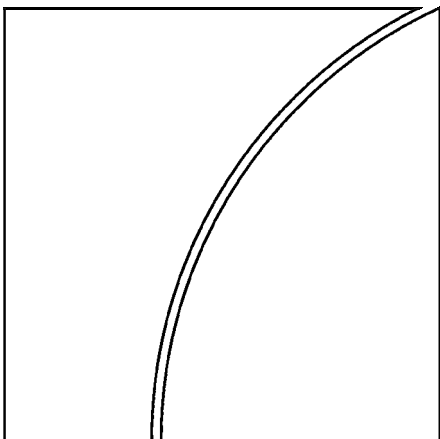


Basel Committee on Banking Supervision



Enhancements to the Basel II framework

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Revisions to Pillar 1 (Minimum capital requirements)

Introduction

The proposals for enhancing the Basel II framework in the area of securitisation and more specifically for dealing with resecritisations have been finalised. Banks are expected to comply with the revised requirements by 31 December 2010. These enhancements are intended to strengthen the framework and respond to lessons learned from the financial crisis. The following is a summary of the changes that the Committee is making to Pillar 1.

1. Resecritisation Risk Weights – Banks using the internal ratings-based (IRB) approach to securitisation will be required to apply higher risk weights to resecritisation exposures.
2. Standardised Risk Weights – Analysis to arrive at revised risk weights for resecritisations in IRB demonstrated that the risk weights in the Standardised approach should also be altered for similar exposures.
3. Use of Ratings Subject to Self-guarantee – Banks will not be permitted to use ratings for exposures subject to self-guarantees adding language to the Basel II framework so that a bank cannot recognise ratings – either in the Standardised Approach (SA) or in the IRB Approach – that are based on guarantees or similar support provided by the bank itself.
4. 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 securitisation framework. 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 securitisation exposure would result in its deduction.
5. Liquidity Facilities in the Standardised Approach – The credit conversion factor (CCF) for all eligible liquidity facilities (LFs) in the SA securitisation 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.
6. Liquidity Facilities in the IRB Approach – Revised language clarify when LFs may be treated as senior securitisation exposures.
7. General Market Disruption LFs in the Standardised & IRB Approaches – Favourable capital treatment afforded general market disruption LFs under the SA and under the Supervisory Formula Approach (SFA) in the IRB Approach is eliminated.

Throughout this document, specific paragraph references are made to the Basel II framework. This document, Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework - Comprehensive Version (June 2006), can be accessed at www.bis.org/publ/bcbs128.htm.

Resecuritisations under the IRB Approach¹

541(i) A resecuritisation exposure is a securitisation exposure in which the risk associated with an underlying pool of exposures is tranching and at least one of the underlying exposures is a securitisation exposure. In addition, an exposure to one or more resecuritisation exposures is a resecuritisation exposure.

Given the complexity of many securitisation transactions, banks are encouraged to consult with their national supervisors when there is uncertainty about whether a particular structured credit position should be considered a resecuritisation exposure. When making such determinations, supervisors will look to the exposure's economic substance.

The following describes how the above definition of a resecuritisation exposure would be applied in practice to several common types of transactions. The examples below are intended to be illustrative, but not exhaustive.

The definition of a resecuritisation exposure captures collateralised 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 securitisation 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 securitisation exposure, any tranching position (eg senior/subordinated ABS) exposed to that pool is considered a resecuritisation exposure.

Furthermore, when an instrument's performance is linked to one or more resecuritisation exposures, generally that instrument is a resecuritisation exposure. Thus, a credit derivative providing credit protection for a CDO² tranche is a resecuritisation exposure.

The definition of resecuritisation also applies to ABCP programmes. For example, consider a traditional multi-seller ABCP conduit that acquires senior securitisation exposures in separate pools of whole loans where none of these loans is a securitisation or resecuritisation 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 resecuritisation exposure because it represents a tranche of a single asset pool (ie the applicable pool of whole loans) which contains no securitisation or resecuritisation 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 securitisation exposure, and so would be a resecuritisation 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 resecuritisation exposure if either of the following conditions were met: (1) the programme-wide credit enhancement was not a resecuritisation, 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.

¹ Under the Basel II framework, there is no distinction between advanced IRB and foundation IRB for securitisation exposures.

These conditions in this example ensure that the CP does not represent a tranching risk position.

The ratings-based approach risk weight tables were modified to add two additional columns as shown below.

Long-term Rating	Securitisation Exposures			Resecuritisation Exposures	
	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				

Short-term Rating	Securitisation Exposures			Resecuritisation Exposures	
	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				

Senior resecuritisation exposures are defined as resecuritisation exposure satisfying the following two conditions: (a) the exposure is a senior position, and (b) none of the underlying exposures are themselves resecuritisation exposures. This would preclude the situation whereby a bank took a mezzanine resecuritisation 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 resecuritisation risk weights. Any resecuritisation exposure where the underlying exposure includes resecuritisation exposures is categorised as non-senior resecuritisation positions for the purpose of the ratings-based approach (RBA).

To maintain consistency between the RBA and the SFA, the SFA floor risk weight is set at 20% for resecuritisation exposures. It remains at 7% for other securitisation exposures. In this way, senior resecuritisation exposures would not be able to avoid the higher risk weight applicable in the RBA for resecuritisations by using the SFA.

Ratings resulting from self guarantees

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.

The Basel Committee has added language to the Basel II framework so that a bank cannot recognise 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, the Committee concluded that banks should not be allowed to recognise external ratings when those ratings are based on support provided by the same bank. For example, if a securitisation 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 securitisation exposure when the bank holds that AAA-rated exposure.

The Basel Committee has added the following three paragraphs to the Basel II securitisation framework.

565(g)(i) 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 securitisation 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 securitisation exposures it provides (eg against the liquidity facility and/or credit enhancement).

565(g)(ii) The treatment described in 565(g)(i) 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) Banks are permitted to recognise overlap in their exposures, consistent with paragraph 581. 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 recognise an overlap of 20% ($100\% \text{ liquidity facility} + 20\% \text{ CP held} - 100\% \text{ CP issued} = 20\%$). 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 ($90\% \text{ liquidity facility} + 20\% \text{ CP held} - 100\% \text{ CP issued} = 10\%$). 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 recognised 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.

Standardised Approach resecuritisation risk weights

After reviewing the empirical work conducted in assessing IRB resecuritisation risk weights, the Committee believes that the rationale for applying higher risk weights to resecuritisations

in the IRB Approach is equally applicable to the SA. 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 resecuritisations.

The following risk weights will be applied in the standardised approach.

Long-term Rating	Securitisation Exposures	Resecuritisation Exposures
AAA to AA-	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	Securitisation Exposures	Resecuritisation 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	

Operational criteria for credit analysis

The securitisation section of the Basel II framework incorporates operational requirements for traditional and synthetic securitisations that a bank would have to meet to recognise risk transference of exposures. The securitisation 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 securitisation exposure.

The paragraphs below have been added to the Basel II framework in the securitisation section following paragraph 565. The paragraphs apply in 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 securitisation framework. If a bank does not perform the level of due diligence specified, it will have to deduct the securitisation exposure.

2.1 Information on the underlying collateral supporting securitisation exposures

565(i) In order for a bank to use the securitisation framework, it must have the information specified in paragraphs 565(ii) through 565(iv).

565(ii) As a general rule, a bank must, on an ongoing basis, have a comprehensive understanding of the risk characteristics of its individual securitisation exposures, whether on balance sheet or off balance sheet, as well as the risk characteristics of the pools underlying its securitisation 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 resecuritisations, banks should have information not only on the underlying securitisation tranches, such as the issuer name and credit quality, but also on the characteristics and performance of the pools underlying the securitisation tranches.

565(iv) A bank must have a thorough understanding of all structural features of a securitisation 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.

Securitisation liquidity facilities – Standardised Approach

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 (paragraph 83). Similarly, eligible liquidity facilities under one year in the SA securitisation framework receive a 20% CCF, while those over one year receive a 50% CCF (paragraph 579).² All other commitments that are securitisation exposures receive a 100% CCF. Most commitments in the securitisation 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.

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 securitisation framework – in order to recognise 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 securitisation framework would be changed from 20% to 50% to be consistent with the CCF applied to long-term eligible liquidity facilities. To accomplish this change in the framework, the following changes to paragraph 579 have been made:

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 to the eligible liquidity facility regardless of the maturity of the facility, if the facility has an original maturity of more than one year.~~ 20% 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. [Note, new language is underlined.]

In addition the following changes to paragraph 639 have also been made:

² See paragraph 578 for the eligibility criteria for liquidity facilities in the securitisation framework.

639. When it is not practical for the bank to use either the bottom-up approach or the top-down approach for calculating K_{IRB} , 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 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 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, the CCF must be 20%.~~ In all other cases, the notional amount of the liquidity facility must be deducted.

Securitisation liquidity facilities – IRB Approach

Under the IRB Approach, liquidity facilities are treated as any other securitisation 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 securitisation 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 IAA or the 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 securitisation 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 programmes 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) 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.]

