Basel Committee
on Banking Supervision

Consultative Document

# Sound Credit Risk Assessment and Valuation for Loans

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# Sound Credit Risk Assessment and Valuation for Loans

## Principles underlying this document

This supervisory guidance is structured around ten principles that fall within two broad categories:

### Supervisory expectations concerning sound credit risk assessment and valuation for loans

1. The bank's board of directors and senior management are responsible for ensuring that the banks have appropriate credit risk assessment processes and effective internal controls to consistently determine provisions for loan losses in accordance with the bank's stated policies and procedures, the applicable accounting framework and supervisory guidance commensurate with the size, nature and complexity of the bank's lending operations.

2. Banks should have a system in place to reliably classify loans on the basis of credit risk.

3. A bank's policies should appropriately address validation of any internal credit risk assessment models.

4. A bank should adopt and document a sound loan loss methodology, which addresses credit risk assessment policies, procedures and controls for assessing credit risk, identifying problem loans and determining loan provisions in a timely manner.

5. A bank's aggregate amount of individual and collectively assessed loan provisions should be adequate to absorb estimated credit losses in the loan portfolio.

6. A bank's use of experienced credit judgement and reasonable estimates are an essential part of the recognition and measurement of loan losses.

7. A bank's credit risk assessment process for loans should provide the bank with the necessary tools, procedures and observable data to use for credit risk assessment purposes, account for impairment of loans and the determination of regulatory capital requirements.

### Supervisory evaluation of credit risk assessment for loans, controls and capital adequacy

8. Banking supervisors should periodically evaluate the effectiveness of a bank's credit risk policies and practices for assessing loan quality.

9. Banking supervisors should be satisfied that the methods employed by a bank to calculate loan loss provisions produce a reasonable and prudent measurement of estimated credit losses in the loan portfolio that are recognized in a timely manner.

10. Banking supervisors should consider credit risk assessment and valuation policies and practices when assessing a bank's capital adequacy.

# Sound Credit Risk Assessment and Valuation for Loans

## Objective and Summary

1. This paper is intended to provide banks and supervisors with guidance on sound credit risk assessment and valuation policies and practices for loans regardless of the accounting framework applied. As such, the principles in this paper are intended to be consistent with those set forth in the International Financial Reporting Standards (IFRS) applicable to loan impairment[1]. Specifically, the paper addresses how common data and processes may be used for credit risk assessment, accounting and capital adequacy purposes and highlights provisioning concepts that are consistent in prudential and accounting frameworks. This guidance focuses on policies and practices that the Basel Committee on Banking Supervision[2] believes will promote sound credit risk assessment and controls.

2. The practices presented here address sound credit risk assessment, valuation and control processes for banks, and the responsibilities of the board of directors and senior management for maintaining aggregate provisions for loan losses. The paper also discusses general guidelines for how supervisors should evaluate the effectiveness of a bank's credit risk policies when assessing the adequacy of a bank's credit risk assessment and regulatory capital[3].

3. Supervisors expect a bank's credit risk assessment and valuation policies and practices to be consistent with prudential guidelines and applicable accounting frameworks. This Basel Committee guidance presumes that banks are following a robust accounting framework. This paper is not intended to set forth additional accounting requirements for provisions for loan losses[4] beyond those established by accounting standard setters. Nor is it intended to bridge provisioning for credit risk assessment for accounting purposes to capital adequacy measures. The Committee recognises that responsibility for compliance[5] with

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[1] To keep the structure and contents of this paper clear and straightforward, it does not contain specific references to IFRS or other relevant accounting frameworks. However, for the reader's convenience some relevant excerpts from International Accounting Standard (IAS) 39 and its application guidance are included in the Appendix to this paper.

[2] The Basel Committee on Banking Supervision (the Basel Committee or the Committee) is a committee of banking supervisory authorities that was established by the central bank Governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom and the United States. It usually meets at the Bank for International Settlements in Basel, where its permanent Secretariat is located.

[3] In June 2004, the Committee released its document on regulatory capital standards (*International Convergence of Capital Measurement and Capital Standards: A Revised Framework*) also commonly referred to as "Basel II". It is not the intention that this paper should be understood as adding to or changing the operational requirements and guidance given regarding the determination of regulatory capital requirements.

[4] This paper uses the term "provision" instead of "reserve" since many accountants for conceptual reasons would avoid the latter term in the context of the balance sheet account for loan impairment. In some countries, the term "allowance" is used to refer to this balance sheet account.

