfolio. The conditions for the use of internal models are set out in paragraphs 718(Lxx) to 718(xcix) below.

718(xLi). Under the shorthand method, the nominal amount (or net present value) of the net position in each foreign currency and in gold is converted at spot rates into the reporting currency¹³⁹ The overall net open position is measured by aggregating:

- The sum of the net short positions or the sum of the net long positions, whichever is the greater;¹⁴⁰ plus

¹³⁹ Where the bank is assessing its 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 a foreign branch or subsidiary of the bank. In such cases the internal limit in each currency may be used as a proxy for the positions. Provided there is adequate ex post monitoring of actual positions against such limits, the limits should be added, without regard to sign, to the net open position in each currency.

- The net position (short or long) in gold, regardless of sign.

The capital charge will be 8% of the overall net open position (see example below).

Example of the shorthand measure of foreign exchange risk

| YEN | EUR | GB£ | CA\$ | US\$ | GOLD |
|------------|------------|------------|-------------|-------------|-------------|
| + 50 | + 100 | + 150 | - 20 | - 180 | - 35 |
| | + 300 | | - 200 | | 35 |

The capital charge would be 8% of the higher of either the net long currency positions or the net short currency positions (i.e. 300) and of the net position in gold (35) = 335 x 8% = 26.8.

718(xLii). A bank doing negligible business in foreign currency and which does not take foreign exchange positions for its own account may, at the discretion of its national authority, be exempted from capital requirements on these positions provided that:

- Its foreign currency business, defined as the greater of the sum of its gross long positions and the sum of its gross short positions in all foreign currencies, does not exceed 100% of eligible capital as defined in paragraphs 49(xxi) and 49(xxii); and
- Its overall net open position as defined in the paragraph above does not exceed 2% of its eligible capital as defined in paragraphs 49(xxi) and 49(xxii)

4. Commodities risk

718(xLiii). This section establishes a minimum capital standard to cover the risk of holding or taking positions in commodities, including precious metals, but excluding gold (which is treated as a foreign currency according to the methodology set out in paragraphs 718(xxx) to 718(xLii) above). A commodity is defined as a physical product which is or can be traded on a secondary market, e.g. agricultural products, minerals (including oil) and precious metals.

718(xLiv). The price risk in commodities is often more complex and volatile than that associated with currencies and interest rates. Commodity markets may also be less liquid than those for interest rates and currencies and, as a result, changes in supply and demand can have a more dramatic effect on price and volatility.¹⁴¹ These market characteristics can make price transparency and the effective hedging of commodities risk more difficult.

718(xLv). For spot or physical trading, the directional risk arising from a change in the spot price is the most important risk. However, banks using portfolio strategies involving forward and derivative contracts are exposed to a variety of additional risks, which may well be larger than the risk of a change in spot prices. These include:

- Basis risk (the risk that the relationship between the prices of similar commodities alters through time);

¹⁴⁰ An alternative calculation, which produces an identical result, is to include the reporting currency as a residual and to take the sum of all the short (or long) positions.

¹⁴¹ Banks need also to guard against the risk that arises when the short position falls due before the long position. Owing to a shortage of liquidity in some markets it might be difficult to close the short position and the bank might be squeezed by the market.

- Interest rate risk (the risk of a change in the cost of carry for forward positions and options);
- Forward gap risk (the risk that the forward price may change for reasons other than a change in interest rates);

In addition banks may face credit counterparty risk on over-the-counter derivatives, but this is captured by one of the methods set out in Annex 4 of this Framework. The funding of commodities positions may well open a bank to interest rate or foreign exchange exposure and if that is so the relevant positions should be included in the measures of interest rate and foreign exchange risk described in paragraphs 709 to 718(xviii) and paragraphs 718(xxx) to 718(xLii), respectively.¹⁴²

718(xLvi). There are three alternatives for measuring commodities position risk which are described in paragraphs 718(xLviii) to 718(Lv) below. As with other categories of market risk, banks may use models subject to the conditions set out in paragraphs 718(Lxx) to 718(xcix). Commodities risk can also be measured in a standardized manner, using either a very simple framework (paragraphs 718(Liv) and 718(Lv) below) or a measurement system which captures forward gap and interest rate risk separately by basing the methodology on seven time-bands (paragraphs 718(xLix) to 718(Liii) below). Both the simplified approach and the maturity ladder approach are appropriate only for banks which, in relative terms, conduct only a limited amount of commodities business. Major traders would be expected over time to adopt a models approach subject to the safeguards set out in paragraphs 718(Lxx) to 718(xcix).

