Part 3: The Second Pillar — Supervisory Review Process

719. This section discusses the key principles of supervisory review, risk management guidance and supervisory transparency and accountability produced by the Committee with respect to banking risks, including guidance relating to, among other things, the treatment of interest rate risk in the banking book, credit risk (stress testing, definition of default, residual risk, and credit concentration risk), operational risk, enhanced cross-border communication and cooperation, and securitisation.

I. Importance of supervisory review

720. The supervisory review process of the Framework is intended not only to ensure that banks have adequate capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks.

721. The supervisory review process recognises the responsibility of bank management in developing an internal capital assessment process and setting capital targets that are commensurate with the bank's risk profile and control environment. In the Framework, bank management continues to bear responsibility for ensuring that the bank has adequate capital to support its risks beyond the core minimum requirements.

722. Supervisors are expected to evaluate how well banks are assessing their capital needs relative to their risks and to intervene, where appropriate. This interaction is intended to foster an active dialogue between banks and supervisors such that when deficiencies are identified, prompt and decisive action can be taken to reduce risk or restore capital. Accordingly, supervisors may wish to adopt an approach to focus more intensely on those banks with risk profiles or operational experience that warrants such attention.

723. The Committee recognises the relationship that exists between the amount of capital held by the bank against its risks and the strength and effectiveness of the bank's risk management and internal control processes. However, increased capital should not be viewed as the only option for addressing increased risks confronting the bank. Other means for addressing risk, such as strengthening risk management, applying internal limits, strengthening the level of provisions and reserves, and improving internal controls, must also be considered. Furthermore, capital should not be regarded as a substitute for addressing fundamentally inadequate control or risk management processes.

724. There are three main areas that might be particularly suited to treatment under Pillar 2: risks considered under Pillar 1 that are not fully captured by the Pillar 1 process (e.g. credit concentration risk); those factors not taken into account by the Pillar 1 process (e.g. interest rate risk in the banking book, business and strategic risk); and factors external to the bank (e.g. business cycle effects). A further important aspect of Pillar 2 is the assessment of compliance with the minimum standards and disclosure requirements of the more advanced methods in Pillar 1, in particular the IRB framework for credit risk and the Advanced Measurement Approaches for operational risk. Supervisors must ensure that these requirements are being met, both as qualifying criteria and on a continuing basis.

II. Four key principles of supervisory review

725. The Committee has identified four key principles of supervisory review, which complement those outlined in the extensive supervisory guidance that has been developed by the Committee, the keystone of which is the Core Principles for Effective Banking Supervision and the Core Principles Methodology.[116] A list of the specific guidance relating to the management of banking risks is provided at the end of this Part of the Framework.

Principle 1: Banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels.

726. Banks must be able to demonstrate that chosen internal capital targets are well founded and that these targets are consistent with their overall risk profile and current operating environment. In assessing capital adequacy, bank management needs to be mindful of the particular stage of the business cycle in which the bank is operating. Rigorous, forward-looking stress testing that identifies possible events or changes in market conditions that could adversely impact the bank should be performed. Bank management clearly bears primary responsibility for ensuring that the bank has adequate capital to support its risks.

727. The five main features of a rigorous process are as follows:

- Board and senior management oversight;
- Sound capital assessment;
- Comprehensive assessment of risks;
- Monitoring and reporting; and
- Internal control review.

1. Board and senior management oversight[117]

728. A sound risk management process is the foundation for an effective assessment of the adequacy of a bank's capital position. Bank management is responsible for understanding the nature and level of risk being taken by the bank and how this risk relates to adequate capital levels. It is also responsible for ensuring that the formality and sophistication of the risk management processes are appropriate in light of the risk profile and business plan.

729. The analysis of a bank's current and future capital requirements in relation to its strategic objectives is a vital element of the strategic planning process. The strategic plan

[116] *Core Principles for Effective Banking Supervision,* Basel Committee on Banking Supervision (September 1997), and *Core Principles Methodology,* Basel Committee on Banking Supervision (October 1999).

[117] This section of the paper 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 section not to identify legal constructs but rather to label two decision-making functions within a bank.

should clearly outline the bank's capital needs, anticipated capital expenditures, desirable capital level, and external capital sources. Senior management and the board should view capital planning as a crucial element in being able to achieve its desired strategic objectives.

730. The bank's board of directors has responsibility for setting the bank's tolerance for risks. It should also ensure that management establishes a framework for assessing the various risks, develops a system to relate risk to the bank's capital level, and establishes a method for monitoring compliance with internal policies. It is likewise important that the board of directors adopts and supports strong internal controls and written policies and procedures and ensures that management effectively communicates these throughout the organisation.

2. Sound capital assessment

731. Fundamental elements of sound capital assessment include:

- Policies and procedures designed to ensure that the bank identifies, measures, and reports all material risks;
- A process that relates capital to the level of risk;
- A process that states capital adequacy goals with respect to risk, taking account of the bank's strategic focus and business plan; and
- A process of internal controls, reviews and audit to ensure the integrity of the overall management process.

3. Comprehensive assessment of risks

732. All material risks faced by the bank should be addressed in the capital assessment process. While the Committee recognises that not all risks can be measured precisely, a process should be developed to estimate risks. Therefore, the following risk exposures, which by no means constitute a comprehensive list of *all* risks, should be considered.

733. ***Credit risk:*** Banks should have methodologies that enable them to assess the credit risk involved in exposures to individual borrowers or counterparties as well as at the portfolio level. For more sophisticated banks, the credit review assessment of capital adequacy, at a minimum, should cover four areas: risk rating systems, portfolio analysis/aggregation, securitisation/complex credit derivatives, and large exposures and risk concentrations.

734. Internal risk ratings are an important tool in monitoring credit risk. Internal risk ratings should be adequate to support the identification and measurement of risk from all credit exposures, and should be integrated into an institution's overall analysis of credit risk and capital adequacy. The ratings system should provide detailed ratings for all assets, not only for criticised or problem assets. Loan loss reserves should be included in the credit risk assessment for capital adequacy.

735. The analysis of credit risk should adequately identify any weaknesses at the portfolio level, including any concentrations of risk. It should also adequately take into consideration the risks involved in managing credit concentrations and other portfolio issues through such mechanisms as securitisation programmes and complex credit derivatives. Further, the analysis of counterparty credit risk should include consideration of public evaluation of the supervisor's compliance with the Core Principles for Effective Banking Supervision.

736. ***Operational risk:*** The Committee believes that similar rigour should be applied to the management of operational risk, as is done for the management of other significant banking risks. The failure to properly manage operational risk can result in a misstatement of an institution's risk/return profile and expose the institution to significant losses.

737. A bank should develop a framework for managing operational risk and evaluate the adequacy of capital given this framework. The framework should cover the bank's appetite and tolerance for operational risk, as specified through the policies for managing this risk, including the extent and manner in which operational risk is transferred outside the bank. It should also include policies outlining the bank's approach to identifying, assessing, monitoring and controlling/mitigating the risk.

738. ***Market risk***: Banks should have methodologies that enable them to assess and actively manage all material market risks, wherever they arise, at position, desk, business line and firm-wide level. For more sophisticated banks, their assessment of internal capital adequacy for market risk, at a minimum, should be based on both VaR modelling and stress testing, including an assessment of concentration risk and the assessment of illiquidity under stressful market scenarios, although all firms' assessments should include stress testing appropriate to their trading activity.

738 (i). VaR is an important tool in monitoring aggregate market risk exposures and provides a common metric for comparing the risk being run by different desks and business lines. A bank's VaR model should be adequate to identify and measure risks arising from all its trading activities and should be integrated into the bank's overall internal capital assessment as well as subject to rigorous on-going validation. A VaR model estimates should be sensitive to changes in the trading book risk profile.

738 (ii). Banks must supplement their VaR model with stress tests (factor shocks or integrated scenarios whether historic or hypothetical) and other appropriate risk management techniques. In the bank's internal capital assessment it must demonstrate that it has enough capital to not only meet the minimum capital requirements but also to withstand a range of severe but plausible market shocks. In particular, it must factor in, where appropriate:

- Illiquidity/gapping of prices;
- Concentrated positions (in relation to market turnover);
- One-way markets;
- Non-linear products/deep out-of-the money positions;
- Events and jumps-to-defaults;
- Significant shifts in correlations;
- Other risks that may not be captured appropriately in VaR (e.g. recovery rate uncertainty, implied correlations, or skew risk).

The stress tests applied by a bank and, in particular, the calibration of those tests (e.g. the parameters of the shocks or types of events considered) should be reconciled back to a clear statement setting out the premise upon which the bank's internal capital assessment is based (e.g. ensuring there is adequate capital to manage the traded portfolios within stated limits through what may be a prolonged period of market stress and illiquidity, or that there is adequate capital to ensure that, over a given time horizon to a specified confidence level, all positions can be liquidated or the risk hedged in an orderly fashion). The market shocks applied in the tests must reflect the nature of portfolios and the time it could take to hedge out or manage risks under severe market conditions.

738 (iii). Concentration risk should be pro-actively managed and assessed by firms and concentrated positions should be routinely reported to senior management.

738 (iv). Banks should design their risk management systems, including the VaR methodology and stress tests, to properly measure the material risks in instruments they trade as well as the trading strategies they pursue. As their instruments and trading strategies change, the VaR methodologies and stress tests should also evolve to accommodate the changes.

738 (v). Banks must demonstrate how they combine their risk measurement approaches to arrive at the overall internal capital for market risk.

739. ***Interest rate risk in the banking book:*** The measurement process should include all material interest rate positions of the bank and consider all relevant repricing and maturity data. Such information will generally include current balance and contractual rate of interest associated with the instruments and portfolios, principal payments, interest reset dates, maturities, the rate index used for repricing, and contractual interest rate ceilings or floors for adjustable-rate items. The system should also have well-documented assumptions and techniques.

740. Regardless of the type and level of complexity of the measurement system used, bank management should ensure the adequacy and completeness of the system. Because the quality and reliability of the measurement system is largely dependent on the quality of the data and various assumptions used in the model, management should give particular attention to these items.

741. ***Liquidity risk:*** Liquidity is crucial to the ongoing viability of any banking organisation. Banks' capital positions can have an effect on their ability to obtain liquidity, especially in a crisis. Each bank must have adequate systems for measuring, monitoring and controlling liquidity risk. Banks should evaluate the adequacy of capital given their own liquidity profile and the liquidity of the markets in which they operate.

742. ***Other risks:*** Although the Committee recognises that 'other' risks, such as reputational and strategic risk, are not easily measurable, it expects industry to further develop techniques for managing all aspects of these risks.