[5] In April 2005, the Committee issued a high-level paper on compliance risk (*Compliance and the compliance function in banks*). The paper considers the specific responsibilities of the bank's board of directors and senior management for compliance and describes sound practices to assist banks in designing, implementing, and operating an effective compliance function.

accounting standards rests with a bank's senior management and board of directors[6], and in most cases is subject to verification through formal external audit. Moreover, a variety of public bodies oversee this process, such as securities regulators and regulators of auditors.

4. The Basel Committee has developed separate papers on a number of related topics in the area of credit risk including credit risk modelling and credit risk management.[7] Banking supervisors promote sound credit risk assessment and valuation policies because they have a natural interest in sound and prudent credit risk assessment and valuation policies and practices utilised by banks. Experience indicates that a significant cause of bank failures is poor credit quality and credit risk assessment. Failure to identify and recognise deterioration in credit quality in a timely manner can aggravate and prolong the problem. Thus, inadequate credit risk assessment policies and procedures, which may lead to inadequate and untimely recognition and measurement of loan losses, undermine the usefulness of capital requirements and hamper proper assessment and control of a bank's credit risk exposure.

5. In the Basel Core Principles,[8] the Committee defines minimum requirements for an effective banking supervisory system and discusses arrangements to promote stability in financial markets. In particular, certain Core Principles require banking supervisors to be satisfied that banks have and adhere to adequate policies, practices and procedures for evaluating the quality of assets and the adequacy of loan loss provisions, enabling the supervisor to obtain a true and fair view of the financial condition of the bank and the profitability of its business.

6. The discussion of credit risk regulatory capital requirements in this document primarily focuses on the use of the Advanced Internal Ratings-based approach under Basel II. Nevertheless, since this paper discusses certain of the Basel Core Principles, it is relevant to all banks irrespective of the approach they use in the calculation of credit risk regulatory capital requirements under Basel II. However, the extent to which the sound practices are implemented should reflect the scope and complexity of an individual bank's operations. As the legal powers of supervisory agencies, in particular regarding accounting issues, vary between jurisdictions, the paper is intended to only provide sound credit risk assessment practice guidance.

7. The focus of this paper is on sound credit risk assessment and valuation for loans carried at amortised cost. Therefore, the paper does not explicitly discuss these processes with respect to loans carried at fair value or at the lesser of amortised cost or fair value. Credit risk is of course present in bank assets other than loans carried at amortised cost and in off-balance-sheet exposures. While credit risk assessment and valuation practices relating

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6 This guidance refers to a management structure composed of a board of directors and senior management. The Basel Committee recognises that there are several differences in the legislative and regulatory frameworks across countries with respect to the functions of the board of directors and senior management. Owing to these differences, the notions of board of directors and senior management are used in this paper not as legal constructs but rather to label two decision-making functions within a bank.

7 In April 1999, the Committee issued a paper on credit risk modelling (*Credit Risk Modeling: Current Practices and Application*), which discusses current practices and issues in credit risk modelling. In September 2000, the Committee issued a paper on credit risk management (*Principles for the Management of Credit Risk)*, a complex topic in which accounting policies play an important part. These papers provide more comprehensive guidance on credit risk assessment and management issues.

8 The *Core Principles for Effective Banking Supervision* were issued by the Basel Committee in September 1997. The Basel Core Principles (BCP) are currently under review for revision, and the requirements cited in this paragraph are subject to change. The revision of the BCP may not be completed by the completion of this paper.

to such other bank assets and exposures are generally outside the scope of this paper, the Basel Committee believes that banks should ensure that sound credit risk assessment policies and practices are in place in these areas and that credit risk is properly considered in the valuation of these assets and exposures. Further, a bank should aggregate all exposures to assess the overall credit risk to the institution. Thus, some of the principles in this paper should be helpful to banks and their supervisors in addressing credit risk assessment and valuation issues pertaining to assets other than loans carried at amortised cost and other credit exposures.

8. Comments from the public on all aspects of the consultative paper are welcome by **28 February 2006**. These should be addressed to the Basel Committee at the following address:

Basel Committee on Banking Supervision
Bank for International Settlements
Centralbahnplatz 2
CH-4002 Basel
Switzerland

Alternatively, comments may be sent by e-mail to baselcommittee@bis.org.