Market disruption lines – Standardised and IRB Approaches

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

Supplemental Pillar 2 Guidance (Supervisory review process)

I. Introduction and background

A. Scope of the risk management guidance

1. The purpose of this guidance is to supplement Basel II's second pillar (supervisory review process) with respect to banks' firm-wide risk management and capital planning processes. It builds on the second pillar, specifically paragraphs 719 through 807 of the comprehensive version of the Basel II framework (June 2006), as well as other Basel Committee guidance. Banks and supervisors are expected to begin implementing this supplemental Pillar 2 guidance immediately.

2. This guidance addresses several notable weaknesses that have been revealed in banks' risk management processes during the financial turmoil that began in 2007. As such, it contributes to the body of reports on the source of the turmoil that have been issued by national and international bodies since the crisis began. The guidance is intended to assist banks and supervisors in better identifying and managing risks in the future and in appropriately capturing risks in their internal assessments of capital adequacy. The risk management principles in this guidance reflect the lessons learned from the turmoil and reinforce how banks should manage and mitigate their risks that are identified through the Pillar 2 process. A thorough and comprehensive internal capital adequacy assessment process (ICAAP) is a vital component of a strong risk management programme. The ICAAP should produce a level of capital adequate to support the nature and level of the bank's risk. It is the role of the supervisor to evaluate the sufficiency of the bank's internal assessment and to intervene where appropriate.

3. Sound risk management processes are necessary to support supervisory and market participants' confidence in banks' assessments of their risk profiles and internal capital adequacy assessments. These processes take on particular importance in light of the identification, measurement and aggregation challenges arising from increasingly complex on- and off-balance sheet exposures.

The areas addressed by this supplemental guidance include:

- Firm-wide risk oversight;
- Specific risk management topics:
 - Risk concentrations;
 - Off-balance sheet exposures with a focus on securitisation;
 - Reputational risk and implicit support;
 - Valuation and liquidity risks;
 - Sound stress testing practices; and
 - Sound compensation practices.

4. When assessing whether a bank is appropriately capitalised, bank management should ensure that it properly identifies and measures the risks to which the bank is exposed.

A financial institution's ICAAP should be conducted on a consolidated basis and, when deemed necessary by the appropriate supervisors, at the legal entity level for each bank in the group.³ In addition, the ICAAP should incorporate stress testing to complement and help validate other quantitative and qualitative approaches so that bank management may have a more complete understanding of the bank's risks and the interaction of those risks under stressed conditions. A bank also should perform a careful analysis of its capital instruments and their potential performance during times of stress, including their ability to absorb losses and support ongoing business operations. A bank's ICAAP should address both short- and long-term needs and consider the prudence of building excess capital over benign periods of the credit cycle and also to withstand a severe and prolonged market downturn. Differences between the capital assessment under a bank's ICAAP and the supervisory assessment of capital adequacy made under Pillar 2 should trigger a dialogue that is proportionate to the depth and nature of such differences.

5. Pillar 1 capital requirements represent *minimum* requirements. An appropriate level of capital under Pillar 2 should exceed the minimum Pillar 1 requirement so that all risks of a bank – both on- and off-balance sheet – are adequately covered, particularly those related to complex capital market activities. This will help ensure that a bank maintains sufficient capital for risks not adequately addressed through Pillar 1 and that it will be able to operate effectively throughout a severe and prolonged period of financial market stress or an adverse credit cycle, in part, by drawing down on the capital buffer built-up during good times. While all banks must comply with the minimum capital requirements during and after such stress events, it is imperative that systemically important banks have the shock absorption capability to adequately protect against severe stress events.

6. The detail and sophistication of a bank's risk management programmes should be commensurate with the size and complexity of its business and the overall level of risk that the bank accepts. This guidance, therefore, should be applied to banks on a proportionate basis.

B. Need for improved risk management

7. The financial market crisis that began in mid-2007 has resulted in substantial financial losses. It is evident that many financial institutions did not fully understand the risks associated with the businesses and structured credit products in which they were involved. Moreover, it is now apparent these banks did not adhere to the fundamental tenets of sound financial judgment and prudent risk management.

8. While financial institutions have faced difficulties over the years for a multitude of reasons, the major causes of serious banking problems continue to be lax credit standards for borrowers and counterparties, poor portfolio risk management, and a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties. This experience is common in both G10 and non-G10 countries.

9. The financial market crisis has underscored the critical importance of effective credit risk management to the long-term success of any banking organisation and as a key component to financial stability. It has provided a stark reminder of the need for banks to effectively identify, measure, monitor and control credit risk, as well as to understand how

³ The ICAAP is a bank-driven process that should leverage off an institution's internal risk management processes. A single ICAAP may be used for internal and regulatory purposes.

credit risk interacts with other types of risk (including market, liquidity and reputational risk). The essential elements of a comprehensive credit risk management programme include (i) establishing an appropriate credit risk environment; (ii) operating under a sound credit granting process; (iii) maintaining an appropriate credit administration, measurement and monitoring process; and (iv) ensuring adequate controls over credit risk.⁴

10. The crisis has also emphasised the importance of effective capital planning and longer-term capital maintenance. A bank's ability to withstand uncertain market conditions is bolstered by maintaining a strong capital position that accounts for potential changes in the bank's strategy and volatility in market conditions over time. Banks should focus on effective and efficient capital planning, as well as long-term capital maintenance. An effective capital planning process requires a bank to assess both the risks to which it is exposed and the risk management processes in place to manage and mitigate those risks; evaluate its capital adequacy relative to its risks; and consider the potential impact on earnings and capital from economic downturns. A bank's capital planning process should incorporate rigorous, forward-looking stress testing, as discussed below in section III(F).

11. Rapid growth in any business activity can present banks with significant risk management challenges. This was the case with the expanded use of the "originate-to-distribute" business model, off-balance sheet vehicles, liquidity facilities and credit derivatives. The originate-to-distribute model and securitisation can enhance credit intermediation and bank profitability, as well as more widely diversify risk. Managing the associated risks, however, poses significant challenges. Indeed, these activities create exposures within business lines, across the firm and across risk factors that can be difficult to identify, measure, manage, mitigate and control. This is especially true in an environment of declining market liquidity, asset prices and risk appetite. The inability to properly identify and measure such risks may lead to unintended risk exposures and concentrations, which in turn can lead to concurrent losses arising in several businesses and risk dimensions due to a common set of factors.

12. Strong demand for structured products created incentives for banks using the originate-to-distribute model to originate loans, such as subprime mortgages, using unsound and unsafe underwriting standards. At the same time, many investors relied solely on the ratings of the credit rating agencies (CRAs) when determining whether to invest in structured credit products. Many investors conducted little or no independent due diligence on the structured products they purchased. Furthermore, many banks had insufficient risk management processes in place to address the risks associated with exposures held on their balance sheet, as well as those associated with off-balance sheet entities, such as asset-backed commercial paper (ABCP) conduits and structured investment vehicles (SIVs).

13. Improvements in risk management must evolve to keep pace with rapid financial innovation. This is particularly relevant for participants in evolving and rapidly growing businesses such as those that employ an originate-to-distribute model. Innovation has increased the complexity and potential illiquidity of structured credit products. This, in turn, can make such products more difficult to value and hedge, and may lead to inadvertent increases in overall risk. Further, the increased growth of complex investor-specific products may result in thin markets that are illiquid, which can expose a bank to large losses in times of stress if the associated risks are not well understood and managed in a timely and effective manner.

⁴ These elements are further elaborated upon in the Basel Committee's *Principles for the Management of Credit Risk* (September 2000).

C. Supervisory responsibility

14. Supervisors should determine whether a bank has in place a sound firm-wide risk management framework that enables it to define its risk appetite and recognise all material risks, including the risks posed by concentrations, securitisation, off-balance sheet exposures, valuation practices and other risk exposures. The bank can achieve this by:

- Adequately identifying, measuring, monitoring, controlling and mitigating these risks;
- Clearly communicating the extent and depth of these risks in an easily understandable, but accurate, manner in reports to senior management and the board of directors, as well as in published financial reports;
- Conducting ongoing stress testing to identify potential losses and liquidity needs under adverse circumstances; and
- Setting adequate minimum internal standards for allowances or liabilities for losses, capital, and contingency funding.

These elements should be adequately incorporated into a bank's risk management system and ICAAP specifically since they are not fully captured by Pillar 1 of the Basel II framework.

II. Firm-wide risk oversight⁵

A. General firm-wide risk management principles

15. Recent market events underscore the importance of senior management taking an integrated, firm-wide perspective of a bank's risk exposure, in order to support its ability to identify and react to emerging and growing risks in a timely and effective manner. The Basel Committee identified a number of areas where additional supervisory guidance is necessary.⁶ The common theme of this guidance is the need to enhance firm-wide oversight, risk management and controls around banks' growing capital markets activities, including securitisation, off-balance sheet exposures, structured credit and complex trading activities.

A sound risk management system should have the following key features:

- Active board and senior management oversight;
- Appropriate policies, procedures and limits;
- Comprehensive and timely identification, measurement, mitigation, controlling, monitoring and reporting of risks;
- Appropriate management information systems (MIS) at the business and firm-wide level; and
- Comprehensive internal controls.

⁵ For a more in-depth discussion on bank corporate governance, see the Basel Committee's paper *Enhancing corporate governance for banking organisations* (February 2006).

⁶ See the Basel Committee's press release of 16 April 2008 announcing the steps to strengthen the resilience of the banking system.