4. Monitoring and reporting

743. The bank should establish an adequate system for monitoring and reporting risk exposures and assessing how the bank's changing risk profile affects the need for capital. The bank's senior management or board of directors should, on a regular basis, receive reports on the bank's risk profile and capital needs. These reports should allow senior management to:

- Evaluate the level and trend of material risks and their effect on capital levels;
- Evaluate the sensitivity and reasonableness of key assumptions used in the capital assessment measurement system;
- Determine that the bank holds sufficient capital against the various risks and is in compliance with established capital adequacy goals; and

- Assess its future capital requirements based on the bank's reported risk profile and make necessary adjustments to the bank's strategic plan accordingly.

5. Internal control review

744. The bank's internal control structure is essential to the capital assessment process. Effective control of the capital assessment process includes an independent review and, where appropriate, the involvement of internal or external audits. The bank's board of directors has a responsibility to ensure that management establishes a system for assessing the various risks, develops a system to relate risk to the bank's capital level, and establishes a method for monitoring compliance with internal policies. The board should regularly verify whether its system of internal controls is adequate to ensure well-ordered and prudent conduct of business.

745. The bank should conduct periodic reviews of its risk management process to ensure its integrity, accuracy, and reasonableness. Areas that should be reviewed include:

- Appropriateness of the bank's capital assessment process given the nature, scope and complexity of its activities;
- Identification of large exposures and risk concentrations;
- Accuracy and completeness of data inputs into the bank's assessment process;
- Reasonableness and validity of scenarios used in the assessment process; and
- Stress testing and analysis of assumptions and inputs.

Principle 2: Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process.

746. The supervisory authorities should regularly review the process by which a bank assesses its capital adequacy, risk position, resulting capital levels, and quality of capital held. Supervisors should also evaluate the degree to which a bank has in place a sound internal process to assess capital adequacy. The emphasis of the review should be on the quality of the bank's risk management and controls and should not result in supervisors functioning as bank management. The periodic review can involve some combination of:

- On-site examinations or inspections;
- Off-site review;
- Discussions with bank management;
- Review of work done by external auditors (provided it is adequately focused on the necessary capital issues); and
- Periodic reporting.

747. The substantial impact that errors in the methodology or assumptions of formal analyses can have on resulting capital requirements requires a detailed review by supervisors of each bank's internal analysis.

1. Review of adequacy of risk assessment

748. Supervisors should assess the degree to which internal targets and processes incorporate the full range of material risks faced by the bank. Supervisors should also review the adequacy of risk measures used in assessing internal capital adequacy and the extent to which these risk measures are also used operationally in setting limits, evaluating business line performance, and evaluating and controlling risks more generally. Supervisors should consider the results of sensitivity analyses and stress tests conducted by the institution and how these results relate to capital plans.

2. Assessment of capital adequacy

749. Supervisors should review the bank's processes to determine that:

- Target levels of capital chosen are comprehensive and relevant to the current operating environment;
- These levels are properly monitored and reviewed by senior management; and
- The composition of capital is appropriate for the nature and scale of the bank's business.

750. Supervisors should also consider the extent to which the bank has provided for unexpected events in setting its capital levels. This analysis should cover a wide range of external conditions and scenarios, and the sophistication of techniques and stress tests used should be commensurate with the bank's activities.

3. Assessment of the control environment

751. Supervisors should consider the quality of the bank's management information reporting and systems, the manner in which business risks and activities are aggregated, and management's record in responding to emerging or changing risks.

752. In all instances, the capital level at an individual bank should be determined according to the bank's risk profile and adequacy of its risk management process and internal controls. External factors such as business cycle effects and the macroeconomic environment should also be considered.

4. Supervisory review of compliance with minimum standards

753. In order for certain internal methodologies, credit risk mitigation techniques and asset securitisations to be recognised for regulatory capital purposes, banks will need to meet a number of requirements, including risk management standards and disclosures. In particular, banks will be required to disclose features of their internal methodologies used in calculating minimum capital requirements. As part of the supervisory review process, supervisors must ensure that these conditions are being met on an ongoing basis.

754. The Committee regards this review of minimum standards and qualifying criteria as an integral part of the supervisory review process under Principle 2. In setting the minimum criteria the Committee has considered current industry practice and so anticipates that these minimum standards will provide supervisors with a useful set of benchmarks that are aligned with bank management expectations for effective risk management and capital allocation.

755. There is also an important role for supervisory review of compliance with certain conditions and requirements set for standardised approaches. In this context, there will be a particular need to ensure that use of various instruments that can reduce Pillar 1 capital requirements are utilised and understood as part of a sound, tested, and properly documented risk management process.

5. Supervisory response

756. Having carried out the review process described above, supervisors should take appropriate action if they are not satisfied with the results of the bank's own risk assessment and capital allocation. Supervisors should consider a range of actions, such as those set out under Principles 3 and 4 below.

Principle 3: Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

757. Pillar 1 capital requirements will include a buffer for uncertainties surrounding the Pillar 1 regime that affect the banking population as a whole. Bank-specific uncertainties will be treated under Pillar 2. It is anticipated that such buffers under Pillar 1 will be set to provide reasonable assurance that a bank with good internal systems and controls, a well-diversified risk profile and a business profile well covered by the Pillar 1 regime, and which operates with capital equal to Pillar 1 requirements, will meet the minimum goals for soundness embodied in Pillar 1. However, supervisors will need to consider whether the particular features of the markets for which they are responsible are adequately covered. Supervisors will typically require (or encourage) banks to operate with a buffer, over and above the Pillar 1 standard. Banks should maintain this buffer for a combination of the following:

(a) Pillar 1 minimums are anticipated to be set to achieve a level of bank creditworthiness in markets that is below the level of creditworthiness sought by many banks for their own reasons. For example, most international banks appear to prefer to be highly rated by internationally recognised rating agencies. Thus, banks are likely to choose to operate above Pillar 1 minimums for competitive reasons.

(b) In the normal course of business, the type and volume of activities will change, as will the different risk exposures, causing fluctuations in the overall capital ratio.

(c) It may be costly for banks to raise additional capital, especially if this needs to be done quickly or at a time when market conditions are unfavourable.

(d) For banks to fall below minimum regulatory capital requirements is a serious matter. It may place banks in breach of the relevant law and/or prompt non-discretionary corrective action on the part of supervisors.

(e) There may be risks, either specific to individual banks, or more generally to an economy at large, that are not taken into account in Pillar 1.

758. There are several means available to supervisors for ensuring that individual banks are operating with adequate levels of capital. Among other methods, the supervisor may set trigger and target capital ratios or define categories above minimum ratios (e.g. well capitalised and adequately capitalised) for identifying the capitalisation level of the bank.

Principle 4: Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

759. Supervisors should consider a range of options if they become concerned that a bank is not meeting the requirements embodied in the supervisory principles outlined above. These actions may include intensifying the monitoring of the bank, restricting the payment of dividends, requiring the bank to prepare and implement a satisfactory capital adequacy restoration plan, and requiring the bank to raise additional capital immediately. Supervisors should have the discretion to use the tools best suited to the circumstances of the bank and its operating environment.

760. The permanent solution to banks' difficulties is not always increased capital. However, some of the required measures (such as improving systems and controls) may take a period of time to implement. Therefore, increased capital might be used as an interim measure while permanent measures to improve the bank's position are being put in place. Once these permanent measures have been put in place and have been seen by supervisors to be effective, the interim increase in capital requirements can be removed.

III. Specific issues to be addressed under the supervisory review process

761. The Committee has identified a number of important issues that banks and supervisors should particularly focus on when carrying out the supervisory review process. These issues include some key risks which are not directly addressed under Pillar 1 and important assessments that supervisors should make to ensure the proper functioning of certain aspects of Pillar 1.

A. Interest rate risk in the banking book

762. The Committee remains convinced that interest rate risk in the banking book is a potentially significant risk which merits support from capital. However, comments received from the industry and additional work conducted by the Committee have made it clear that there is considerable heterogeneity across internationally active banks in terms of the nature of the underlying risk and the processes for monitoring and managing it. In light of this, the Committee has concluded that it is at this time most appropriate to treat interest rate risk in the banking book under Pillar 2 of the Framework. Nevertheless, supervisors who consider that there is sufficient homogeneity within their banking populations regarding the nature and methods for monitoring and measuring this risk could establish a mandatory minimum capital requirement.

763. The revised guidance on interest rate risk recognises banks' internal systems as the principal tool for the measurement of interest rate risk in the banking book and the supervisory response. To facilitate supervisors' monitoring of interest rate risk exposures across institutions, banks would have to provide the results of their internal measurement systems, expressed in terms of economic value relative to capital, using a standardised interest rate shock.

764. If supervisors determine that banks are not holding capital commensurate with the level of interest rate risk, they must require the bank to reduce its risk, to hold a specific additional amount of capital or some combination of the two. Supervisors should be

particularly attentive to the sufficiency of capital of 'outlier banks' where economic value declines by more than 20% of the sum of Tier 1 and Tier 2 capital as a result of a standardised interest rate shock (200 basis points) or its equivalent, as described in the supporting document *Principles for the Management and Supervision of Interest Rate Risk*.

B. Credit risk

1. Stress tests under the IRB approaches

765. A bank should ensure that it has sufficient capital to meet the Pillar 1 requirements and the results (where a deficiency has been indicated) of the credit risk stress test performed as part of the Pillar 1 IRB minimum requirements (paragraphs 434 to 437). Supervisors may wish to review how the stress test has been carried out. The results of the stress test will thus contribute directly to the expectation that a bank will operate above the Pillar 1 minimum regulatory capital ratios. Supervisors will consider whether a bank has sufficient capital for these purposes. To the extent that there is a shortfall, the supervisor will react appropriately. This will usually involve requiring the bank to reduce its risks and/or to hold additional capital/provisions, so that existing capital resources could cover the Pillar 1 requirements plus the result of a recalculated stress test.

2. Definition of default

766. A bank must use the reference definition of default for its internal estimations of PD and/or LGD and EAD. However, as detailed in paragraph 454, national supervisors will issue guidance on how the reference definition of default is to be interpreted in their jurisdictions. Supervisors will assess individual banks' application of the reference definition of default and its impact on capital requirements. In particular, supervisors will focus on the impact of deviations from the reference definition according to paragraph 456 (use of external data or historic internal data not fully consistent with the reference definition of default).