718(xLvii). For the maturity ladder approach and the simplified approach, long and short positions in each commodity may be reported on a net basis for the purposes of calculating open positions. However, positions in different commodities will as a general rule not be offsettable in this fashion. Nevertheless, national authorities will have discretion to permit netting between different sub-categories¹⁴³ of the same commodity in cases where the subcategories are deliverable against each other. They can also be considered as offsettable if they are close substitutes against each other and a minimum correlation of 0.9 between the price movements can be clearly established over a minimum period of one year. However, a bank wishing to base its calculation of capital charges for commodities on correlations would have to satisfy the relevant supervisory authority of the accuracy of the method which has been chosen and obtain its prior approval. Where banks use the models approach they can offset long and short positions in different commodities to a degree which is determined by empirical correlations, in the same way as a limited degree of offsetting is allowed, for instance, between interest rates in different currencies.

¹⁴² Where a commodity is part of a forward contract (quantity of commodities 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 in paragraphs 709 to 718(xlviii) and paragraphs 718(xxx) to 718(xLii). Positions which are purely stock financing (i.e. a physical stock has been sold forward and the cost of funding has been locked in until the date of the forward sale) may be omitted from the commodities risk calculation although they will be subject to interest rate and counterparty risk requirements.

¹⁴³ Commodities can be grouped into clans, families, sub-groups and individual commodities. For example, a clan might be Energy Commodities, within which Hydro-Carbons are a family with Crude Oil being a sub-group and West Texas Intermediate, Arabian Light and Brent being individual commodities.

(i) Models for measuring commodities risk

718(xLviii). Banks may choose to adopt the models approach as set out in paragraphs 718(Lxx) to 718(xcix). It is essential that the methodology used encompasses:

- Directional risk, to capture the exposure from changes in spot prices arising from net open positions;
- Forward gap and interest rate risk, to capture the exposure to changes in forward prices arising from maturity mismatches; and
- Basis risk, to capture the exposure to changes in the price relationships between two similar, but not identical, commodities.

It is also particularly important that models take proper account of market characteristics - notably delivery dates and the scope provided to traders to close out positions.

(ii) Maturity ladder approach

718(xLix). In calculating the capital charges under this approach banks will first have to express each commodity position (spot plus forward) in terms of the standard unit of measurement (barrels, kilos, grams etc.). The net position in each commodity will then be converted at current spot rates into the national currency.

718(L). Secondly, in order to capture forward gap and interest rate risk within a time-band (which, together, are sometimes referred to as curvature/spread risk), matched long and short positions in each time-band will carry a capital charge. The methodology will be rather similar to that used for interest rate related instruments as set out in paragraphs 709 to 718(xviii). Positions in the separate commodities (expressed in terms of the standard unit of measurement) will first be entered into a maturity ladder while physical stocks should be allocated to the first time-band. A separate maturity ladder will be used for each commodity as defined in paragraph 718(xLvii) above.¹⁴⁴ For each time-band, the sum of short and long positions which are matched will be multiplied first by the spot price for the commodity, and then by the appropriate spread rate for that band (as set out in the table below).

¹⁴⁴ For markets which have daily delivery dates, any contracts maturing within ten days of one another may be offset.