B. Board and senior management oversight⁷

16. It is the responsibility of the board of directors and senior management to define the institution's risk appetite and to ensure that the bank's risk management framework includes detailed policies that set specific firm-wide prudential limits on the bank's activities, which are consistent with its risk taking appetite and capacity. In order to determine the overall risk appetite, the board and senior management must first have an understanding of risk exposures on a firm-wide basis. To achieve this understanding, the appropriate members of senior management must bring together the perspectives of the key business and control functions. In order to develop an integrated firm-wide perspective on risk, senior management must overcome organisational silos between business lines and share information on market developments, risks and risk mitigation techniques. As the banking industry has moved increasingly towards market-based intermediation, there is a greater probability that many areas of a bank may be exposed to a common set of products, risk factors or counterparties. Senior management should establish a risk management process that is not limited to credit, market, liquidity and operational risks, but incorporates *all* material risks. This includes reputational, legal and strategic risks, as well as risks that do not appear to be significant in isolation, but when combined with other risks could lead to material losses.

17. The board of directors and senior management should possess sufficient knowledge of all major business lines to ensure that appropriate policies, controls and risk monitoring systems are effective. They should have the necessary expertise to understand the capital markets activities in which the bank is involved – such as securitisation and off-balance sheet activities – and the associated risks. The board and senior management should remain informed on an on-going basis about these risks as financial markets, risk management practices and the bank's activities evolve. In addition, the board and senior management should ensure that accountability and lines of authority are clearly delineated. With respect to new or complex products and activities, senior management should understand the underlying assumptions regarding business models, valuation and risk management practices. In addition, senior management should evaluate the potential risk exposure if those assumptions fail.

18. Before embarking on new activities or introducing products new to the institution, the board and senior management should identify and review the changes in firm-wide risks arising from these potential new products or activities and ensure that the infrastructure and internal controls necessary to manage the related risks are in place. In this review, a bank should also consider the possible difficulty in valuing the new products and how they might perform in a stressed economic environment.

19. A bank's risk function and its chief risk officer (CRO) or equivalent position should be independent of the individual business lines and report directly to the chief executive officer (CEO) and the institution's board of directors. In addition, the risk function should

⁷ This refers to a management structure composed of a board of directors and senior management. The Committee is aware that there are significant differences in legislative and regulatory frameworks across countries as regards the functions of the board of directors and senior management. In some countries, the board has the main, if not exclusive, function of supervising the executive body (senior management, general management) so as to ensure that the latter fulfils its tasks. For this reason, in some cases, it is known as a supervisory board. This means that the board has no executive functions. In other countries, by contrast, the board has a broader competence in that it lays down the general framework for the management of the bank. Owing to these differences, the notions of the board of directors and senior management are used in this paper not to identify legal constructs but rather to label two decision-making functions within a bank.

highlight to senior management and the board risk management concerns, such as risk concentrations and violations of risk appetite limits.

C. Policies, procedures, limits and controls

20. Firm-wide risk management programmes should include detailed policies that set specific firm-wide prudential limits on the principal risks relevant to a bank's activities. A bank's policies and procedures should provide specific guidance for the implementation of broad business strategies and should establish, where appropriate, internal limits for the various types of risk to which the bank may be exposed. These limits should consider the bank's role in the financial system and be defined in relation to the bank's capital, total assets, earnings or, where adequate measures exist, its overall risk level.

21. A bank's policies, procedures and limits should:

- Provide for adequate and timely identification, measurement, monitoring, control and mitigation of the risks posed by its lending, investing, trading, securitisation, off-balance sheet, fiduciary and other significant activities at the business line and firm-wide levels;
- Ensure that the economic substance of a bank's risk exposures, including reputational risk and valuation uncertainty, are fully recognised and incorporated into the bank's risk management processes;
- Be consistent with the bank's stated goals and objectives, as well as its overall financial strength;
- Clearly delineate accountability and lines of authority across the bank's various business activities, and ensure there is a clear separation between business lines and the risk function;
- Escalate and address breaches of internal position limits;
- Provide for the review of new businesses and products by bringing together all relevant risk management, control and business lines to ensure that the bank is able to manage and control the activity prior to it being initiated; and
- Include a schedule and process for reviewing the policies, procedures and limits and for updating them as appropriate.

D. Identifying, measuring, monitoring and reporting of risk

22. A bank's MIS should provide the board and senior management in a clear and concise manner with timely and relevant information concerning their institutions' risk profile. This information should include all risk exposures, including those that are off-balance sheet. Management should understand the assumptions behind and limitations inherent in specific risk measures.

23. The key elements necessary for the aggregation of risks are an appropriate infrastructure and MIS that (i) allow for the aggregation of exposures and risk measures across business lines and (ii) support customised identification of concentrations (see section III(A) below on risk concentrations) and emerging risks. MIS developed to achieve this objective should support the ability to evaluate the impact of various types of economic and financial shocks that affect the whole of the financial institution. Further, a bank's systems should be flexible enough to incorporate hedging and other risk mitigation actions to be carried out on a firm-wide basis while taking into account the various related basis risks.

24. To enable proactive management of risk, the board and senior management need to ensure that MIS is capable of providing regular, accurate and timely information on the bank's aggregate risk profile, as well as the main assumptions used for risk aggregation. MIS should be adaptable and responsive to changes in the bank's underlying risk assumptions and should incorporate multiple perspectives of risk exposure to account for uncertainties in risk measurement. In addition, it should be sufficiently flexible so that the institution can generate forward-looking bank-wide scenario analyses that capture management's interpretation of evolving market conditions and stressed conditions. (See section III(F) below on stress testing.) Third-party inputs or other tools used within MIS (eg credit ratings, risk measures, models) should be subject to initial and ongoing validation.

25. A bank's MIS should be capable of capturing limit breaches and there should be procedures in place to promptly report such breaches to senior management, as well as to ensure that appropriate follow-up actions are taken. For instance, similar exposures should be aggregated across business platforms (including the banking and trading books) to determine whether there is a concentration or a breach of an internal position limit.

E. Internal controls⁸

26. Risk management processes should be frequently monitored and tested by independent control areas and internal, as well as external, auditors. The aim is to ensure that the information on which decisions are based is accurate so that processes fully reflect management policies and that regular reporting, including the reporting of limit breaches and other exception-based reporting, is undertaken effectively. The risk management function of banks must be independent of the business lines in order to ensure an adequate separation of duties and to avoid conflicts of interest.

III. Specific risk management topics

A. Risk concentration

27. Unmanaged risk concentrations are an important cause of major problems in banks. A bank should aggregate all similar direct and indirect exposures regardless of where the exposures have been booked. A risk concentration is any single exposure or group of similar exposures (eg to the same borrower or counterparty, including protection providers, geographic area, industry or other risk factors) with the potential to produce (i) losses large enough (relative to a bank's earnings, capital, total assets or overall risk level) to threaten a bank's creditworthiness or ability to maintain its core operations or (ii) a material change in a bank's risk profile. Risk concentrations should be analysed on both a bank legal entity and consolidated basis, as an unmanaged concentration at a subsidiary bank may appear immaterial at the consolidated level, but can nonetheless threaten the viability of the subsidiary organisation.

28. Risk concentrations should be viewed in the context of a single or a set of closely related risk-drivers that may have different impacts on a bank. These concentrations should be integrated when assessing a bank's overall risk exposure. A bank should consider concentrations that are based on common or correlated risk factors that reflect more subtle

⁸ See the Basel Committee's paper *Framework for Internal Control Systems in Banking Organisations* (September 1998).

or more situation-specific factors than traditional concentrations, such as correlations between market, credit risks and liquidity risk.

29. The growth of market-based intermediation has increased the possibility that different areas of a bank are exposed to a common set of products, risk factors or counterparties. This has created new challenges for risk aggregation and concentration management. Through its risk management processes and MIS, a bank should be able to identify and aggregate similar risk exposures across the firm, including across legal entities, asset types (eg loans, derivatives and structured products), risk areas (eg the trading book) and geographic regions. The typical situations in which risk concentrations can arise include:

- exposures to a single counterparty, borrower or group of connected counterparties or borrowers;
- industry or economic sectors, including exposures to both regulated and non-regulated financial institutions such as hedge funds and private equity firms;
- geographical regions;
- exposures arising from credit risk mitigation techniques, including exposure to similar collateral types or to a single or closely related credit protection provider;
- trading exposures/market risk;
- exposures to counterparties (eg hedge funds and hedge counterparties) through the execution or processing of transactions (either product or service);
- funding sources;
- assets that are held in the banking book or trading book, such as loans, derivatives and structured products; and
- off-balance sheet exposures, including guarantees, liquidity lines and other commitments.

30. Risk concentrations can also arise through a combination of exposures across these broad categories. A bank should have an understanding of its firm-wide risk concentrations resulting from similar exposures across its different business lines. Examples of such business lines include subprime exposure in lending books; counterparty exposures; conduit exposures and SIVs; contractual and non-contractual exposures; trading activities; and underwriting pipelines.

31. While risk concentrations often arise due to direct exposures to borrowers and obligors, a bank may also incur a concentration to a particular asset type indirectly through investments backed by such assets (eg collateralised debt obligations – CDOs), as well as exposure to protection providers guaranteeing the performance of the specific asset type (eg monoline insurers). A bank should have in place adequate, systematic procedures for identifying high correlation between the creditworthiness of a protection provider and the obligors of the underlying exposures due to their performance being dependent on common factors beyond systematic risk (ie “wrong way risk”).