3. Residual risk

767. The Framework allows banks to offset credit or counterparty risk with collateral, guarantees or credit derivatives, leading to reduced capital charges. While banks use credit risk mitigation (CRM) techniques to reduce their credit risk, these techniques give rise to risks that may render the overall risk reduction less effective. Accordingly these risks (e.g. legal risk, documentation risk, or liquidity risk) to which banks are exposed are of supervisory concern. Where such risks arise, and irrespective of fulfilling the minimum requirements set out in Pillar 1, a bank could find itself with greater credit risk exposure to the underlying counterparty than it had expected. Examples of these risks include:

- Inability to seize, or realise in a timely manner, collateral pledged (on default of the counterparty);
- Refusal or delay by a guarantor to pay; and
- Ineffectiveness of untested documentation.

768. Therefore, supervisors will require banks to have in place appropriate written CRM policies and procedures in order to control these residual risks. A bank may be required to submit these policies and procedures to supervisors and must regularly review their appropriateness, effectiveness and operation.

769. In its CRM policies and procedures, a bank must consider whether, when calculating capital requirements, it is appropriate to give the full recognition of the value of the credit risk

mitigant as permitted in Pillar 1 and must demonstrate that its CRM management policies and procedures are appropriate to the level of capital benefit that it is recognising. Where supervisors are not satisfied as to the robustness, suitability or application of these policies and procedures they may direct the bank to take immediate remedial action or hold additional capital against residual risk until such time as the deficiencies in the CRM procedures are rectified to the satisfaction of the supervisor. For example, supervisors may direct a bank to:

- Make adjustments to the assumptions on holding periods, supervisory haircuts, or volatility (in the own haircuts approach);
- Give less than full recognition of credit risk mitigants (on the whole credit portfolio or by specific product line); and/or
- Hold a specific additional amount of capital.

4. Credit concentration risk

770. A risk concentration is any single exposure or group of exposures with the potential to produce losses large enough (relative to a bank's capital, total assets, or overall risk level) to threaten a bank's health or ability to maintain its core operations. Risk concentrations are arguably the single most important cause of major problems in banks.

771. Risk concentrations can arise in a bank's assets, liabilities, or off-balance sheet items, through the execution or processing of transactions (either product or service), or through a combination of exposures across these broad categories. Because lending is the primary activity of most banks, credit risk concentrations are often the most material risk concentrations within a bank.

772. Credit risk concentrations, by their nature, are based on common or correlated risk factors, which, in times of stress, have an adverse effect on the creditworthiness of each of the individual counterparties making up the concentration. Concentration risk arises in both direct exposures to obligors and may also occur through exposures to protection providers. Such concentrations are not addressed in the Pillar 1 capital charge for credit risk.

773. Banks should have in place effective internal policies, systems and controls to identify, measure, monitor, and control their credit risk concentrations. Banks should explicitly consider the extent of their credit risk concentrations in their assessment of capital adequacy under Pillar 2. These policies should cover the different forms of credit risk concentrations to which a bank may be exposed. Such concentrations include:

- Significant exposures to an individual counterparty or group of related counterparties. In many jurisdictions, supervisors define a limit for exposures of this nature, commonly referred to as a large exposure limit. Banks might also establish an aggregate limit for the management and control of all of its large exposures as a group;
- Credit exposures to counterparties in the same economic sector or geographic region;
- Credit exposures to counterparties whose financial performance is dependent on the same activity or commodity; and
- Indirect credit exposures arising from a bank's CRM activities (e.g. exposure to a single collateral type or to credit protection provided by a single counterparty).

774. A bank's framework for managing credit risk concentrations should be clearly documented and should include a definition of the credit risk concentrations relevant to the

bank and how these concentrations and their corresponding limits are calculated. Limits should be defined in relation to a bank's capital, total assets or, where adequate measures exist, its overall risk level.

775. A bank's management should conduct periodic stress tests of its major credit risk concentrations and review the results of those tests to identify and respond to potential changes in market conditions that could adversely impact the bank's performance.

776. A bank should ensure that, in respect of credit risk concentrations, it complies with the Committee document *Principles for the Management of Credit Risk* (September 2000) and the more detailed guidance in the Appendix to that paper.

777. In the course of their activities, supervisors should assess the extent of a bank's credit risk concentrations, how they are managed, and the extent to which the bank considers them in its internal assessment of capital adequacy under Pillar 2. Such assessments should include reviews of the results of a bank's stress tests. Supervisors should take appropriate actions where the risks arising from a bank's credit risk concentrations are not adequately addressed by the bank.

5. Counterparty credit risk

777 (i). As counterparty credit risk (CCR) represents a form of credit risk, this would include meeting this Framework's standards regarding their approaches to stress testing, "residual risks" associated with credit risk mitigation techniques, and credit concentrations, as specified in the paragraphs above.

777 (ii). The bank must have counterparty credit risk management policies, processes and systems that are conceptually sound and implemented with integrity relative to the sophistication and complexity of a firm's holdings of exposures that give rise to CCR. A sound counterparty credit risk management framework shall include the identification, measurement, management, approval and internal reporting of CCR.

777 (iii). The bank's risk management policies must take account of the market, liquidity, legal and operational risks that can be associated with CCR and, to the extent practicable, interrelationships among those risks. The bank must not undertake business with a counterparty without assessing its creditworthiness and must take due account of both settlement and pre-settlement credit risk. These risks must be managed as comprehensively as practicable at the counterparty level (aggregating counterparty exposures with other credit exposures) and at the firm-wide level.

777 (iv). The board of directors and senior management must be actively involved in the CCR control process and must regard this as an essential aspect of the business to which significant resources need to be devoted. Where the bank is using an internal model for CCR, senior management must be aware of the limitations and assumptions of the model used and the impact these can have on the reliability of the output. They should also consider the uncertainties of the market environment (e.g. timing of realisation of collateral) and operational issues (e.g. pricing feed irregularities) and be aware of how these are reflected in the model.

777 (v). In this regard, the daily reports prepared on a firm's exposures to CCR must be reviewed by a level of management with sufficient seniority and authority to enforce both reductions of positions taken by individual credit managers or traders and reductions in the firm's overall CCR exposure.

777 (vi). The bank's CCR management system must be used in conjunction with internal credit and trading limits. In this regard, credit and trading limits must be related to the firm's risk measurement model in a manner that is consistent over time and that is well understood by credit managers, traders and senior management.

777 (vii). The measurement of CCR must include monitoring daily and intra-day usage of credit lines. The bank must measure current exposure gross and net of collateral held where such measures are appropriate and meaningful (e.g. OTC derivatives, margin lending, etc.). Measuring and monitoring peak exposure or potential future exposure (PFE) at a confidence level chosen by the bank at both the portfolio and counterparty levels is one element of a robust limit monitoring system. Banks must take account of large or concentrated positions, including concentrations by groups of related counterparties, by industry, by market, customer investment strategies, etc.

777 (viii). The bank must have a routine and rigorous program of stress testing in place as a supplement to the CCR analysis based on the day-to-day output of the firm's risk measurement model. The results of this stress testing must be reviewed periodically by senior management and must be reflected in the CCR policies and limits set by management and the board of directors. Where stress tests reveal particular vulnerability to a given set of circumstances, management should explicitly consider appropriate risk management strategies (e.g. by hedging against that outcome, or reducing the size of the firm's exposures).

777 (ix). The bank must have a routine in place for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operation of the CCR management system. The firm's CCR management system must be well documented, for example, through a risk management manual that describes the basic principles of the risk management system and that provides an explanation of the empirical techniques used to measure CCR.

777 (x). The bank must conduct an independent review of the CCR management system regularly through its own internal auditing process. This review must include both the activities of the business credit and trading units and of the independent CCR control unit. A review of the overall CCR management process must take place at regular intervals (ideally not less than once a year) and must specifically address, at a minimum:

- the adequacy of the documentation of the CCR management system and process;
- the organisation of the CCR control unit;
- the integration of CCR measures into daily risk management;
- the approval process for risk pricing models and valuation systems used by front and back-office personnel;
- the validation of any significant change in the CCR measurement process;
- the scope of counterparty credit risks captured by the risk measurement model;
- the integrity of the management information system;
- the accuracy and completeness of CCR data;
- the verification of the consistency, timeliness and reliability of data sources used to run internal models, including the independence of such data sources;
- the accuracy and appropriateness of volatility and correlation assumptions;
- the accuracy of valuation and risk transformation calculations;
- the verification of the model's accuracy through frequent backtesting.

777 (xi). A bank that receives approval to use an internal model to estimate its exposure amount or EAD for CCR exposures must monitor the appropriate risks and have processes to adjust its estimation of EPE when those risks become significant. This includes the following:

- Banks must identify and manage their exposures to specific wrong-way risk.
- For exposures with a rising risk profile after one year, banks must compare on a regular basis the estimate of EPE over one year with the EPE over the life of the exposure.
- For exposures with a short-term maturity (below one year), banks must compare on a regular basis the replacement cost (current exposure) and the realised exposure profile, and/or store data that allow such a comparisons.

777 (xii). When assessing an internal model used to estimate EPE, and especially for banks that receive approval to estimate the value of the alpha factor, supervisors must review the characteristics of the firm's portfolio of exposures that give rise to CCR. In particular, supervisors must consider the following characteristics, namely:

- the diversification of the portfolio (number of risk factors the portfolio is exposed to);
- the correlation of default across counterparties; and
- the number and granularity of counterparty exposures.

777 (xiii). Supervisors will take appropriate action where the firm's estimates of exposure or EAD under the Internal Model Method or alpha do not adequately reflect its exposure to CCR. Such action might include directing the bank to revise its estimates; directing the bank to apply a higher estimate of exposure or EAD under the IMM or alpha; or disallowing a bank from recognising internal estimates of EAD for regulatory capital purposes.

777 (xiv). For banks that make use of the standardised method, supervisors should review the bank's evaluation of the risks contained in the transactions that give rise to CCR and the bank's assessment of whether the standardised method captures those risks appropriately and satisfactorily. If the standardised method does not capture the risk inherent in the bank's relevant transactions (as could be the case with structured, more complex OTC derivatives), supervisors may require the bank to apply the CEM or the SM on a transaction-by-transaction basis (i.e. no netting will be recognised).

C. Operational risk

778. Gross income, used in the Basic Indicator and Standardised Approaches for operational risk, is only a proxy for the scale of operational risk exposure of a bank and can in some cases (e.g. for banks with low margins or profitability) underestimate the need for capital for operational risk. With reference to the Committee document on *Sound Practices for the Management and Supervision of Operational Risk* (February 2003), the supervisor should consider whether the capital requirement generated by the Pillar 1 calculation gives a consistent picture of the individual bank's operational risk exposure, for example in comparison with other banks of similar size and with similar operations.