Time-bands and spread rates

| Time-band | Spread rate |
|------------------|--------------------|
| 0 - 1 month | 1.5% |
| 1 - 3 months | 1.5% |
| 3 - 6 months | 1.5% |
| 6 - 12 months | 1.5% |
| 1 - 2 years | 1.5% |
| 2 - 3 years | 1.5% |
| over 3 years | 1.5% |

718(Li). The residual net positions from nearer time-bands may then be carried forward to offset exposures in time-bands that are further out. However, recognising that such hedging of positions among different time-bands is imprecise, a surcharge equal to 0.6% of the net

position carried forward will be added in respect of each time-band that the net position is carried forward. The capital charge for each matched amount created by carrying net positions forward will be calculated as in paragraph 718(L) above. At the end of this process a bank will have either only long or only short positions, to which a capital charge of 15% will apply.

718(Lii). Even though the Committee is aware that there are differences in volatility between different commodities, it has decided in the interest of simplicity, and given the fact that banks normally run rather small open positions in commodities, that one uniform capital charge for open positions in all commodities should apply. Those banks which desire to be more precise in this area may choose to adopt the models approach.

718(Liii). All commodity derivatives and off-balance-sheet positions which 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” method¹⁴⁵ is used (see paragraphs 718(Lix) to 718(Lxii) below). 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 the current market price should be incorporated as a series of positions equal to the notional amount of the contract, with one position corresponding with each payment on the swap and slotted into the maturity ladder accordingly. The positions would be long positions if

¹⁴⁵ For banks using other approaches to measure options risk, all options and the associated underlyings should be excluded from both the maturity ladder approach and the simplified approach.

the bank is paying fixed and receiving floating, and short positions if the bank is receiving fixed and paying floating:¹⁴⁶

- *Commodity swaps* where the legs are in different commodities are to be incorporated in the relevant maturity ladder. No offsetting will be allowed in this regard except where the commodities belong to the same sub-category as defined in paragraph 718(xLvii) above.

(iii) Simplified approach

718(Liv). In calculating the capital charge for directional risk, the same procedure will be adopted as in the maturity ladder approach above (see paragraphs 718(xLix) and 718(Liii)). Once again, all commodity derivatives and off-balance-sheet positions which are affected by changes in commodity prices should be included. The capital charge will equal 15% of the net position, long or short, in each commodity.

718(Lv). In order to protect the bank against basis risk, interest rate risk and forward gap risk, the capital charge for each commodity as described in paragraphs 718(xLix) and 718(Liiv) above will be subject to an additional capital charge equivalent to 3% of the bank's gross positions, 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

718(Lvi). In recognition of the wide diversity of banks' activities in options and the difficulties of measuring price risk for options, several alternative approaches will be permissible at the discretion of the national authority:

- Those banks which solely use purchased option^{s147} will be free to use the simplified approach described in paragraph 718(Lviii) below;
- Those banks which also write options will be expected to use one of the intermediate approaches as set out in paragraphs 718(Lix) to 718(Lxix) or a comprehensive risk management model under the terms of paragraphs 718(Lxx) to 718(xcix) of this Framework. The more significant its trading, the more the bank will be expected to use a sophisticated approach.

718(Lvii). In the *simplified approach*, the positions for the options and the associated underlying, cash or forward, are not subject to the standardized methodology but rather are "carved-out" and subject to separately calculated capital charges that incorporate both general market risk and specific risk. The risk numbers thus generated are then added to the capital charges for the relevant category, i.e. interest rate related instruments, equities, foreign exchange and commodities as described in paragraphs 709 to 718(Lv). The *deltaplus method* uses the sensitivity parameters or "Greek letters" associated with options to measure their market risk and capital requirements. Under this method, the delta equivalent position of each option becomes part of the standardized methodology set out in paragraphs 709 to 718(Lv) with the delta-equivalent amount subject to the applicable general market risk

¹⁴⁶ If one of the legs involves receiving/paying a fixed or floating interest rate, that exposure should be slotted into the appropriate repricing maturity band in the maturity ladder covering interest rate related instruments.