32. Procedures should be in place to communicate risk concentrations to the board of directors and senior management in a manner that clearly indicates where in the organisation each segment of a risk concentration resides. A bank should have credible risk mitigation strategies in place that have senior management approval. This may include altering business strategies, reducing limits or increasing capital buffers in line with the desired risk profile. While it implements risk mitigation strategies, the bank should be aware of possible concentrations that might arise as a result of employing risk mitigation techniques.

33. Banks should employ a number of techniques, as appropriate, to measure risk concentrations. These techniques include shocks to various risk factors; use of business level and firm-wide scenarios; and the use of integrated stress testing and economic capital models. Identified concentrations should be measured in a number of ways, including for example consideration of gross versus net exposures, use of notional amounts, and analysis of exposures with and without counterparty hedges. As set out in paragraph 21 above, a bank should establish internal position limits for concentrations to which it may be exposed. When conducting periodic stress tests (see section III(F)), a bank should incorporate all major risk concentrations and identify and respond to potential changes in market conditions that could adversely impact their performance and capital adequacy.

34. The assessment of such risks under a bank's ICAAP and the supervisory review process should not be a mechanical process, but one in which each bank determines, depending on its business model, its own specific vulnerabilities. An appropriate level of capital for risk concentrations should be incorporated in a bank's ICAAP, as well as in Pillar 2 assessments. Each bank should discuss such issues with its supervisor.

35. A bank should have in place effective internal policies, systems and controls to identify, measure, monitor, manage, control and mitigate its risk concentrations in a timely manner. Not only should normal market conditions be considered, but also the potential build-up of concentrations under stressed market conditions, economic downturns and periods of general market illiquidity. In addition, the bank should assess scenarios that consider possible concentrations arising from contractual and non-contractual contingent claims. The scenarios should also combine the potential build-up of pipeline exposures together with the loss of market liquidity and a significant decline in asset values.

B. Off-balance sheet exposures and securitisation risk

36. Banks' use of securitisation has grown dramatically over the last several years. It has been used as an alternative source of funding and as a mechanism to transfer risk to investors. While the risks associated with securitisation are not new to banks, the recent financial turmoil highlighted unexpected aspects of credit risk, concentration risk, market risk, liquidity risk, legal risk and reputational risk, which banks failed to adequately address. For instance, a number of banks that were not contractually obligated to support sponsored securitisation structures were unwilling to allow those structures to fail due to concerns about reputational risk and future access to capital markets. The support of these structures exposed the banks to additional and unexpected credit, market and liquidity risk as they brought assets onto their balance sheets, which put significant pressure on their financial profile and capital ratios.

37. Weaknesses in banks' risk management of securitisation and off-balance sheet exposures resulted in large unexpected losses during the financial crisis. To help mitigate these risks, a bank's on- and off-balance sheet securitisation activities should be included in its risk management disciplines, such as product approval, risk concentration limits, and estimates of market, credit and operational risk (as discussed above in section II).

38. In light of the wide range of risks arising from securitisation activities, which can be compounded by rapid innovation in securitisation techniques and instruments, minimum capital requirements calculated under Pillar 1 are often insufficient. All risks arising from securitisation, particularly those that are not fully captured under Pillar 1, should be addressed in a bank's ICAAP. These risks include:

- Credit, market, liquidity and reputational risk of each exposure;
- Potential delinquencies and losses on the underlying securitised exposures;

- Exposures from credit lines or liquidity facilities to special purpose entities; and
- Exposures from guarantees provided by monolines and other third parties.

39. Securitisation exposures should be included in the bank's MIS to help ensure that senior management understands the implications of such exposures for liquidity, earnings, risk concentration and capital. More specifically, a bank should have the necessary processes in place to capture in a timely manner updated information on securitisation transactions including market data, if available, and updated performance data from the securitisation trustee or servicer.

Risk evaluation and management

40. A bank should conduct analyses of the underlying risks when investing in the structured products and must not solely rely on the external credit ratings assigned to securitisation exposures by the CRAs. A bank should be aware that external ratings are a useful starting point for credit analysis, but are no substitute for full and proper understanding of the underlying risk, especially where ratings for certain asset classes have a short history or have been shown to be volatile. Moreover, a bank also should conduct credit analysis of the securitisation exposure at acquisition and on an ongoing basis. It should also have in place the necessary quantitative tools, valuation models and stress tests of sufficient sophistication to reliably assess all relevant risks.

41. When assessing securitisation exposures, a bank should ensure that it fully understands the credit quality and risk characteristics of the underlying exposures in structured credit transactions, including any risk concentrations. In addition, a bank should review the maturity of the exposures underlying structured credit transactions relative to the issued liabilities in order to assess potential maturity mismatches.

42. A bank should track credit risk in securitisation exposures at the transaction level and across securitisations exposures within each business line and across business lines. It should produce reliable measures of aggregate risk. A bank also should track all meaningful concentrations in securitisation exposures, such as name, product or sector concentrations, and feed this information to firm-wide risk aggregation systems that track, for example, credit exposure to a particular obligor.

43. A bank's own assessment of risk needs to be based on a comprehensive understanding of the structure of the securitisation transaction. It should identify the various types of triggers, credit events and other legal provisions that may affect the performance of its on- and off-balance sheet exposures and integrate these triggers and provisions into its funding/liquidity, credit and balance sheet management. The impact of the events or triggers on a bank's liquidity and capital position should also be considered.

44. Banks either underestimated or did not anticipate that a market-wide disruption could prevent them from securitising warehoused or pipeline exposures and did not anticipate the effect this could have on liquidity, earnings and capital adequacy. As part of its risk management processes, a bank should consider and, where appropriate, mark-to-market warehoused positions, as well as those in the pipeline, regardless of the probability of securitising the exposures. It should consider scenarios which may prevent it from securitising its assets as part of its stress testing (as discussed below in section III(F)) and identify the potential effect of such exposures on its liquidity, earnings and capital adequacy.

45. A bank should develop prudent contingency plans specifying how it would respond to funding, capital and other pressures that arise when access to securitisation markets is reduced. The contingency plans should also address how the bank would address valuation

challenges for potentially illiquid positions held for sale or for trading. The risk measures, stress testing results and contingency plans should be incorporated into the bank's risk management processes and its ICAAP, and should result in an appropriate level of capital under Pillar 2 in excess of the minimum requirements.

46. A bank that employs risk mitigation techniques should fully understand the risks to be mitigated, the potential effects of that mitigation and whether or not the mitigation is fully effective. This is to help ensure that the bank does not understate the true risk in its assessment of capital. In particular, it should consider whether it would provide support to the securitisation structures in stressed scenarios due to the reliance on securitisation as a funding tool.

C. Reputational risk and implicit support

47. Reputational risk can be defined as the risk arising from negative perception on the part of customers, counterparties, shareholders, investors, debt-holders, market analysts, other relevant parties or regulators that can adversely affect a bank's ability to maintain existing, or establish new, business relationships and continued access to sources of funding (eg through the interbank or securitisation markets). Reputational risk is multidimensional and reflects the perception of other market participants. Furthermore, it exists throughout the organisation and exposure to reputational risk is essentially a function of the adequacy of the bank's internal risk management processes, as well as the manner and efficiency with which management responds to external influences on bank-related transactions.

48. Reputational risk can lead to the provision of implicit support, which may give rise to credit, liquidity, market and legal risk – all of which can have a negative impact on a bank's earnings, liquidity and capital position. A bank should identify potential sources of reputational risk to which it is exposed. These include the bank's business lines, liabilities, affiliated operations, off-balance sheet vehicles and the markets in which it operates. The risks that arise should be incorporated into the bank's risk management processes and appropriately addressed in its ICAAP and liquidity contingency plans.

49. Prior to the 2007 upheaval, many banks failed to recognise the reputational risk associated with their off-balance sheet vehicles. In stressed conditions some firms went beyond their contractual obligations to support their sponsored securitisations and off-balance sheet vehicles. A bank should incorporate the exposures that could give rise to reputational risk into its assessments of whether the requirements under the securitisation framework have been met and the potential adverse impact of providing implicit support.

50. Reputational risk may arise, for example, from a bank's sponsorship of securitisation structures such as ABCP conduits and SIVs, as well as from the sale of credit exposures to securitisation trusts. It may also arise from a bank's involvement in asset or funds management, particularly when financial instruments are issued by owned or sponsored entities and are distributed to the customers of the sponsoring bank. In the event that the instruments were not correctly priced or the main risk drivers not adequately disclosed, a sponsor may feel some responsibility to its customers, or be economically compelled, to cover any losses. Reputational risk also arises when a bank sponsors activities such as money market mutual funds, in-house hedge funds and real estate investment trusts (REITs). In these cases, a bank may decide to support the value of shares/units held by investors even though is not contractually required to provide the support.

51. The financial market crisis has provided several examples of banks providing financial support that exceeded their contractual obligations. In order to preserve their reputation, some banks felt compelled to provide liquidity support to their SIVs, which was

beyond their contractual obligations. In other cases, banks purchased ABCP issued by vehicles they sponsored in order to maintain market liquidity. As a result, these banks assumed additional liquidity and credit risks, and also put pressure on capital ratios.