D. Market risk

1. Policies and procedures for trading book eligibility

778 (i). Clear policies and procedures used to determine the exposures that may be included in, and those that should be excluded from, the trading book for purposes of calculating regulatory capital are critical to ensure the consistency and integrity of firms'

trading book. Such policies must conform to paragraph 687 (i) of this Framework. Supervisors should be satisfied that the policies and procedures clearly delineate the boundaries of the firm's trading book, in compliance with the general principles set forth in paragraphs 684 to 689 (iii) of this Framework, and consistent with the bank's risk management capabilities and practices. Supervisors should also be satisfied that transfers of positions between banking and trading books can only occur in a very limited set of circumstances. A supervisor will require a firm to modify its policies and procedures when they prove insufficient for preventing the booking in the trading book of positions that are not compliant with the general principles set forth in paragraphs 684 to 689 (iii) of this Framework, or not consistent with the bank's risk management capabilities and practices.

2. Valuation

778 (ii). Prudent valuation policies and procedures form the foundation on which any robust assessment of market risk capital adequacy should be built. For a well diversified portfolio consisting of highly liquid cash instruments, and without market concentration, the valuation of the portfolio, combined with the minimum quantitative standards set out in the Market Risk Amendment, as revised in this section, may deliver sufficient capital to enable a bank, in adverse market conditions, to close out or hedge its positions within 10 days in an orderly fashion. However, for less well diversified portfolios, for portfolios containing less liquid instruments, for portfolios with concentrations in relation to market turnover, and/or for portfolios which contain large numbers of positions that are marked-to-model this is less likely to be the case. In such circumstances, supervisors will consider whether a bank has sufficient capital. To the extent there is a shortfall the supervisor will react appropriately. This will usually require the bank to reduce its risks and/or hold additional amount of capital.

3. Stress testing under the internal models approach

778 (iii). A bank must ensure that it has sufficient capital to meet the minimum capital requirements set out in the Market Risk Amendment and to cover the results of its stress testing required by that amendment (paragraph B.2(g), taking into account the principles set forth in paragraphs 738 (ii) and 740). Supervisors will consider whether a bank has sufficient capital for these purposes, taking into account the nature and scale of the bank's trading activities and any other relevant factors such as valuation adjustments made by the bank. To the extent that there is a shortfall, or if supervisors are not satisfied with the premise upon which the bank's assessment of internal market risk capital adequacy is based, supervisors will take the appropriate measures. This will usually involve requiring the bank to reduce its risk exposures and/or to hold an additional amount of capital, so that its overall capital resources at least cover the Pillar 1 requirements plus the result of a stress test acceptable to the supervisor.

4. Specific risk modelling under the internal models approach

778 (iv). For banks wishing to model the specific risk arising from their trading activities, additional criteria have been set out in the revised section B.8, paragraph 2 of the Market Risk Amendment, including conservatively assessing the risk arising from less liquid positions and/or positions with limited price transparency under realistic market scenarios. Where supervisors consider that limited liquidity or price transparency undermines the effectiveness of a bank's model to capture the specific risk, they will take appropriate measures, including requiring the exclusion of positions from the bank's specific risk model. Supervisors should review the adequacy of the bank's measure of the default risk surcharge; where the bank's approach is inadequate, the use of the standardised specific risk charges will be required.

IV. Other aspects of the supervisory review process

A. Supervisory transparency and accountability

779. The supervision of banks is not an exact science, and therefore, discretionary elements within the supervisory review process are inevitable. Supervisors must take care to carry out their obligations in a transparent and accountable manner. Supervisors should make publicly available the criteria to be used in the review of banks' internal capital assessments. If a supervisor chooses to set target or trigger ratios or to set categories of capital in excess of the regulatory minimum, factors that may be considered in doing so should be publicly available. Where the capital requirements are set above the minimum for an individual bank, the supervisor should explain to the bank the risk characteristics specific to the bank which resulted in the requirement and any remedial action necessary.

B. Enhanced cross-border communication and cooperation

780. Effective supervision of large banking organisations necessarily entails a close and continuous dialogue between industry participants and supervisors. In addition, the Framework will require enhanced cooperation between supervisors, on a practical basis, especially for the cross-border supervision of complex international banking groups.

781. The Framework will not change the legal responsibilities of national supervisors for the regulation of their domestic institutions or the arrangements for consolidated supervision as set out in the existing Basel Committee standards. The home country supervisor is responsible for the oversight of the implementation of the Framework for a banking group on a consolidated basis; host country supervisors are responsible for supervision of those entities operating in their countries. In order to reduce the compliance burden and avoid regulatory arbitrage, the methods and approval processes used by a bank at the group level may be accepted by the host country supervisor at the local level, provided that they adequately meet the local supervisor's requirements. Wherever possible, supervisors should avoid performing redundant and uncoordinated approval and validation work in order to reduce the implementation burden on banks, and conserve supervisory resources.

782. In implementing the Framework, supervisors should communicate the respective roles of home country and host country supervisors as clearly as possible to banking groups with significant cross-border operations in multiple jurisdictions. The home country supervisor would lead this coordination effort in cooperation with the host country supervisors. In communicating the respective supervisory roles, supervisors will take care to clarify that existing supervisory legal responsibilities remain unchanged.

783. The Committee supports a pragmatic approach of mutual recognition for internationally active banks as a key basis for international supervisory co-operation. This approach implies recognising common capital adequacy approaches when considering the entities of internationally active banks in host jurisdictions, as well as the desirability of minimising differences in the national capital adequacy regulations between home and host jurisdictions so that subsidiary banks are not subjected to excessive burden.

V. Supervisory review process for securitisation

784. Further to the Pillar 1 principle that banks should take account of the economic substance of transactions in their determination of capital adequacy, supervisory authorities will monitor, as appropriate, whether banks have done so adequately. As a result, regulatory

capital treatments for specific securitisation exposures might differ from those specified in Pillar 1 of the Framework, particularly in instances where the general capital requirement would not adequately and sufficiently reflect the risks to which an individual banking organisation is exposed.

785. Amongst other things, supervisory authorities may review where relevant a bank's own assessment of its capital needs and how that has been reflected in the capital calculation as well as the documentation of certain transactions to determine whether the capital requirements accord with the risk profile (e.g. substitution clauses). Supervisors will also review the manner in which banks have addressed the issue of maturity mismatch in relation to retained positions in their economic capital calculations. In particular, they will be vigilant in monitoring for the structuring of maturity mismatches in transactions to artificially reduce capital requirements. Additionally, supervisors may review the bank's economic capital assessment of actual correlation between assets in the pool and how they have reflected that in the calculation. Where supervisors consider that a bank's approach is not adequate, they will take appropriate action. Such action might include denying or reducing capital relief in the case of originated assets, or increasing the capital required against securitisation exposures acquired.

A. Significance of risk transfer

786. Securitisation transactions may be carried out for purposes other than credit risk transfer (e.g. funding). Where this is the case, there might still be a limited transfer of credit risk. However, for an originating bank to achieve reductions in capital requirements, the risk transfer arising from a securitisation has to be deemed significant by the national supervisory authority. If the risk transfer is considered to be insufficient or non existent, the supervisory authority can require the application of a higher capital requirement than prescribed under Pillar 1 or, alternatively, may deny a bank from obtaining any capital relief from the securitisations. Therefore, the capital relief that can be achieved will correspond to the amount of credit risk that is effectively transferred. The following includes a set of examples where supervisors may have concerns about the degree of risk transfer, such as retaining or repurchasing significant amounts of risk or "cherry picking" the exposures to be transferred via a securitisation.

787. Retaining or repurchasing significant securitisation exposures, depending on the proportion of risk held by the originator, might undermine the intent of a securitisation to transfer credit risk. Specifically, supervisory authorities might expect that a significant portion of the credit risk and of the nominal value of the pool be transferred to at least one independent third party at inception and on an ongoing basis. Where banks repurchase risk for market making purposes, supervisors could find it appropriate for an originator to buy part of a transaction but not, for example, to repurchase a whole tranche. Supervisors would expect that where positions have been bought for market making purposes, these positions should be resold within an appropriate period, thereby remaining true to the initial intention to transfer risk.

788. Another implication of realising only a non-significant risk transfer, especially if related to good quality unrated exposures, is that both the poorer quality unrated assets and most of the credit risk embedded in the exposures underlying the securitised transaction are likely to remain with the originator. Accordingly, and depending on the outcome of the supervisory review process, the supervisory authority may increase the capital requirement for particular exposures or even increase the overall level of capital the bank is required to hold.

B. Market innovations

789. As the minimum capital requirements for securitisation may not be able to address all potential issues, supervisory authorities are expected to consider new features of securitisation transactions as they arise. Such assessments would include reviewing the impact new features may have on credit risk transfer and, where appropriate, supervisors will be expected to take appropriate action under Pillar 2. A Pillar 1 response may be formulated to take account of market innovations. Such a response may take the form of a set of operational requirements and/or a specific capital treatment.

C. Provision of implicit support

790. Support to a transaction, whether contractual (i.e. credit enhancements provided at the inception of a securitised transaction) or non-contractual (implicit support) can take numerous forms. For instance, contractual support can include over collateralisation, credit derivatives, spread accounts, contractual recourse obligations, subordinated notes, credit risk mitigants provided to a specific tranche, the subordination of fee or interest income or the deferral of margin income, and clean-up calls that exceed 10 percent of the initial issuance. Examples of implicit support include the purchase of deteriorating credit risk exposures from the underlying pool, the sale of discounted credit risk exposures into the pool of securitised credit risk exposures, the purchase of underlying exposures at above market price or an increase in the first loss position according to the deterioration of the underlying exposures.

791. The provision of implicit (or non-contractual) support, as opposed to contractual credit support (i.e. credit enhancements), raises significant supervisory concerns. For traditional securitisation structures the provision of implicit support undermines the clean break criteria, which when satisfied would allow banks to exclude the securitised assets from regulatory capital calculations. For synthetic securitisation structures, it negates the significance of risk transference. By providing implicit support, banks signal to the market that the risk is still with the bank and has not in effect been transferred. The institution's capital calculation therefore understates the true risk. Accordingly, national supervisors are expected to take appropriate action when a banking organisation provides implicit support.

792. When a bank has been found to provide implicit support to a securitisation, it will be required to hold capital against all of the underlying exposures associated with the structure as if they had not been securitised. It will also be required to disclose publicly that it was found to have provided non-contractual support, as well as the resulting increase in the capital charge (as noted above). The aim is to require banks to hold capital against exposures for which they assume the credit risk, and to discourage them from providing non-contractual support.