¹⁴⁷ Unless all their written option positions are hedged by perfectly matched long positions in exactly the same options, in which case no capital charge for market risk is required.

charges. Separate capital charges are then applied to the gamma and vega risks of the option positions. The *scenario approach* uses simulation techniques to calculate changes in the value of an options portfolio for changes in the level and volatility of its associated underlyings. Under this approach, the general market risk charge is determined by the scenario "grid" (i.e. the specified combination of underlying and volatility changes) that produces the largest loss. For the delta-plus method and the scenario approach the specific risk capital charges are determined separately by multiplying the delta-equivalent of each option by the specific risk weights set out in paragraphs 709 to 718(xxix).

(i) Simplified approach

718(Lviii). Banks which handle a limited range of purchased options only will be free to use the simplified approach set out in the table below for particular trades. As an example of how the calculation would work, if a holder of 100 shares currently valued at \$10 each holds an equivalent put option with a strike price of \$11, the capital charge would be: \$1,000 x 16%

(i.e. 8% specific plus 8% general market risk) = \$160, less the amount the option is in the money ($\$11 - \10) $\times 100 = \$100$, i.e. the capital charge would be \$60. A similar methodology applies for options whose underlying is a foreign currency, an interest rate related instrument or a commodity.

Simplified approach: capital charges

| Position | Treatment |
|--|--|
| Long cash and Long put Or Short cash and Long call | The capital charge will be the market value of the underlying security ¹⁴⁸ multiplied by the sum of specific and general market risk charges ¹⁴⁹ for the underlying less the amount the option is in the money (if any) bounded at zero ¹⁵⁰ |
| Long call Or Long put | The capital charge will be the lesser of: (i) the market value of the underlying security multiplied by the sum of specific and general market risk charges ¹⁴⁹ for the underlying (ii) the market value of the option ¹⁵¹ |

148 In some cases such as foreign exchange, it may be unclear which side is the “underlying security”; this should be taken to be the asset which would be received if the option were exercised. In addition the nominal value should be used for items where the market value of the underlying instrument could be zero, e.g. caps and floors, swaptions etc.

149 Some options (e.g. where the underlying is an interest rate, a currency or a commodity) bear no specific risk but specific risk will be present in the case of options on certain interest rate related instruments (e.g. options on a corporate debt security or corporate bond index; see paragraphs 709 to 718(xviii) for the relevant capital charges) and for options on equities and stock indices (see paragraphs 718(xix) to 718(xxix)). The charge under this measure for currency options will be 8% and for options on commodities 15%.

150 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.

151 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.

(ii) Intermediate approaches

Delta-plus method

718(Lix). Banks which write options will be allowed to include delta-weighted options positions within the standardized methodology set out in paragraphs 709 to 718(Lv). Such options should be reported as a position equal to the market value of the underlying multiplied by the delta. However, since delta does not sufficiently cover the risks associated with options positions, banks will also be required to measure gamma (which measures the rate of change of delta) and vega (which measures the sensitivity of the value of an option with respect to a change in volatility) sensitivities in order to calculate the total capital charge. These sensitivities will be calculated according to an approved exchange model or to the bank’s proprietary options pricing model subject to oversight by the national authority¹⁵²

718(Lx). Delta-weighted positions with *debt securities or interest rates as the underlying* will be slotted into the interest rate time-bands, as set out in paragraphs 709 to 718(xviii), 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 bought call option on a June three-month interest-rate future will 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.¹⁵³ The written option will 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 will be treated as a combination of floating rate securities and a series of European-style options. For example, the holder of a three-year floating rate bond indexed to six month LIBOR with a cap of 15% will treat it as:

- (i) A debt security that reprices in six months; and
- (ii) A series of five written call options on a FRA with a reference rate of 15%, each with a negative sign at the time the underlying FRA takes effect and a positive sign at the time the underlying FRA matures.¹⁵⁴

718(Lxi). The capital charge for *options with equities as the underlying* will also be based on the delta-weighted positions which will be incorporated in the measure of market risk described in paragraphs 718(xix) to 718(xxix). For purposes of this calculation each national market is to be treated as a separate underlying. The capital charge for *options on foreign*

exchange and gold positions will be based on the method set out in paragraphs 718(xxx) to 718(xLii). For delta risk, the net delta-based equivalent of the foreign currency and gold options will be incorporated into the measurement of the exposure for the respective currency (or gold) position. The capital charge for *options on commodities* will be based on the simplified or the maturity ladder approach set out in paragraphs 718(xLiii) to 718(Lv). The delta-weighted positions will be incorporated in one of the measures described in that section.