52. Reputational risk also may affect a bank's liabilities, since market confidence and a bank's ability to fund its business are closely related to its reputation. For instance, to avoid damaging its reputation, a bank may call its liabilities even though this might negatively affect its liquidity profile. This is particularly true for liabilities that are components of regulatory capital, such as hybrid/subordinated debt. In such cases, a bank's capital position is likely to suffer.

53. Bank management should have appropriate policies in place to identify sources of reputational risk when entering new markets, products or lines of activities. In addition, a bank's stress testing procedures should take account of reputational risk so management has a firm understanding of the consequences and second round effects of reputational risk.

54. Once a bank identifies potential exposures arising from reputational concerns, it should measure the amount of support it might have to provide (including implicit support of securitisations) or losses it might experience under adverse market conditions. In particular, in order to avoid reputational damages and to maintain market confidence, a bank should develop methodologies to measure as precisely as possible the effect of reputational risk in terms of other risk types (eg credit, liquidity, market or operational risk) to which it may be exposed. This could be accomplished by including reputational risk scenarios in regular stress tests. For instance, non-contractual off-balance sheet exposures could be included in the stress tests to determine the effect on a bank's credit, market and liquidity risk profiles. Methodologies also could include comparing the actual amount of exposure carried on the balance sheet versus the maximum exposure amount held off-balance sheet, that is, the potential amount to which the bank could be exposed.

55. A bank should pay particular attention to the effects of reputational risk on its overall liquidity position, taking into account both possible increases in the asset side of the balance sheet and possible restrictions on funding, should the loss of reputation result in various counterparties' loss of confidence. (See section III(E) on the management of liquidity risk.)

56. In contrast to contractual credit exposures, such as guarantees, implicit support is a more subtle form of exposure. Implicit support arises when a bank provides post-sale support to a securitisation transaction in excess of any contractual obligation. Such non-contractual support exposes a bank to the risk of loss, such as loss arising from deterioration in the credit quality of the securitisation's underlying assets.

57. By providing implicit support, a bank signals to the market that all of the risks inherent in the securitised assets are still held by the organisation and, in effect, had not been transferred. Since the risk arising from the potential provision of implicit support is not captured *ex ante* under Pillar 1, it must be considered as part of the Pillar 2 process. In addition, the processes for approving new products or strategic initiatives should consider the potential provision of implicit support and should be incorporated in a bank's ICAAP.

D. Valuation practices

58. In order to enhance the supervisory assessment of banks' valuation practices, the Basel Committee published *Supervisory guidance for assessing banks' financial instrument*

fair value practices in April 2009.⁹ This guidance applies to all positions that are measured at fair value and at all times, not only during times of stress.

59. The characteristics of complex structured products, including securitisation transactions, make their valuation inherently difficult due, in part, to the absence of active and liquid markets, the complexity and uniqueness of the cash waterfalls, and the links between valuations and underlying risk factors. The absence of a transparent price from a liquid market means that the valuation must rely on models or proxy-pricing methodologies, as well as on expert judgment. The outputs of such models and processes are highly sensitive to the inputs and parameter assumptions adopted, which may themselves be subject to estimation error and uncertainty. Moreover, calibration of the valuation methodologies is often complicated by the lack of readily available benchmarks.

60. Therefore, a bank is expected to have adequate governance structures and control processes for fair valuing exposures for risk management and financial reporting purposes. The valuation governance structures and related processes should be embedded in the overall governance structure of the bank, and consistent for both risk management and reporting purposes. The governance structures and processes are expected to explicitly cover the role of the board and senior management. In addition, the board should receive reports from senior management on the valuation oversight and valuation model performance issues that are brought to senior management for resolution, as well as all significant changes to valuation policies.

61. A bank should also have clear and robust governance structures for the production, assignment and verification of financial instrument valuations. Policies should ensure that the approvals of all valuation methodologies are well documented. In addition, policies and procedures should set forth the range of acceptable practices for the initial pricing, marking-to-market/model, valuation adjustments and periodic independent revaluation. New product approval processes should include all internal stakeholders relevant to risk measurement, risk control, and the assignment and verification of valuations of financial instruments.

62. A bank's control processes for measuring and reporting valuations should be consistently applied across the firm and integrated with risk measurement and management processes. In particular, valuation controls should be applied consistently across similar instruments (risks) and consistent across business lines (books). These controls should be subject to internal audit. Regardless of the booking location of a new product, reviews and approval of valuation methodologies must be guided by a minimum set of considerations. Furthermore, the valuation/new product approval process should be supported by a transparent, well-documented inventory of acceptable valuation methodologies that are specific to products and businesses.

63. In order to establish and verify valuations for instruments and transactions in which it engages, a bank must have adequate capacity, including during periods of stress. This capacity should be commensurate with the importance, riskiness and size of these exposures in the context of the business profile of the institution. In addition, for those exposures that represent material risk, a bank is expected to have the capacity to produce valuations using alternative methods in the event that primary inputs and approaches become unreliable, unavailable or not relevant due to market discontinuities or illiquidity. A

⁹ See also the Basel Committee's paper *Fair value measurement and modelling: an assessment of challenges and lessons learned from the market stress*, May 2008.

bank must test and review the performance of its models under stress conditions so that it understands the limitations of the models under stress conditions.

64. The relevance and reliability of valuations is directly related to the quality and reliability of the inputs. A bank is expected to apply the accounting guidance provided to determine the relevant market information and other factors likely to have a material effect on an instrument's fair value when selecting the appropriate inputs to use in the valuation process. Where values are determined to be in an active market, a bank should maximise the use of relevant observable inputs and minimise the use of unobservable inputs when estimating fair value using a valuation technique. However, where a market is deemed inactive, observable inputs or transactions may not be relevant, such as in a forced liquidation or distress sale, or transactions may not be observable, such as when markets are inactive. In such cases, accounting fair value guidance provides assistance on what should be considered, but may not be determinative. In assessing whether a source is reliable and relevant, a bank should consider, among other things:

- the frequency and availability of the prices/quotes;
- whether those prices represent actual regularly occurring transactions on an arm's length basis;
- the breadth of the distribution of the data and whether it is generally available to the relevant participants in the market;
- the timeliness of the information relative to the frequency of valuations;
- the number of independent sources that produce the quotes/prices;
- whether the quotes/prices are supported by actual transactions;
- the maturity of the market; and
- the similarity between the financial instrument sold in a transaction and the instrument held by the institution.

65. A bank's external reporting should provide timely, relevant, reliable and decision-useful information that promotes transparency. Senior management should consider whether disclosures around valuation uncertainty can be made more meaningful. For instance, the bank may describe the modelling techniques and the instruments to which they are applied; the sensitivity of fair values to modelling inputs and assumptions; and the impact of stress scenarios on valuations. A bank should regularly review its disclosure policies to ensure that the information disclosed continues to be relevant to its business model and products and to current market conditions.

E. Liquidity risk management and supervision

66. The financial market crisis underscores the importance of assessing the potential impact of liquidity risk on capital adequacy in a bank's ICAAP. Senior management should consider the relationship between liquidity and capital since liquidity risk can impact capital adequacy which, in turn, can aggravate a bank's liquidity profile.

67. In September 2008, the Committee published *Principles for Sound Liquidity Risk Management and Supervision*, which stresses that banks need to have strong liquidity cushions in order to weather prolonged periods of financial market stress and illiquidity. The standards address many of the shortcomings experienced by the banking sector during the market turmoil that began in mid-2007, including those related to stress testing practices, contingency funding plans, management of on- and off-balance sheet activity and contingent commitments.

68. The Committee's liquidity guidance outlines requirements for sound practices for the liquidity risk management of banks. The fundamental principle is that a bank should both assiduously manage its liquidity risk and also maintain sufficient liquidity to withstand a range of stress events. Liquidity is a critical element of a bank's resilience to stress, and as such, a bank should maintain a liquidity cushion, made up of unencumbered, high quality liquid assets, to protect against liquidity stress events, including potential losses of unsecured and typically available secured funding sources.

69. A key element in the management of liquidity risk is the need for strong governance of liquidity risk, including the setting of a liquidity risk tolerance by the board. The risk tolerance should be communicated throughout the bank and reflected in the strategy and policies that senior management set to manage liquidity risk. Another facet of liquidity risk management is that a bank should appropriately price the costs, benefits and risks of liquidity into the internal pricing, performance measurement, and new product approval process of all significant business activities.

70. A bank is expected to be able to thoroughly identify, measure and control liquidity risks, especially with regard to complex products and contingent commitments (both contractual and non-contractual). This process should involve the ability to project cash flows arising from assets, liabilities and off-balance sheet items over various time horizons, and should ensure diversification in both the tenor and source of funding. A bank should utilise early warning indicators to identify the emergence of increased risk or vulnerabilities in its liquidity position or funding needs. It should have the ability to control liquidity risk exposure and funding needs, regardless of its organisation structure, within and across legal entities, business lines, and currencies, taking into account any legal, regulatory and operational limitations to the transferability of liquidity.

71. A bank's failure to effectively manage intraday liquidity could leave it unable to meet its payment obligations at the time expected, which could lead to liquidity dislocations that cascade quickly across many systems and institutions. As such, the bank's management of intraday liquidity risks should be considered as a crucial part of liquidity risk management. It should also actively manage its collateral positions and have the ability to calculate all of its collateral positions.