793. If a bank is found to have provided implicit support on more than one occasion, the bank is required to disclose its transgression publicly and national supervisors will take appropriate action that may include, but is not limited to, one or more of the following:

- The bank may be prevented from gaining favourable capital treatment on securitised assets for a period of time to be determined by the national supervisor;
- The bank may be required to hold capital against all securitised assets as though the bank had created a commitment to them, by applying a conversion factor to the risk weight of the underlying assets;
- For purposes of capital calculations, the bank may be required to treat all securitised assets as if they remained on the balance sheet;

- The bank may be required by its national supervisory authority to hold regulatory capital in excess of the minimum risk-based capital ratios.

794. Supervisors will be vigilant in determining implicit support and will take appropriate supervisory action to mitigate the effects. Pending any investigation, the bank may be prohibited from any capital relief for planned securitisation transactions (moratorium). National supervisory response will be aimed at changing the bank's behaviour with regard to the provision of implicit support, and to correct market perception as to the willingness of the bank to provide future recourse beyond contractual obligations.

D. Residual risks

795. As with credit risk mitigation techniques more generally, supervisors will review the appropriateness of banks' approaches to the recognition of credit protection. In particular, with regard to securitisations, supervisors will review the appropriateness of protection recognised against first loss credit enhancements. On these positions, expected loss is less likely to be a significant element of the risk and is likely to be retained by the protection buyer through the pricing. Therefore, supervisors will expect banks' policies to take account of this in determining their economic capital. Where supervisors do not consider the approach to protection recognised is adequate, they will take appropriate action. Such action may include increasing the capital requirement against a particular transaction or class of transactions.

E. Call provisions

796. Supervisors expect a bank not to make use of clauses that entitles it to call the securitisation transaction or the coverage of credit protection prematurely if this would increase the bank's exposure to losses or deterioration in the credit quality of the underlying exposures.

797. Besides the general principle stated above, supervisors expect banks to only execute clean-up calls for economic business purposes, such as when the cost of servicing the outstanding credit exposures exceeds the benefits of servicing the underlying credit exposures.

798. Subject to national discretion, supervisory authorities may require a review prior to the bank exercising a call which can be expected to include consideration of:

- The rationale for the bank's decision to exercise the call; and
- The impact of the exercise of the call on the bank's regulatory capital ratio.

799. The supervisory authority may also require the bank to enter into a follow-up transaction, if necessary, depending on the bank's overall risk profile, and existing market conditions.

800. Date related calls should be set at a date no earlier than the duration or the weighted average life of the underlying securitisation exposures. Accordingly, supervisory authorities may require a minimum period to elapse before the first possible call date can be set, given, for instance, the existence of up-front sunk costs of a capital market securitisation transaction.

F. Early amortisation

801. Supervisors should review how banks internally measure, monitor, and manage risks associated with securitisations of revolving credit facilities, including an assessment of the risk and likelihood of early amortisation of such transactions. At a minimum, supervisors should ensure that banks have implemented reasonable methods for allocating economic capital against the economic substance of the credit risk arising from revolving securitisations and should expect banks to have adequate capital and liquidity contingency plans that evaluate the probability of an early amortisation occurring and address the implications of both scheduled and early amortisation. In addition, the capital contingency plan should address the possibility that the bank will face higher levels of required capital under the early amortisation Pillar 1 capital requirement.

802. Because most early amortisation triggers are tied to excess spread levels, the factors affecting these levels should be well understood, monitored, and managed, to the extent possible (see paragraphs 790 to 794 on implicit support), by the originating bank. For example, the following factors affecting excess spread should generally be considered:

- Interest payments made by borrowers on the underlying receivable balances;
- Other fees and charges to be paid by the underlying obligors (e.g. late-payment fees, cash advance fees, over-limit fees);
- Gross charge-offs;
- Principal payments;
- Recoveries on charged-off loans;
- Interchange income;
- Interest paid on investors' certificates;
- Macroeconomic factors such as bankruptcy rates, interest rate movements, unemployment rates; etc.

803. Banks should consider the effects that changes in portfolio management or business strategies may have on the levels of excess spread and on the likelihood of an early amortisation event. For example, marketing strategies or underwriting changes that result in lower finance charges or higher charge-offs, might also lower excess spread levels and increase the likelihood of an early amortisation event.

804. Banks should use techniques such as static pool cash collections analyses and stress tests to better understand pool performance. These techniques can highlight adverse trends or potential adverse impacts. Banks should have policies in place to respond promptly to adverse or unanticipated changes. Supervisors will take appropriate action where they do not consider these policies adequate. Such action may include, but is not limited to, directing a bank to obtain a dedicated liquidity line or raising the early amortisation credit conversion factor, thus, increasing the bank's capital requirements.

805. While the early amortisation capital charge described in Pillar 1 is meant to address potential supervisory concerns associated with an early amortisation event, such as the inability of excess spread to cover potential losses, the policies and monitoring described in this section recognise that a given level of excess spread is not, by itself, a perfect proxy for credit performance of the underlying pool of exposures. In some circumstances, for example, excess spread levels may decline so rapidly as to not provide a timely indicator of underlying credit deterioration. Further, excess spread levels may reside far above trigger levels, but still exhibit a high degree of volatility which could warrant supervisory attention. In addition, excess spread levels can fluctuate for reasons unrelated to underlying credit risk, such as a

mismatch in the rate at which finance charges reprice relative to investor certificate rates. Routine fluctuations of excess spread might not generate supervisory concerns, even when they result in different capital requirements. This is particularly the case as a bank moves in or out of the first step of the early amortisation credit conversion factors. On the other hand, existing excess spread levels may be maintained by adding (or designating) an increasing number of new accounts to the master trust, an action that would tend to mask potential deterioration in a portfolio. For all of these reasons, supervisors will place particular emphasis on internal management, controls, and risk monitoring activities with respect to securitisations with early amortisation features.

806. Supervisors expect that the sophistication of a bank's system in monitoring the likelihood and risks of an early amortisation event will be commensurate with the size and complexity of the bank's securitisation activities that involve early amortisation provisions.

807. For controlled amortisations specifically, supervisors may also review the process by which a bank determines the minimum amortisation period required to pay down 90% of the outstanding balance at the point of early amortisation. Where a supervisor does not consider this adequate it will take appropriate action, such as increasing the conversion factor associated with a particular transaction or class of transactions.

Guidance Related to the Supervisory Review Process
(Published by the Basel Committee on Banking Supervision)

1.	Core Principles for Effective Banking Supervision	September 1997, *Final*
2.	The Core Principles Methodology	October 1999, *Final*
3.	Risk Management Guidelines for Derivatives	July 1994, *Final*
4.	Framework for Internal Controls	September 1998, *Final*
5.	Sound Practices for Banks' Interactions with Highly Leveraged Institutions	January 1999, *Final*
6.	Enhancing Corporate Governance	August 1999, *Final*
7.	Sound Practices for Managing Liquidity	February 2000, *Final*
8.	Principles for the Management of Credit Risk	September 2000, *Final*
9.	Supervisory Guidance for Managing Settlement Risk in Foreign Exchange Transactions	September 2000, *Final*
10.	Internal Audit in Banks and the Supervisor's Relationship with Auditors	August 2001, *Final*
11.	Customer Due Diligence for Banks	October 2001, *Final*
12.	The Relationship Between Banking Supervisors and Banks' External Auditors	January 2002, *Final*
13.	Supervisory Guidance for Dealing with Weak Banks	March 2002, *Final*
14.	Sound Practices for the Management and Supervision of Operational Risk	February 2003, *Final*
15.	Management and supervision of cross-border electronic banking activities	July 2003, *Final*
16.	Risk management principles for electronic banking	July 2003, *Final*
17.	Principles for the management and supervision of interest rate risk	July 2004, *Final*
18.	Enhancing corporate governance for banking organisations	July 2005, *For comment*

Note: the papers are available from the BIS website (www.bis.org/bcbs/publ/index.htm).

Part 4: The Third Pillar — Market Discipline

I. General considerations

A. Disclosure requirements

808. The Committee believes that the rationale for Pillar 3 is sufficiently strong to warrant the introduction of disclosure requirements for banks using the Framework. Supervisors have an array of measures that they can use to require banks to make such disclosures. Some of these disclosures will be qualifying criteria for the use of particular methodologies or the recognition of particular instruments and transactions.

B. Guiding principles

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.

810. In principle, banks' disclosures should be consistent with how senior management and the board of directors assess and manage the risks of the bank. Under Pillar 1, banks use specified approaches/methodologies for measuring the various risks they face and the resulting capital requirements. The Committee believes that providing disclosures that are based on this common framework is an effective means of informing the market about a bank's exposure to those risks and provides a consistent and understandable disclosure framework that enhances comparability.

C. Achieving appropriate disclosure

811. The Committee is aware that supervisors have different powers available to them to achieve the disclosure requirements. Market discipline can contribute to a safe and sound banking environment, and supervisors require firms to operate in a safe and sound manner. Under safety and soundness grounds, supervisors could require banks to disclose information. Alternatively, supervisors have the authority to require banks to provide information in regulatory reports. Some supervisors could make some or all of the information in these reports publicly available. Further, there are a number of existing mechanisms by which supervisors may enforce requirements. These vary from country to country and range from "moral suasion" through dialogue with the bank's management (in order to change the latter's behaviour), to reprimands or financial penalties. The nature of the exact measures used will depend on the legal powers of the supervisor and the seriousness of the disclosure deficiency. However, it is not intended that direct additional capital requirements would be a response to non-disclosure, except as indicated below.

812. In addition to the general intervention measures outlined above, this Framework also anticipates a role for specific measures. Where disclosure is a qualifying criterion under Pillar 1 to obtain lower risk weightings and/or to apply specific methodologies, there would be a direct sanction (not being allowed to apply the lower weighting or the specific methodology).

D. Interaction with accounting disclosures

813. The Committee recognises the need for a Pillar 3 disclosure framework that does not conflict with requirements under accounting standards, which are broader in scope. The Committee has made a considerable effort to see that the narrower focus of Pillar 3, which is aimed at disclosure of bank capital adequacy, does not conflict with the broader accounting requirements. Going forward, the Committee intends to maintain an ongoing relationship with the accounting authorities, given that their continuing work may have implications for the disclosures required in Pillar 3. The Committee will consider future modifications to Pillar 3 as necessary in light of its ongoing monitoring of this area and industry developments.