¹⁵² National authorities may wish to require banks doing business in certain classes of exotic options (e.g. barriers, digitals) or in options at the money that are close to expiry to use either the scenario approach or the internal models alternative, both of which can accommodate more detailed revaluation approaches.

¹⁵³ A two months call option on a bond future where delivery of the bond takes place in September would be considered in April as being long the bond and short a five months deposit, both positions being deltaweighted.

¹⁵⁴ The rules applying to closely matched positions set out in paragraph 718(xiv) will also apply in this respect. 718(Lxii). In addition to the above capital charges arising from delta risk, there will be further capital charges for *gamma* and for *vega risk*. Banks using the delta-plus method will be required to calculate the gamma and vega for each option position (including hedge positions) separately. The capital charges should be calculated in the following way:

- (i) for each individual option a “gamma impact” should be calculated according to a Taylor series expansion as:

$$\text{Gamma impact} = \frac{1}{2} \times \text{Gamma} \times \text{VU}^2$$

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 paragraph 718(iv). An equivalent

calculation should be carried out where the underlying is an interest rate, again based on the assumed changes in the corresponding yield in paragraph 718(iv);

- For options on equities and equity indices: the market value of the underlying should be multiplied by 8%;¹⁵⁵
- 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,¹⁵⁶ each time-band as set out in paragraph 718(iv);¹⁵⁷
- for equities and stock indices, each national market;
- for foreign currencies and gold, each currency pair and gold;
- for commodities, each individual commodity as defined in paragraph 718(xlvii).

(iv) Each option on the same underlying will have a gamma impact that is either positive or negative. These individual gamma impacts will 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 will be included in the capital calculation.

¹⁵⁵ The basic rules set out here for interest rate and equity options do not attempt to capture specific risk when calculating gamma capital charges. However, national authorities may wish to require specific banks to do so.

¹⁵⁶ Positions have to be slotted into separate maturity ladders by currency.

¹⁵⁷ Banks using the duration method should use the time-bands as set out in paragraph 718(vii).

(v) The total gamma capital charge will be the sum of the absolute value of the net negative gamma impacts as calculated above.

(vi) For volatility risk, banks will be 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 $\pm 25\%$.

(vii) The total capital charge for vega risk will be the sum of the absolute value of the individual capital charges that have been calculated for vega risk.

Scenario approach

718(Lxiii). More sophisticated banks will also have the right to base the market risk capital charge for options portfolios and associated hedging positions on *scenario matrix analysis*. This will be accomplished by specifying a fixed range of changes in the option portfolio's risk factors and calculating changes in the value of the option portfolio at various points along this "grid". For the purpose of calculating the capital charge, the bank will revalue the option

portfolio using matrices for simultaneous changes in the option's underlying rate or price and in the volatility of that rate or price. A different matrix will be set up for each individual underlying as defined in paragraph 718(Lxii) above. As an alternative, at the discretion of each national authority, banks which are significant traders in options will for interest rate options be permitted to base the calculation on a minimum of six sets of time-bands. When using this method, not more than three of the time-bands as defined in paragraphs 718(iv) and 718(vii) should be combined into any one set.

718(Lxiv). The options and related hedging positions will be evaluated over a specified range above and below the current value of the underlying. The range for interest rates is consistent with the assumed changes in yield in paragraph 718(iv). Those banks using the alternative method for interest rate options set out in paragraph 718(Lxiii) above should use, for each set of time-bands, the highest of the assumed changes in yield applicable to the group to which the time-bands belong.¹⁵⁸ The other ranges are $\pm 8\%$ for equities¹⁵⁵, $\pm 8\%$ for foreign exchange and gold, and $\pm 15\%$ for commodities. For all risk categories, at least seven observations (including the current observation) should be used to divide the range into equally spaced intervals.