72. While banks typically manage liquidity under "normal" circumstances, they should also be prepared to manage liquidity under stressed conditions. A bank should perform stress tests or scenario analyses on a regular basis in order to identify and quantify their exposures to possible future liquidity stresses, analysing possible impacts on the institutions' cash flows, liquidity positions, profitability, and solvency. The results of these stress tests should be discussed thoroughly by management, and based on this discussion, should form the basis for taking remedial or mitigating actions to limit the bank's exposures, build up a liquidity cushion, and adjust its liquidity profile to fit its risk tolerance. The results of stress tests should also play a key role in shaping the bank's contingency funding planning, which should outline policies for managing a range of stress events and clearly sets out strategies for addressing liquidity shortfalls in emergency situations.

73. As public disclosure increases certainty in the market, improves transparency, facilitates valuation, and strengthens market discipline, it is important that banks publicly disclose information on a regular basis that enables market participants to make informed decisions about the soundness of their liquidity risk management framework and liquidity position.

74. The liquidity guidance also augments sound practices for supervisors and emphasises the importance of assessing the adequacy of a bank's liquidity risk management and its level of liquidity. The guidance emphasises the importance of supervisors assessing

the adequacy of a bank's liquidity risk management framework and its level of liquidity, and suggests steps that supervisors should take if these are deemed inadequate. The principles also stress the importance of effective cooperation between supervisors and other key stakeholders, such as central banks, especially in times of stress.

F. Sound stress testing practices

75. In order to strengthen banks' stress testing practices, as well as improve supervision of those practices, in May 2009 the Basel Committee published *Principles for sound stress testing practices and supervision*. Improvements in stress testing alone cannot address all risk management weaknesses, but as part of a comprehensive approach, stress testing has a leading role to play in strengthening bank corporate governance and the resilience of individual banks and the financial system.

76. Stress testing is an important tool that is used by banks as part of their internal risk management that alerts bank management to adverse unexpected outcomes related to a broad variety of risks, and provides an indication to banks of how much capital might be needed to absorb losses should large shocks occur. Moreover, stress testing supplements other risk management approaches and measures. It plays a particularly important role in:

- providing forward looking assessments of risk,
- overcoming limitations of models and historical data,
- supporting internal and external communication,
- feeding into capital and liquidity planning procedures,
- informing the setting of a banks' risk tolerance,
- addressing existing or potential, firm-wide risk concentrations, and
- facilitating the development of risk mitigation or contingency plans across a range of stressed conditions.

Stress testing is especially important after long periods of benign risk, when the fading memory of negative economic conditions can lead to complacency and the underpricing of risk, and when innovation leads to the rapid growth of new products for which there is limited or no loss data.

77. Stress testing should form an integral part of the overall governance and risk management culture of the bank. Board and senior management involvement in setting stress testing objectives, defining scenarios, discussing the results of stress tests, assessing potential actions and decision making is critical in ensuring the appropriate use of stress testing in banks' risk governance and capital planning. Senior management should take an active interest in the development in, and operation of, stress testing. The results of stress tests should contribute to strategic decision making and foster internal debate regarding assumptions, such as the cost, risk and speed with which new capital could be raised or that positions could be hedged or sold. Board and senior management involvement in the stress testing program is essential for its effective operation.

78. To provide a complementary risk perspective to other risk management tools such as Value at Risk (VaR) and economic capital, stress tests should be used to provide an independent risk perspective. Stress tests should complement risk management models that are based on complex, quantitative models using backward looking data and estimated statistical relationships. In particular, stress testing outcomes for a particular portfolio can provide insights about the validity of statistical models at high confidence intervals, used to determine for example VaR.

79. Therefore, a bank's capital planning process should incorporate rigorous, forward-looking stress testing that identifies possible events or changes in market conditions that could adversely impact the bank. Banks, under their ICAAPs, and supervisors, under Pillar 2, should examine future capital resources and capital requirements under adverse scenarios. In particular, the results of forward-looking stress testing should be considered when evaluating the adequacy of a bank's capital buffer. Capital adequacy should be assessed under stressed conditions against a variety of capital ratios, including regulatory ratios, as well as ratios based on the bank's internal definition of capital resources. In addition, the possibility that a crisis impairs the ability of even very healthy banks to raise funds at reasonable cost should be considered.

80. Stress testing is particularly important in the management of warehouse and pipeline risk. Many of the risks associated with pipeline and warehoused exposures emerge when a bank is unable to access the securitisation market due to either bank specific or market stresses. A bank should therefore include such exposures in their regular stress tests regardless of the probability of the pipeline exposures being securitised.

81. In addition, a bank should develop methodologies to measure the effect of reputational risk in terms of other risk types, namely credit, liquidity, market and other risks that they may be exposed to in order to avoid reputational damages and in order to maintain market confidence. This could be done by including reputational risk scenarios in regular stress tests. For instance, including non-contractual off-balance sheet exposures in the stress tests to determine the effect on a bank's credit, market and liquidity risk profiles.

82. A bank should carefully assess the risks with respect to commitments to off-balance sheet vehicles and third-party firms related to structured credit securities and the possibility that assets will need to be taken on balance sheet for reputational reasons. Therefore, in its stress testing programme, a bank should include scenarios assessing the size and soundness of such vehicles and firms relative to its own financial, liquidity and regulatory capital positions. This analysis should include structural, solvency, liquidity and other risk issues, including the effects of covenants and triggers.

83. Supervisors should assess the effectiveness of banks' stress testing programme in identifying relevant vulnerabilities. Supervisors should review the key assumptions driving stress testing results and challenge their continuing relevance in view of existing and potentially changing market conditions. Supervisors should challenge banks on how stress testing is used and the way it affects decision-making. Where this assessment reveals material shortcomings, supervisors should require a bank to detail a plan of corrective action.

G. Sound compensation practices

84. Risk management must be embedded in the culture of a bank. It should be a critical focus of the CEO, CRO, senior management, trading desk and other business line heads and employees in making strategic and day-to-day decisions. For a broad and deep risk management culture to develop and be maintained over time, compensation policies must not be unduly linked to short-term accounting profit generation. Compensation policies should be linked to longer-term capital preservation and the financial strength of the firm, and should consider risk-adjusted performance measures. In addition, a bank should provide adequate disclosure regarding its compensation policies to stakeholders. Each bank's board of directors and senior management have the responsibility to mitigate the risks arising from remuneration policies in order to ensure effective firm-wide risk management.

85. Compensation practices at large financial institutions are one factor among many that contributed to the financial crisis that began in 2007. High short-term profits led to

generous bonus payments to employees without adequate regard to the longer-term risks they imposed on their firms. These incentives amplified the excessive risk-taking that has threatened the global financial system and left firms with fewer resources to absorb losses as risks materialised. The lack of attention to risk also contributed to the large, in some cases extreme absolute level of compensation in the industry. As a result, to improve compensation practices and strengthen supervision in this area, particularly for systemically important firms, the Financial Stability Board (formerly the Financial Stability Forum) published its *Principles for Sound Compensation Practices* in April 2009. Paragraphs 86 through 94 below set out those principles, which should be implemented by banks and reinforced by supervisors.

86. A bank's board of directors must actively oversee the compensation system's design and operation, which should not be controlled primarily by the chief executive officer and management team. Relevant board members and employees must have independence and expertise in risk management and compensation.

87. In addition, the board of directors must monitor and review the compensation system to ensure the system includes adequate controls and operates as intended. The practical operation of the system should be regularly reviewed to ensure compliance with policies and procedures. Compensation outcomes, risk measurements, and risk outcomes should be regularly reviewed for consistency with intentions.

88. Staff that are engaged in the financial and risk control areas must be independent, have appropriate authority, and be compensated in a manner that is independent of the business areas they oversee and commensurate with their key role in the firm. Effective independence and appropriate authority of such staff is necessary to preserve the integrity of financial and risk management's influence on incentive compensation.

89. Compensation must be adjusted for all types of risk so that remuneration is balanced between the profit earned and the degree of risk assumed in generating the profit. In general, both quantitative measures and human judgment should play a role in determining the appropriate risk adjustments, including those that are difficult to measure such as liquidity risk and reputation risk.

90. Compensation outcomes must be symmetric with risk outcomes and compensation systems should link the size of the bonus pool to the overall performance of the firm. Employees' incentive payments should be linked to the contribution of the individual and business to the firm's overall performance.

91. Compensation payout schedules must be sensitive to the time horizon of risks. Profits and losses of different activities of a financial firm are realized over different periods of time. Variable compensation payments should be deferred accordingly. Payments should not be finalised over short periods where risks are realised over long periods. Management should question payouts for income that cannot be realised or whose likelihood of realisation remains uncertain at the time of payout.

92. The mix of cash, equity and other forms of compensation must be consistent with risk alignment. The mix will vary depending on the employee's position and role. The firm should be able to explain the rationale for its mix.

93. Supervisory review of compensation practices must be rigorous and sustained, and deficiencies must be addressed promptly with the appropriate supervisory action. Supervisors should include compensation practices in their risk assessment of firms, and firms should work constructively with supervisors to ensure their practices are adequate. Regulations and supervisory practices will naturally differ across jurisdictions and potentially

among authorities within a country. Nevertheless, all supervisors should strive for effective review and intervention.