814. Management should use its discretion in determining the appropriate medium and location of the disclosure. In situations where the disclosures are made under accounting requirements or are made to satisfy listing requirements promulgated by securities regulators, banks may rely on them to fulfil the applicable Pillar 3 expectations. In these situations, banks should explain material differences between the accounting or other disclosure and the supervisory basis of disclosure. This explanation does not have to take the form of a line by line reconciliation.

815. For those disclosures that are not mandatory under accounting or other requirements, management may choose to provide the Pillar 3 information through other means (such as on a publicly accessible internet website or in public regulatory reports filed with bank supervisors), consistent with requirements of national supervisory authorities. However, institutions are encouraged to provide all related information in one location to the degree feasible. In addition, if information is not provided with the accounting disclosure, institutions should indicate where the additional information can be found.

816. The recognition of accounting or other mandated disclosure in this manner is also expected to help clarify the requirements for validation of disclosures. For example, information in the annual financial statements would generally be audited and additional material published with such statements must be consistent with the audited statements. In addition, supplementary material (such as Management's Discussion and Analysis) that is published to satisfy other disclosure regimes (e.g. listing requirements promulgated by securities regulators) is generally subject to sufficient scrutiny (e.g. internal control assessments, etc.) to satisfy the validation issue. If material is not published under a validation regime, for instance in a stand alone report or as a section on a website, then management should ensure that appropriate verification of the information takes place, in accordance with the general disclosure principle set out below. Accordingly, Pillar 3 disclosures will not be required to be audited by an external auditor, unless otherwise required by accounting standards setters, securities regulators or other authorities.

E. Materiality

817. A bank should decide which disclosures are relevant for it based on the materiality concept. Information would be regarded as material if its omission or misstatement could change or influence the assessment or decision of a user relying on that information for the purpose of making economic decisions. This definition is consistent with International Accounting Standards and with many national accounting frameworks. The Committee recognises the need for a qualitative judgement of whether, in light of the particular circumstances, a user of financial information would consider the item to be material (user test). The Committee is not setting specific thresholds for disclosure as these can be open to manipulation and are difficult to determine, and it believes that the user test is a useful benchmark for achieving sufficient disclosure.

F. Frequency

818. The disclosures set out in Pillar 3 should be made on a semi-annual basis, subject to the following exceptions. Qualitative disclosures that provide a general summary of a bank's risk management objectives and policies, reporting system and definitions may be published on an annual basis. In recognition of the increased risk sensitivity of the Framework and the general trend towards more frequent reporting in capital markets, large internationally active banks and other significant banks (and their significant bank subsidiaries) must disclose their Tier 1 and total capital adequacy ratios, and their components,[119] on a quarterly basis. Furthermore, if information on risk exposure or other items is prone to rapid change, then banks should also disclose information on a quarterly basis. In all cases, banks should publish material information as soon as practicable and not later than deadlines set by like requirements in national laws.[120]

G. Proprietary and confidential information

819. Proprietary information encompasses information (for example on products or systems), that if shared with competitors would render a bank's investment in these products/systems less valuable, and hence would undermine its competitive position. Information about customers is often confidential, in that it is provided under the terms of a legal agreement or counterparty relationship. This has an impact on what banks should reveal in terms of information about their customer base, as well as details on their internal arrangements, for instance methodologies used, parameter estimates, data etc. The Committee believes that the requirements set out below strike an appropriate balance between the need for meaningful disclosure and the protection of proprietary and confidential information. In exceptional cases, disclosure of certain items of information required by Pillar 3 may prejudice seriously the position of the bank by making public information that is either proprietary or confidential in nature. In such cases, a bank need not disclose those specific items, but must disclose more general information about the subject matter of the requirement, together with the fact that, and the reason why, the specific items of information have not been disclosed. This limited exemption is not intended to conflict with the disclosure requirements under the accounting standards.

II. The disclosure requirements[121]

820. The following sections set out in tabular form the disclosure requirements under Pillar 3. Additional definitions and explanations are provided in a series of footnotes.

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[119] These components include Tier 1 capital, total capital and total required capital.

[120] For some small banks with stable risk profiles, annual reporting may be acceptable. Where a bank publishes information on only an annual basis, it should state clearly why this is appropriate.

[121] In this section of this Framework, disclosures marked with an asterisk are conditions for use of a particular approach or methodology for the calculation of regulatory capital.

A. General disclosure principle

821. Banks should have a formal disclosure policy approved by the board of directors that addresses the bank's approach for determining what disclosures it will make and the internal controls over the disclosure process. In addition, banks should implement a process for assessing the appropriateness of their disclosures, including validation and frequency of them.

B. Scope of application

822. Pillar 3 applies at the top consolidated level of the banking group to which this Framework applies (as indicated above in Part 1: Scope of Application). Disclosures related to individual banks within the groups would not generally be required to fulfil the disclosure requirements set out below. An exception to this arises in the disclosure of Total and Tier 1 Capital Ratios by the top consolidated entity where an analysis of significant bank subsidiaries within the group is appropriate, in order to recognise the need for these subsidiaries to comply with this Framework and other applicable limitations on the transfer of funds or capital within the group.

Table 1

Scope of application

Qualitative Disclosures	(a)	The name of the top corporate entity in the group to which this Framework applies.
	(b)	An outline of differences in the basis of consolidation for accounting and regulatory purposes, with a brief description of the entities[122] within the group (a) that are fully consolidated;[123] (b) that are pro-rata consolidated;[124] (c) that are given a deduction treatment;[125] and (d) from which surplus capital is recognised[125] plus (e) that are neither consolidated nor deducted (e.g. where the investment is risk-weighted).
	(c)	Any restrictions, or other major impediments, on transfer of funds or regulatory capital within the group.
Quantitative Disclosures	(d)	The aggregate amount of surplus capital[126] of insurance subsidiaries (whether deducted or subjected to an alternative method[127]) included in the capital of the consolidated group.

[122] Entity = securities, insurance and other financial subsidiaries, commercial subsidiaries, significant minority equity investments in insurance, financial and commercial entities.

[123] Following the listing of significant subsidiaries in consolidated accounting, e.g. IAS 27.

[124] Following the listing of subsidiaries in consolidated accounting, e.g. IAS 31.

[125] May be provided as an extension (extension of entities only if they are significant for the consolidating bank) to the listing of significant subsidiaries in consolidated accounting, e.g. IAS 27 and 32.

[126] Surplus capital in unconsolidated regulated subsidiaries is the difference between the amount of the investment in those entities and their regulatory capital requirements.

[127] See paragraphs 30 and 33.

	(e)	The aggregate amount of capital deficiencies[128] in all subsidiaries not included in the consolidation i.e. that are deducted and the name(s) of such subsidiaries.
	(f)	The aggregate amounts (e.g. current book value) of the firm's total interests in insurance entities, which are risk-weighted[129] rather than deducted from capital or subjected to an alternate group-wide method,[130] as well as their name, their country of incorporation or residence, the proportion of ownership interest and, if different, the proportion of voting power in these entities. In addition, indicate the quantitative impact on regulatory capital of using this method versus using the deduction or alternate group-wide method.

C. Capital

Table 2

Capital structure

Qualitative Disclosures	(a)	Summary information on the terms and conditions of the main features of all capital instruments, especially in the case of innovative, complex or hybrid capital instruments.
Quantitative Disclosures	(b)	The amount of Tier 1 capital, with separate disclosure of: • paid-up share capital/common stock; • reserves; • minority interests in the equity of subsidiaries; • innovative instruments; [131] • other capital instruments; • surplus capital from insurance companies;[132] • regulatory calculation differences deducted from Tier 1 capital; [133] and • other amounts deducted from Tier 1 capital, including goodwill and investments.
	(c)	The total amount of Tier 2 and Tier 3 capital.
	(d)	Other deductions from capital. [134]
	(e)	Total eligible capital.

[128] A capital deficiency is the amount by which actual capital is less than the regulatory capital requirement. Any deficiencies which have been deducted on a group level in addition to the investment in such subsidiaries are not to be included in the aggregate capital deficiency.

[129] See paragraph 31.

[130] See paragraph 30.

[131] Innovative instruments are covered under the Committee's press release, *Instruments eligible for inclusion in Tier 1 capital* (27 October 1998).

[132] See paragraph 33.

[133] Representing 50% of the difference (when expected losses as calculated within the IRB approach exceed total provisions) to be deducted from Tier 1 capital.

[134] Including 50% of the difference (when expected losses as calculated within the IRB approach exceed total provisions) to be deducted from Tier 2 capital.

Table 3

Capital Adequacy

Qualitative disclosures	(a)	A summary discussion of the bank's approach to assessing the adequacy of its capital to support current and future activities.

Quantitative disclosures	(b)	Capital requirements for credit risk:
		• Portfolios subject to standardised or simplified standardised approach, disclosed separately for each portfolio;
		• Portfolios subject to the IRB approaches, disclosed separately for each portfolio under the foundation IRB approach and for each portfolio under the advanced IRB approach:
		  • Corporate (including SL not subject to supervisory slotting criteria), sovereign and bank;
		  • Residential mortgage;
		  • Qualifying revolving retail;[135] and
		  • Other retail;
		• Securitisation exposures.

	(c)	Capital requirements for equity exposures in the IRB approach:
		• Equity portfolios subject to the market-based approaches;
		  • Equity portfolios subject to simple risk weight method; and
		  • Equities in the banking book under the internal models approach (for banks using IMA for banking book equity exposures).
		• Equity portfolios subject to PD/LGD approaches.

	(d)	Capital requirements for market risk[136]: • Standardised approach; • Internal models approach — Trading book.
	(e)	Capital requirements for operational risk[136]: • Basic indicator approach; • Standardised approach; • Advanced measurement approach (AMA).
	(f)	Total and Tier 1[137] capital ratio: • For the top consolidated group; and • For significant bank subsidiaries (stand alone or sub-consolidated depending on how the Framework is applied).

D. Risk exposure and assessment

823. The risks to which banks are exposed and the techniques that banks use to identify, measure, monitor and control those risks are important factors market participants consider in their assessment of an institution. In this section, several key banking risks are considered: credit risk, market risk, interest rate risk and equity risk in the banking book and operational risk. Also included in this section are disclosures relating to credit risk mitigation and asset

[135] Banks should distinguish between the separate non-mortgage retail portfolios used for the Pillar 1 capital calculation (i.e. qualifying revolving retail exposures and other retail exposures) unless these portfolios are insignificant in size (relative to overall credit exposures) and the risk profile of each portfolio is sufficiently similar such that separate disclosure would not help users' understanding of the risk profile of the banks' retail business.