718(Lxv). The second dimension of the matrix entails a change in the volatility of the underlying rate or price. A single change in the volatility of the underlying rate or price equal to a shift in volatility of $+ 25\%$ and $- 25\%$ is expected to be sufficient in most cases. As circumstances warrant, however, the supervisory authority may choose to require that a different change in volatility be used and/or that intermediate points on the grid be calculated.

718(Lxvi). After calculating the matrix each cell contains the net profit or loss of the option and the underlying hedge instrument. The capital charge for each underlying will then be calculated as the largest loss contained in the matrix.

718(Lxvii). The application of the scenario analysis by any specific bank will be subject to supervisory consent, particularly as regards the precise way that the analysis is constructed. Banks' use of scenario analysis as part of the standardized methodology will also be subject to validation by the national authority, and to those of the qualitative standards listed in paragraphs 718(Lxxiv) and 718(Lxxv) which are appropriate given the nature of the business.

¹⁵⁸ If, for example, the time-bands 3 to 4 years, 4 to 5 years and 5 to 7 years are combined the highest assumed change in yield of these three bands would be 0.75.

718(Lxviii). In drawing up these intermediate approaches the Committee has sought to cover the major risks associated with options. In doing so, it is conscious that so far as specific risk is concerned, only the delta-related elements are captured; to capture other risks would necessitate a much more complex regime. On the other hand, in other areas the simplifying assumptions used have resulted in a relatively conservative treatment of certain options positions. For these reasons, the Committee intends to keep this area under close review.

718(Lxix). Besides the options risks mentioned above, the Committee is conscious of the other risks also associated with options, e.g. rho (rate of change of the value of the option with respect to the interest rate) and theta (rate of change of the value of the option with respect to time). While not proposing a measurement system for those risks at present, it expects banks undertaking significant options business at the very least to monitor such risks closely. Additionally, banks will be permitted to incorporate rho into their capital calculations for interest rate risk, if they wish to do so.

7. Annex – 3

Details on ABCP (Asset Based Commercial Paper) program
in the context of resecuritization exposures.

Annex # 3

Resecuritization in the Context of ABCP

The definition of resecuritization also applies to ABCP programmes. For example, consider a traditional multi-seller ABCP conduit that acquires senior securitization exposures in separate pools of whole loans where none of these loans is a securitization or resecuritization exposure, and where the first-loss protection for each conduit investment is provided by the seller. To protect investors in the commercial paper (CP) issued by the conduit, typically the conduit sponsor or a third party would provide additional credit protection to cover all or a portion of the losses above the seller-provided protection at the level of an individual pool (eg “pool-

specific liquidity facility”) and/or across all the pools (eg “programme-wide credit enhancement”). In this example, a pool-specific liquidity facility generally would not be a resecuritization exposure because it represents a tranche of a single asset pool (ie the applicable pool of whole loans) which contains no securitization or resecuritization exposures. A programme-wide credit enhancement covering only some of the losses above the seller-provided protection across the various pools generally would constitute a tranching of the risk of a pool of multiple assets containing at least one securitization exposure, and so would be a resecuritization exposure. Lastly, in this example if the conduit funds itself entirely with a single class of CP, then this CP generally would not be considered a resecuritization exposure if either of the following conditions were met: (1) the programme-wide credit enhancement was not a resecuritization, or (2) the CP was fully supported by the sponsoring bank (ie where the sponsor provides support to an extent that leaves the CP effectively exposed to the default risk of the sponsor, instead of the underlying pools or assets) so that the external rating of the CP was based primarily on the credit quality of the bank sponsor.

For further details refer to BCBS document entitled "Enhancements to Basle II Framework" of July 2009.