94. Firms must disclose clear, comprehensive and timely information about their compensation practices to facilitate constructive engagement by all stakeholders, including in particular shareholders. Stakeholders need to be able to evaluate the quality of support for the firm's strategy and risk posture. Appropriate disclosure related to risk management and other control systems will enable a firm's counterparties to make informed decisions about their business relations with the firm. Supervisors should have access to all necessary information in order to evaluate banks' compensation practices.

Revisions to Pillar 3 (Market discipline)

I. Background and objectives

1. In response to observed weaknesses in public disclosure and after a careful assessment of leading disclosure practices, the Committee decided to revise the current Pillar 3 requirements in the following six areas. Banks are expected to comply with the revised requirements by 31 December 2010. These enhancements also respond to the Financial Stability Board's recommendations for strengthened Pillar 3 requirements and draw upon the Senior Supervisors Group's analysis of disclosure practices.¹⁰

- (i) Securitisation exposures in the trading book;
- (ii) Sponsorship of off-balance sheet vehicles;
- (iii) Internal Assessment Approach (IAA) and other ABCP liquidity facilities;
- (iv) Resecuritisation exposures;
- (v) Valuation with regard to securitisation exposures; and
- (vi) Pipeline and warehousing risks with regard to securitisation exposures

2. The current Pillar 3 requirements are set out in Part 4 of the Basel II framework. They are intended to complement the other two Pillars of the Basel II framework (ie Pillar 1 minimum capital requirements and the Pillar 2 supervisory review process) by allowing market participants to assess a bank's capital adequacy through key pieces of information on the scope of application, capital, risk exposure and risk assessment process. While the requirements provide a common disclosure framework to enhance comparability among banks, the Committee had purposefully decided back in 2004 to avoid specifying in detail each requirement. Allowing a bank to interpret the details of each requirement provides flexibility for effective disclosures that better reflect its risk profile as well as more consistency with internal risk management. Such flexibility, however, could also somewhat undermine comparability among banks.

3. The Pillar 3 revisions include disclosure requirements that are not specifically required to compute capital requirements under Pillar 1. This information, however, will help market participants to better understand the overall risk profile of an institution. The Committee believes that these enhanced disclosure requirements will help to avoid a recurrence of market uncertainties about the strength of banks' balance sheets related to their securitisation activities.

¹⁰ FSF *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience* (April 2008) and the Senior Supervisors Group's report *Leading Practice Disclosures for Selected Exposures* (April 2008).

II. Changes to the Pillar 3 disclosure requirements

4. The Committee has strengthened the Guiding Principles of Pillar 3 (Paragraph 809) by adding a statement that, in addition to the particular information mentioned in the Pillar 3 tables, banks need to make disclosures that reflect their real risk profile as markets evolve over time. In promoting disclosure of information that conveys a bank's real risk profile, the Committee stresses the concept of banks' responsibility toward market participants. Paragraph 809 of the Basel II framework is revised as follows (additional text is underlined):

809. The purpose of Pillar 3 - market discipline is to complement the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2). The Committee aims to encourage market discipline by developing a set of disclosure requirements which will allow market participants to assess key pieces of information on the scope of application, capital, risk exposures, risk assessment processes, and hence the capital adequacy of the institution. The Committee believes that such disclosures have particular relevance under the framework, where reliance on internal methodologies gives banks more discretion in assessing capital requirements. The Committee emphasises that, beyond disclosure requirements as set forth in Part 4, Section II of this framework, banks are responsible for conveying their actual risk profile to market participants. The information banks disclose must be adequate to fulfill this objective.

5. The Committee's revisions in the six areas are summarised below.

(i) Securitisation exposures in the trading book

- Expand disclosures in Table 9 to include securitisation exposures within the trading book broadly in line with those in the banking book. There will be separate tables for the quantitative disclosures for banking/trading book.

(ii) Sponsorship of off-balance sheet vehicles

- Add a requirement to disclose the nature of risks other than credit risk inherent in securitised assets (Table 9a).
- Define the term "sponsor" for Pillar 3 purposes, thereby requiring that banks include in the qualitative disclosures all securitisation activities which the bank sponsors, regardless of whether they are in the banking or trading book, on- or off-balance sheet, and whether or not they are subject to the securitisation framework (Table 9b).
- Move the voluntary disclosure on sponsorship mentioned in the current Footnote 225 to the table and make the disclosure requirement mandatory (Table 9g and 9o).
- Revise the current Footnote 224 to clarify the meaning of the phrase "exposures securitised" (Footnote 229).
- Add a requirement to disclose on-balance sheet securitisation exposures separately from off-balance sheet securitisation exposures (Table 9k and 9s).

(iii) IAA and other ABCP liquidity facilities

- Add a clarification to show which regulatory capital approach applies to which type of securitisation exposures (Table 9a).

- Require qualitative information on the Internal Assessment Approach (IAA) process such as the structure, purposes, control mechanisms, etc. in line with the general disclosure requirements for the IRB system (Table 9e).
- Require breakdown of some quantitative information on the banking and trading books for each regulatory capital approach (Table 9l and 9u).

(iv) Resecuritisation exposures

- Add a description of processes in place to monitor changes in the credit and market risk of securitisation exposures; a description of the bank's policy governing the use of credit risk mitigation to mitigate the risks retained through securitisation and resecuritisation exposures; and the type of risks assumed and retained with resecuritisation activity (Table 9a).
- Encourage separate disclosure on the valuation of securitisation exposures and resecuritisation exposures (Footnote 227).
- Add the aggregate amount of resecuritisation exposures retained or purchased (Table 9n and 9w).

(v) Valuation with regard to securitisation exposures

- Introduce qualitative disclosure requirements on how banks value their securitisation positions by adding key assumptions for valuing positions (Table 9c).

(vi) Pipeline and warehousing risks with regard to securitisation exposures

- Add two disclosure requirements for accounting policies, which will provide the market with information to determine where they can find exposures intended to be securitised in the future, including information about how such exposures are valued (Table 9c).
- Add a requirement to disclose the total amount of outstanding exposures intended to be securitised broken down by exposure type (Table 9i and 9p).

(vii) Other

- Add a qualitative requirement to explain significant changes to any of the quantitative information since the last reporting period (Table 9f).

6. The disclosure requirements of the Basel II framework (Tables 9 and 7) are as follows:

Appendix

Table 9

Securitisation exposures²¹⁷

Qualitative disclosures ^{*222}	(a)	<p>The general qualitative disclosure requirement (paragraph 824) with respect to securitisation (including synthetics), including a discussion of:</p> <ul style="list-style-type: none"> the bank's objectives in relation to securitisation activity, including the extent to which these activities transfer credit risk of the underlying securitised exposures away from the bank to other entities and including the type of risks assumed and retained with resecuritisation activity,²²³ the nature of other risks (e.g. liquidity risk) inherent in securitised assets; the various roles played by the bank in the securitisation process²²⁴ and an indication of the extent of the bank's involvement in each of them; a description of the processes in place to monitor changes in the credit and market risk of securitisation exposures²³² (for example, how the behaviour of the underlying assets impacts securitisation exposures²³²) including how those processes differ for resecuritisation exposures; a description of the bank's policy governing the use of credit risk mitigation to mitigate the risks retained through securitisation and resecuritisation exposures; and the regulatory capital approaches (e.g. Standardised Approach (SA); Ratings Based Approach (RBA); Internal Assessment Approach (IAA); Supervisory Formula Approach (SFA); standardised measurement method and Comprehensive Risk Measure) that the bank uses for its securitisation activities including the type of securitisation exposures²³² to which each approach applies.²³³
	(b)	<p>A list of:</p> <ul style="list-style-type: none"> the types of SPEs that the bank, as sponsor,²²⁵ uses to securitise third-party exposures. Indicate whether the bank has exposure to these SPEs, either on- or off-balance sheet; and affiliated entities i) that the bank manages or advises and ii) that invest either in the securitisation exposures²³² that the bank has securitised or in SPEs that the bank sponsors.²²⁶

²²² Where relevant, banks should provide separate qualitative disclosures for banking book and trading book exposures.

²²³ For example, if a bank is particularly active in the market of senior tranche of resecuritisations of mezzanine tranches related to securitisations of residential mortgages, it should describe the structure of resecuritisations (e.g. senior tranche of mezzanine tranche of residential mortgage); this description should be provided for the main categories of resecuritisation products in which the bank is active.

²²⁴ For example: originator, investor, servicer, provider of credit enhancement, sponsor, liquidity provider, swap provider, protection provider.

²²⁵ A bank would generally be considered a "sponsor" if it, in fact or in substance, manages or advises the programme, places securities into the market, or provides liquidity and/or credit enhancements. The programme may include, for example, ABCP conduit programmes and structured investment vehicles.

²²⁶ For example, money market mutual funds, to be listed individually, and personal and private trusts, to be noted collectively.