[136] Capital requirements are to be disclosed only for the approaches used.

[137] Including proportion of innovative capital instruments.

securitisation, both of which alter the risk profile of the institution. Where applicable, separate disclosures are set out for banks using different approaches to the assessment of regulatory capital.

1. General qualitative disclosure requirement

824. For each separate risk area (e.g. credit, market, operational, banking book interest rate risk, equity) banks must describe their risk management objectives and policies, including:

- strategies and processes;
- the structure and organisation of the relevant risk management function;
- the scope and nature of risk reporting and/or measurement systems;
- policies for hedging and/or mitigating risk and strategies and processes for monitoring the continuing effectiveness of hedges/mitigants.

2. Credit risk

825. General disclosures of credit risk provide market participants with a range of information about overall credit exposure and need not necessarily be based on information prepared for regulatory purposes. Disclosures on the capital assessment techniques give information on the specific nature of the exposures, the means of capital assessment and data to assess the reliability of the information disclosed.

Table 4[138]

Credit risk: general disclosures for all banks

Qualitative Disclosures	(a)	The general qualitative disclosure requirement (paragraph 824) with respect to credit risk, including: • Definitions of past due and impaired (for accounting purposes); • Description of approaches followed for specific and general allowances and statistical methods; • Discussion of the bank's credit risk management policy; and • For banks that have partly, but not fully adopted either the foundation IRB or the advanced IRB approach, a description of the nature of exposures within each portfolio that are subject to the 1) standardised, 2) foundation IRB, and 3) advanced IRB approaches and of management's plans and timing for migrating exposures to full implementation of the applicable approach.

[138] Table 4 does not include equities.

Quantitative Disclosures	(b)	Total gross credit risk exposures,[139] plus average gross exposure[140] over the period[141] broken down by major types of credit exposure.[142]
	(c)	Geographic[143] distribution of exposures, broken down in significant areas by major types of credit exposure.
	(d)	Industry or counterparty type distribution of exposures, broken down by major types of credit exposure.
	(e)	Residual contractual maturity breakdown of the whole portfolio,[144] broken down by major types of credit exposure.
	(f)	By major industry or counterparty type: • Amount of impaired loans and if available, past due loans, provided separately;[145] • Specific and general allowances; and • Charges for specific allowances and charge-offs during the period.
	(g)	Amount of impaired loans and, if available, past due loans provided separately broken down by significant geographic areas including, if practical, the amounts of specific and general allowances related to each geographical area.[146]
	(h)	Reconciliation of changes in the allowances for loan impairment.[147]
	(i)	For each portfolio, the amount of exposures (for IRB banks, drawn plus EAD on undrawn) subject to the 1) standardised, 2) foundation IRB, and 3) advanced IRB approaches.

[139] That is, after accounting offsets in accordance with the applicable accounting regime and without taking into account the effects of credit risk mitigation techniques, e.g. collateral and netting.

[140] Where the period end position is representative of the risk positions of the bank during the period, average gross exposures need not be disclosed.

[141] Where average amounts are disclosed in accordance with an accounting standard or other requirement which specifies the calculation method to be used, that method should be followed. Otherwise, the average exposures should be calculated using the most frequent interval that an entity's systems generate for management, regulatory or other reasons, provided that the resulting averages are representative of the bank's operations. The basis used for calculating averages need be stated only if not on a daily average basis.

[142] This breakdown could be that applied under accounting rules, and might, for instance, be (a) loans, commitments and other non-derivative off balance sheet exposures, (b) debt securities, and (c) OTC derivatives.

[143] Geographical areas may comprise individual countries, groups of countries or regions within countries. Banks might choose to define the geographical areas based on the way the bank's portfolio is geographically managed. The criteria used to allocate the loans to geographical areas should be specified.

[144] This may already be covered by accounting standards, in which case banks may wish to use the same maturity groupings used in accounting.

[145] Banks are encouraged also to provide an analysis of the ageing of past-due loans.

[146] The portion of general allowance that is not allocated to a geographical area should be disclosed separately.

[147] The reconciliation shows separately specific and general allowances; the information comprises: a description of the type of allowance; the opening balance of the allowance; charge-offs taken against the allowance during the period; amounts set aside (or reversed) for estimated probable loan losses during the period, any other adjustments (e.g. exchange rate differences, business combinations, acquisitions and disposals of subsidiaries), including transfers between allowances; and the closing of the allowance. Charge-offs and recoveries that have been recorded directly to the income statement should be disclosed separately.

Table 5

Credit risk: disclosures for portfolios subject to the standardised approach and supervisory risk weights in the IRB approaches[148]

Qualitative Disclosures	(a)	For portfolios under the standardised approach: • Names of ECAIs and ECAs used, plus reasons for any changes;* • Types of exposure for which each agency is used; • A description of the process used to transfer public issue ratings onto comparable assets in the banking book; and • The alignment of the alphanumerical scale of each agency used with risk buckets.[149]
Quantitative Disclosures	(b)	• For exposure amounts after risk mitigation subject to the standardised approach, amount of a bank's outstandings (rated and unrated) in each risk bucket as well as those that are deducted; and • For exposures subject to the supervisory risk weights in IRB (HVCRE, any SL products subject to supervisory slotting criteria and equities under the simple risk weight method) the aggregate amount of a bank's outstandings in each risk bucket.

Credit risk: disclosures for portfolios subject to IRB approaches

826. An important part of this Framework is the introduction of an IRB approach for the assessment of regulatory capital for credit risk. To varying degrees, banks will have discretion to use internal inputs in their regulatory capital calculations. In this sub-section, the IRB approach is used as the basis for a set of disclosures intended to provide market participants with information about asset quality. In addition, these disclosures are important to allow market participants to assess the resulting capital in light of the exposures. There are two categories of quantitative disclosures: those focussing on an analysis of risk exposure and assessment (i.e. the inputs) and those focussing on the actual outcomes (as the basis for providing an indication of the likely reliability of the disclosed information). These are supplemented by a qualitative disclosure regime which provides background information on the assumptions underlying the IRB framework, the use of the IRB system as part of a risk management framework and the means for validating the results of the IRB system. The disclosure regime is intended to enable market participants to assess the credit risk exposure of IRB banks and the overall application and suitability of the IRB framework, without revealing proprietary information or duplicating the role of the supervisor in validating the detail of the IRB framework in place.

[148] A *de minimis* exception would apply where ratings are used for less than 1% of the total loan portfolio.

[149] This information need not be disclosed if the bank complies with a standard mapping which is published by the relevant supervisor.

Table 6

Credit risk: disclosures for portfolios subject to IRB approaches

Qualitative disclosures*	(a)	Supervisor's acceptance of approach/ supervisory approved transition
	(b)	Explanation and review of the: • Structure of internal rating systems and relation between internal and external ratings; • use of internal estimates other than for IRB capital purposes; • process for managing and recognising credit risk mitigation; and • Control mechanisms for the rating system including discussion of independence, accountability, and rating systems review.
	(c)	Description of the internal ratings process, provided separately for five distinct portfolios: • Corporate (including SMEs, specialised lending and purchased corporate receivables), sovereign and bank; • Equities;[150] • Residential mortgages; • Qualifying revolving retail;[151] and • Other retail. The description should include, for each portfolio: • The types of exposure included in the portfolio; • The definitions, methods and data for estimation and validation of PD, and (for portfolios subject to the IRB advanced approach) LGD and/or EAD, including assumptions employed in the derivation of these variables;[152] and • Description of deviations as permitted under paragraph 456 and footnote 89 from the reference definition of default where determined to be material, including the broad segments of the portfolio(s) affected by such deviations.[153]

[150] Equities need only be disclosed here as a separate portfolio where the bank uses the PD/LGD approach for equities held in the banking book.

[151] In both the qualitative disclosures and quantitative disclosures that follow, banks should distinguish between the qualifying revolving retail exposures and other retail exposures unless these portfolios are insignificant in size (relative to overall credit exposures) and the risk profile of each portfolio is sufficiently similar such that separate disclosure would not help users' understanding of the risk profile of the banks' retail business.

[152] This disclosure does not require a detailed description of the model in full — it should provide the reader with a broad overview of the model approach, describing definitions of the variables, and methods for estimating and validating those variables set out in the quantitative risk disclosures below. This should be done for each of the five portfolios. Banks should draw out any significant differences in approach to estimating these variables within each portfolio.

[153] This is to provide the reader with context for the quantitative disclosures that follow. Banks need only describe main areas where there has been material divergence from the reference definition of default such that it would affect the readers' ability to compare and understand the disclosure of exposures by PD grade.

Quantitative disclosures: risk assessment*	(d)	For each portfolio (as defined above) except retail, present the following information across a sufficient number of PD grades (including default) to allow for a meaningful differentiation of credit risk:[154] • Total exposures (for corporate, sovereign and bank, outstanding loans and EAD on undrawn commitments;[155] for equities, outstanding amount); • For banks on the IRB advanced approach, exposure-weighted average LGD (percentage); and • Exposure-weighted average risk-weight. For banks on the IRB advanced approach, amount of undrawn commitments and exposure-weighted average EAD for each portfolio;[156] For each retail portfolio (as defined above), either:[157] • Disclosures as outlined above on a pool basis (i.e. same as for non-retail portfolios); or • Analysis of exposures on a pool basis (outstanding loans and EAD on commitments) against a sufficient number of EL grades to allow for a meaningful differentiation of credit risk.
Quantitative disclosures: historical results*	(e)	Actual losses (e.g. charge-offs and specific provisions) in the preceding period for each portfolio (as defined above) and how this differs from past experience. A discussion of the factors that impacted on the loss experience in the preceding period — for example, has the bank experienced higher than average default rates, or higher than average LGDs and EADs.
	(f)	Banks' estimates against actual outcomes over a longer period.[158] At a minimum, this should include information on estimates of losses against actual losses in each portfolio (as defined above) over a period sufficient to allow for a meaningful assessment of the performance of the internal rating processes for each portfolio.[159] Where appropriate, banks should further decompose this to provide analysis of PD and, for banks on the advanced IRB approach, LGD and EAD outcomes against estimates provided in the quantitative risk assessment disclosures above.[160]

[154] The PD, LGD and EAD disclosures below should reflect the effects of collateral, netting and guarantees/credit derivatives, where recognised under Part 2. Disclosure of each PD grade should include the exposure weighted-average PD for each grade. Where banks are aggregating PD grades for the purposes of disclosure, this should be a representative breakdown of the distribution of PD grades used in the IRB approach.

[155] Outstanding loans and EAD on undrawn commitments can be presented on a combined basis for these disclosures.

[156] Banks need only provide one estimate of EAD for each portfolio. However, where banks believe it is helpful, in order to give a more meaningful assessment of risk, they may also disclose EAD estimates across a number of EAD categories, against the undrawn exposures to which these relate.

[157] Banks would normally be expected to follow the disclosures provided for the non-retail portfolios. However, banks may choose to adopt EL grades as the basis of disclosure where they believe this can provide the reader with a meaningful differentiation of credit risk. Where banks are aggregating internal grades (either PD/LGD or EL) for the purposes of disclosure, this should be a representative breakdown of the distribution of those grades used in the IRB approach.

[158] These disclosures are a way of further informing the reader about the reliability of the information provided in the "quantitative disclosures: risk assessment" over the long run. The disclosures are requirements from year-end 2009; In the meantime, early adoption would be encouraged. The phased implementation is to allow banks sufficient time to build up a longer run of data that will make these disclosures meaningful.

[159] The Committee will not be prescriptive about the period used for this assessment. Upon implementation, it might be expected that banks would provide these disclosures for as long run of data as possible — for example, if banks have 10 years of data, they might choose to disclose the average default rates for each PD grade over that 10-year period. Annual amounts need not be disclosed.

[160] Banks should provide this further decomposition where it will allow users greater insight into the reliability of the estimates provided in the 'quantitative disclosures: risk assessment'. In particular, banks should provide

Table 7

Credit risk mitigation: disclosures for standardised and IRB approaches[161,162]

<table>
<tr><td rowspan="1">Qualitative Disclosures*</td><td>(a)</td><td>The general qualitative disclosure requirement (paragraph 824) with respect to credit risk mitigation including:
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.</td></tr>
<tr><td rowspan="2">Quantitative Disclosures*</td><td>(b)</td><td>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:
eligible financial collateral; and
other eligible IRB collateral;
after the application of haircuts.[163]</td></tr>
<tr><td>(c)</td><td>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.</td></tr>
</table>

this information where there are material differences between the PD, LGD or EAD estimates given by banks compared to actual outcomes over the long run. Banks should also provide explanations for such differences.

161 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.

162 Credit derivatives that are treated, for the purposes of this Framework, as part of synthetic securitisation structures should be excluded from the credit risk mitigation disclosures and included within those relating to securitisation.

163 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.

Table 8

General disclosure for exposures related to counterparty credit risk

Qualitative Disclosures	(a)	The general qualitative disclosure requirement (paragraphs 824 and 825) with respect to derivatives and CCR, including: • Discussion of methodology used to assign economic capital and credit limits for counterparty credit exposures; • Discussion of policies for securing collateral and establishing credit reserves; • Discussion of policies with respect to wrong-way risk exposures; • Discussion of the impact of the amount of collateral the bank would have to have to provide given a credit rating downgrade.
Quantitative Disclosures	(b)	Gross positive fair value of contracts, netting benefits, netted current credit exposure, collateral held (including type, e.g. cash, government securities, etc.), and net derivatives credit exposure.[164] Also report measures for exposure at default, or exposure amount, under the IMM, SM or CEM, whichever is applicable. The notional value of credit derivative hedges, and the distribution of current credit exposure by types of credit exposure.[165]
	(c)	Credit derivative transactions that create exposures to CCR (notional value), segregated between use for the institution's own credit portfolio, as well as in its intermediation activities, including the distribution of the credit derivatives products used[166], broken down further by protection bought and sold within each product group.
	(d)	The estimate of alpha if the bank has received supervisory approval to estimate alpha.

[164] *Net credit exposure* is the credit exposure on derivatives transactions after considering both the benefits from legally enforceable netting agreements and collateral arrangements. The notional amount of credit derivative hedges alerts market participants to an additional source of credit risk mitigation.

[165] This might be interest rate contracts, FX contracts, equity contracts, credit derivatives, and commodity/other contracts.

[166] This might be Credit Default Swaps, Total Return Swaps, Credit options, and other.

Table 9

Securitisation: disclosure for standardised and IRB approaches[162]

Qualitative disclosures*	(a)	The general qualitative disclosure requirement (paragraph 824) with respect to securitisation (including synthetics), including a discussion of: • 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; • the roles played by the bank in the securitisation process[167] and an indication of the extent of the bank's involvement in each of them; and the regulatory capital approaches (e.g. RBA, IAA and SFA) that the bank follows for its securitisation activities.
	(b)	Summary of the bank's accounting policies for securitisation activities, including: • whether the transactions are treated as sales or financings; • recognition of gain on sale; • key assumptions for valuing retained interests, including any significant changes since the last reporting period and the impact of such changes; and • treatment of synthetic securitisations if this is not covered by other accounting policies (e.g. on derivatives).
	(c)	Names of ECAIs used for securitisations and the types of securitisation exposure for which each agency is used.
Quantitative disclosures*	(d)	The total outstanding exposures securitised by the bank and subject to the securitisation framework (broken down into traditional/synthetic), by exposure type.[168,169,170]
	(e)	For exposures securitised by the bank and subject to the securitisation framework:[170] • amount of impaired/past due assets securitised; and • losses recognised by the bank during the current period[171] broken down by exposure type.
	(f)	Aggregate amount of securitisation exposures retained or purchased[172] broken down by exposure type.[168]
	(g)	Aggregate amount of securitisation exposures retained or purchased[172] and the associated IRB capital charges for these exposures broken down into a meaningful number of risk weight bands. 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 type of underlying asset.

[167] For example: originator, investor, servicer, provider of credit enhancement, sponsor of asset backed commercial paper facility, liquidity provider, swap provider.

[168] For example, credit cards, home equity, auto, etc.

[169] Securitisation transactions 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.

[170] Where relevant, banks are encouraged to differentiate between exposures resulting from activities in which they act only as sponsors, and exposures that result from all other bank securitisation activities that are subject to the securitisation framework.

[171] For example, charge-offs/allowances (if the assets remain on the bank's balance sheet) or write-downs of I/O strips and other residual interests.

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

	(h)	For securitisations subject to the early amortisation treatment, the following items by underlying asset type for securitised facilities: • the aggregate drawn exposures attributed to the seller's and investors' interests; • the aggregate IRB 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 IRB capital charges incurred by the bank against the investor's shares of drawn balances and undrawn lines.
	(i)	Banks using the standardised approach are also subject to disclosures (g) and (h), but should use the capital charges for the standardised approach.
	(j)	Summary of current year's securitisation activity, including the amount of exposures securitised (by exposure type), and recognised gain or loss on sale by asset type.

3. Market risk

Table 10

Market risk: disclosures for banks using the standardised approach[173]

Qualitative disclosures	(a)	The general qualitative disclosure requirement (paragraph 824) for market risk including the portfolios covered by the standardised approach.
Quantitative disclosures	(b)	The capital requirements for: • interest rate risk; • equity position risk; • foreign exchange risk; and • commodity risk.

[173] The standardised approach here refers to the "standardised measurement method" as defined in the Market Risk Amendment.

Table 11

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

Qualitative disclosures	(a)	The general qualitative disclosure requirement (paragraph 824) for market risk including the portfolios covered by the IMA. In addition, a discussion of the extent of and methodologies for compliance with the "Prudent valuation guidance" for positions held in the trading book (paragraphs 690 to 701).
	(b)	The discussion should include an articulation of the soundness standards on which the bank's internal capital adequacy assessment is based. It should also include a description of the methodologies used to achieve a capital adequacy assessment that is consistent with the soundness standards.
	(c)	For each portfolio covered by the IMA: • the characteristics of the models used; • a description of stress testing applied to the portfolio; and • a description of the approach used for backtesting/validating the accuracy and consistency of the internal models and modelling processes.
	(d)	The scope of acceptance by the supervisor.
Quantitative disclosures	(e)	For trading portfolios under the IMA: • The high, mean and low VaR values over the reporting period and period-end; and • A comparison of VaR estimates with actual gains/losses experienced by the bank, with analysis of important "outliers" in backtest results.

4. Operational risk

Table 12

Operational risk

Qualitative disclosures	(a)	In addition to the general qualitative disclosure requirement (paragraph 824), the approach(es) for operational risk capital assessment for which the bank qualifies.
	(b)	Description of the AMA, if used by the bank, including a discussion of relevant internal and external factors considered in the bank's measurement approach. In the case of partial use, the scope and coverage of the different approaches used.
	(c) *	For banks using the AMA, a description of the use of insurance for the purpose of mitigating operational risk.

5. *Equities*

Table 13

Equities: disclosures for banking book positions

Qualitative Disclosures	(a)	The general qualitative disclosure requirement (paragraph 824) with respect to equity risk, including: • differentiation between holdings on which capital gains are expected and those taken under other objectives including for relationship and strategic reasons; and • discussion of important policies covering the valuation and accounting of equity holdings in the banking book. This includes the accounting techniques and valuation methodologies used, including key assumptions and practices affecting valuation as well as significant changes in these practices.
Quantitative Disclosures*	(b)	Value disclosed in the balance sheet of investments, as well as the fair value of those investments; for quoted securities, a comparison to publicly quoted share values where the share price is materially different from fair value.
	(c)	The types and nature of investments, including the amount that can be classified as: • Publicly traded; and • Privately held.
	(d)	The cumulative realised gains (losses) arising from sales and liquidations in the reporting period.
	(e)	• Total unrealised gains (losses)[174] • Total latent revaluation gains (losses)[175] • any amounts of the above included in Tier 1 and/or Tier 2 capital.
	(f)	Capital requirements broken down by appropriate equity groupings, consistent with the bank's methodology, as well as the aggregate amounts and the type of equity investments subject to any supervisory transition or grandfathering provisions regarding regulatory capital requirements.

6. *Interest rate risk in the banking book*

Table 14

Interest rate risk in the banking book (IRRBB)

Qualitative disclosures	(a)	The general qualitative disclosure requirement (paragraph 824), including the nature of IRRBB and key assumptions, including assumptions regarding loan prepayments and behaviour of non-maturity deposits, and frequency of IRRBB measurement.
Quantitative disclosures	(b)	The increase (decline) in earnings or economic value (or relevant measure used by management) for upward and downward rate shocks according to management's method for measuring IRRBB, broken down by currency (as relevant).

[174] Unrealised gains (losses) recognised in the balance sheet but not through the profit and loss account.

[175] Unrealised gains (losses) not recognised either in the balance sheet or through the profit and loss account.