	(c)	Summary of the bank's accounting policies for securitisation activities, including: <ul style="list-style-type: none"> • whether the transactions are treated as sales or financings; • recognition of gain on sale; • methods and key assumptions (including inputs) applied in valuing positions retained or purchased;²²⁷ • changes in methods and key assumptions from the previous period and impact of the changes; • treatment of synthetic securitisations if this is not covered by other accounting policies (e.g. on derivatives); • how exposures intended to be securitised (e.g. in the pipeline or warehouse) are valued and whether they are recorded in the banking book or the trading book; and • policies for recognising liabilities on the balance sheet for arrangements that could require the bank to provide financial support for securitised assets.
	(d)	In the banking book, the names of ECAs used for securitisations and the types of securitisation exposure ²³² for which each agency is used.
	(e)	Description of the IAA process. The description should include: <ul style="list-style-type: none"> • structure of the internal assessment process and relation between internal assessment and external ratings, including information on ECAs as referenced in 9 (d); • use of internal assessment other than for IAA capital purposes; • control mechanisms for the internal assessment process including discussion of independence, accountability, and internal assessment process review; • the exposure type²²⁸ to which the internal assessment process is applied; and • stress factors used for determining credit enhancement levels, by exposure type.²²⁸
	(f)	An explanation of significant changes to any of the quantitative information (e.g. amounts of assets intended to be securitised, movement of assets between banking book and trading book) since the last reporting period.
Quantitative disclosures*: Banking book	(g)	The total amount of outstanding exposures securitised ²²⁹ by the bank and defined under the securitisation framework (broken down into traditional/synthetic) by exposure type ^{228,230} , separately for securitisations of third-party exposures for which the bank acts only as sponsor. ²²⁵

²²⁷ Where relevant, banks are encouraged to differentiate between valuation of securitisation exposures and re-securitisation exposures.

²²⁸ For example, credit cards, home equity, auto, and securitisation exposures detailed by underlying exposure type and security type (e.g. RMBS, CMBS, ABS, CDOs) etc.

²²⁹ "Exposures securitised" include underlying exposures originated by the bank, whether generated by them or purchased into the balance sheet from third parties, and third-party exposures included in sponsored schemes. Securitisation transactions (including underlying exposures originally on the bank's balance sheet and underlying exposures acquired by the bank from third-party entities) in which the originating bank does not retain any securitisation exposure should be shown separately but need only be reported for the year of inception.

²³⁰ Banks are required to disclose exposures regardless of whether there is a capital charge under Pillar 1.

	(h)	For exposures securitised ²²⁹ by the bank and defined under the securitisation framework. ²³⁰ <ul style="list-style-type: none"> amount of impaired/past due assets securitised broken down by exposure type²²⁸; and losses recognised by the bank during the current period broken down by exposure type.^{228, 231}
	(i)	The total amount of outstanding exposures intended to be securitised broken down by exposure type. ^{228, 230}
	(j)	Summary of current period's securitisation activity, including the total amount of exposures securitised ²²⁹ (by exposure type ²²⁸), and recognised gain or loss on sale by exposure type. ^{228, 230}
	(k)	Aggregate amount of: <ul style="list-style-type: none"> on-balance sheet securitisation exposures²³² retained or purchased broken down by exposure type²²⁸; and off-balance sheet securitisation exposures²³² broken down by exposure type.²²⁸
	(l)	<ul style="list-style-type: none"> Aggregate amount of securitisation exposures²³² retained or purchased and the associated capital charges, broken down between securitisation and re-securitisation exposures and further broken down into a meaningful number of risk weight bands for each regulatory capital approach (e.g. SA, RBA, IAA and SFA) used. Exposures that have been deducted entirely from Tier 1 capital, credit enhancing I/Os deducted from total capital, and other exposures deducted from total capital should be disclosed separately by exposure type.²²⁸
	(m)	For securitisations subject to the early amortisation treatment, the following items by exposure type ²²⁸ for securitised facilities: <ul style="list-style-type: none"> the aggregate drawn exposures attributed to the seller's and investors' interests; the aggregate capital charges incurred by the bank against its retained (i.e. the seller's) shares of the drawn balances and undrawn lines; and the aggregate capital charges incurred by the bank against the investor's shares of drawn balances and undrawn lines.
	(n)	Aggregate amount of re-securitisation exposures ²³² retained or purchased broken down according to: <ul style="list-style-type: none"> exposures to which credit risk mitigation is applied and those not applied; and exposures to guarantors broken down according to guarantor credit worthiness categories or guarantor name.
	(o)	The total amount of outstanding exposures securitised ²²⁹ by the bank and defined under the securitisation framework (broken down into traditional/synthetic) by exposure type, ^{228, 230} separately for securitisations of third-party exposures for which the bank acts only as sponsor. ²²⁵
	(p)	The total amount of outstanding exposures intended to be securitised broken down by exposure type. ^{228, 230}
	(q)	Summary of current period's securitisation activity, including the total amount of exposures securitised ²²⁹ (by exposure type ²²⁸), and recognised gain or loss on sale by exposure type. ^{228, 230}
Quantitative disclosures*: Trading book		

²³¹ For example, charge-offs/allowances (if the assets remain on the bank's balance sheet) or write-downs of I/O strips and other retained residual interests, as well as recognition of liabilities for probable future financial support required of the bank with respect to securitised assets.

²³² Securitisation exposures, as noted in Part 2, Section IV, include, but are not restricted to, securities, liquidity facilities, protection provided to securitisation positions, other commitments and credit enhancements such as I/O strips, cash collateral accounts and other subordinated assets.

(r)	Aggregate amount of exposures securitised ²²⁹ by the bank for which the bank has retained some exposures and which is subject to the market risk approach (broken down into traditional/synthetic), by exposure type. ²²⁸
(s)	Aggregate amount of: <ul style="list-style-type: none"> on-balance sheet securitisation exposures²³² retained or purchased broken down by exposure type²²⁸; and off-balance sheet securitisation exposures²³² broken down by exposure type.²²⁸
(t)	Aggregate amount of securitisation exposures ²³² retained or purchased separately for: <ul style="list-style-type: none"> securitisation exposures²³² retained or purchased subject to Comprehensive Risk Measure for specific risk; and securitisation exposures²³² subject to the securitisation framework for specific risk broken down into a meaningful number of risk weight bands for each regulatory capital approach (e.g. SA, RBA, SFA and concentration ratio approach).
(u)	Aggregate amount of: <ul style="list-style-type: none"> the capital requirements for the securitisation exposures²³² subject to Comprehensive Risk Measure, broken down into appropriate risk classifications (e.g. default risk, migration risk and correlation risk).²³³ the capital requirements for the securitisation exposures²³² (resecuritisation or securitisation), subject to the securitisation framework broken down into a meaningful number of risk weight bands for each regulatory capital approach (e.g. SA, RBA, SFA and concentration ratio approach). securitisation exposures²³² that are deducted entirely from Tier 1 capital, credit enhancing I/Os deducted from total capital, and other exposures deducted from total capital should be disclosed separately by exposure type.²²⁸
(v)	For securitisations subject to the early amortisation treatment, the following items by exposure type ²²⁸ for securitised facilities: <ul style="list-style-type: none"> the aggregate drawn exposures attributed to the seller's and investors' interests; the aggregate capital charges incurred by the bank against its retained (i.e. the seller's) shares of the drawn balances and undrawn lines; and the aggregate capital charges incurred by the bank against the investor's shares of drawn balances and undrawn lines.
(w)	Aggregate amount of resecuritisation exposures retained or purchased ²³¹ broken down according to: <ul style="list-style-type: none"> exposures to which credit risk mitigation is applied and those not applied; and exposures to guarantors broken down according to guarantor credit worthiness categories or guarantor name.

²³³ See "Table 10" for market risk approach used.

Table 7

Credit risk mitigation: disclosures for standardised and IRB approaches^{216, 217}

Qualitative Disclosures*	(a)	<p>The general qualitative disclosure requirement (paragraph 824) with respect to credit risk mitigation including:</p> <ul style="list-style-type: none"> • policies and processes for, and an indication of the extent to which the bank makes use of, on- and off-balance sheet netting; • policies and processes for collateral valuation and management; • a description of the main types of collateral taken by the bank; • the main types of guarantor/credit derivative counterparty and their creditworthiness; and • information about (market or credit) risk concentrations within the mitigation taken.
Quantitative Disclosures*	(b)	<p>For each separately disclosed credit risk portfolio under the standardised and/or foundation IRB approach, the total exposure (after, where applicable, on- or off-balance sheet netting) that is covered by:</p> <ul style="list-style-type: none"> • eligible financial collateral; and • other eligible IRB collateral; <p>after the application of haircuts.²¹⁸</p>
	(c)	<p>For each separately disclosed portfolio under the standardised and/or IRB approach, the total exposure (after, where applicable, on- or off-balance sheet netting) that is covered by guarantees/credit derivatives.</p>

²¹⁶ At a minimum, banks must give the disclosures below in relation to credit risk mitigation that has been recognised for the purposes of reducing capital requirements under this framework. Where relevant, banks are encouraged to give further information about mitigants that have not been recognised for that purpose.

²¹⁷ Credit derivatives and other credit mitigation that are treated, for the purposes of this Framework, as part of securitisation structures should be excluded from the credit risk mitigation disclosures and included within those relating to securitisation (Table 9).

²¹⁸ If the comprehensive approach is applied, where applicable, the total exposure covered by collateral after haircuts should be reduced further to remove any positive adjustments that were applied to the exposure, as permitted under Part 2.