## Supervisory expectations concerning sound credit risk assessment and valuation for loans

9. The fundamental requirements described below allow banks to utilise common elements of the credit risk monitoring system for credit risk assessment, accounting and regulatory capital adequacy purposes.

### Principle 1

***The bank's board of directors and senior management are responsible for ensuring that the banks have appropriate credit risk assessment processes and effective internal controls to consistently determine provisions for loan losses in accordance with the bank's stated policies and procedures, the applicable accounting framework and supervisory guidance commensurate with the size, nature and complexity of the bank's lending operations.***

10. It is the responsibility of the board of directors and senior management of each bank to maintain aggregate loan provisions at an appropriate level and to oversee and monitor the credit risk assessment and provisioning processes. Further, the board of directors and senior management must reasonably assure that their institutions have appropriate credit risk assessment processes and internal controls in place to consistently determine provisions for loan losses in accordance with the bank's stated policies and procedures, the applicable accounting framework and any appropriate supervisory guidance. To fulfil these responsibilities, boards of directors instruct senior management to develop and maintain an appropriate, systematic and consistently applied process to determine provisions for loan losses. Senior management should create and implement suitable policies and procedures to communicate the provisioning process internally to all applicable personnel.

11. An internal control system for credit risk assessment and the provisioning process should, among others:

a. Include measures to provide assurance regarding the reliability and integrity of information and compliance with laws, regulations, and internal policies and procedures;

b. Reasonably assure that the bank's financial statements and its supervisory reports are prepared in accordance with the applicable accounting framework and relevant prudential provisioning supervisory guidance; and

c. Include a well defined and independent loan review process containing:

- An effective loan grading system that is consistently applied, identifies and accurately grades differing credit risk characteristics and loan quality problems in a timely manner, and prompts appropriate administrative actions;
- Sufficient internal controls to reasonably assure that all relevant loan review information is appropriately considered in estimating losses. This includes maintaining appropriate reports, details of reviews performed, and identification of personnel involved; and
- Clear formal communication and coordination among a bank's credit administration function, financial reporting staff, internal auditors, senior management, board of directors and others who are involved in the credit risk assessment and measurement process, as applicable (e.g. written policies and procedures, management reports, audit programs, and committee minutes).

### Principle 2

***Banks should have a system in place to reliably classify loans on the basis of credit risk.***

12. Effective credit risk assessment and loan accounting practices should be performed in a systematic way and in accordance with established policies and procedures. To be able to prudently value loans and to determine appropriate loan provisions, it is particularly important that banks have a system in place to reliably classify loans on the basis of credit risk. Larger loans should be classified on the basis of a credit risk grading system. Other, smaller loans, may be classified on the basis of either a credit risk grading system or payment delinquency status. Both accounting frameworks and Basel II recognise loan classification systems as tools in accurately assessing the full range of credit risk. Further, Basel II and accounting frameworks both recognise that all credit classifications, not only those reflecting severe credit deterioration, should be considered in assessing probability of default and loan impairment.

13. A well-structured loan grading system is an important tool in differentiating the degree of credit risk in the various credit exposures of a bank. This allows a more accurate determination of the overall characteristics of the loan portfolio, probability of default and ultimately the adequacy of provisions for loan losses. In describing a loan grading system, a bank should address the definitions of each loan grade and the delineation of responsibilities for the design, implementation, operation and performance of a loan grading system.

14. Credit risk grading processes typically take into account a borrower's current financial condition and paying capacity, the current value and realisability of collateral and other borrower and facility specific characteristics that affect the prospects for collection of principal and interest. Because these characteristics are not used solely for one purpose (e.g. credit risk or financial reporting), a bank may assign a single credit risk grade to a loan regardless of the purpose for which the grading is used. Both Basel II and accounting

frameworks recognise the use of internal (or external) credit risk grading processes in determining groups of loans that would be collectively assessed for loan loss measurement. Thus, a bank may make a single determination of groups of loans for collective assessment under both Basel II and the applicable accounting framework.

15. Risk ratings should be reviewed and updated whenever relevant new information is received. All credits should receive a periodic formal review (e.g. at least annually) to reasonably assure that credit risk grades are accurate and up-to-date. Credit risk grades for individually assessed loans that are either large, complex, higher risk or problem credits should be reviewed more frequently.

## Principle 3

***A bank's policies should appropriately address validation of any internal credit risk assessment models.***

16. Credit risk assessment and loan provisioning may involve risk measurement models and assumption-based estimates. Models may be used in various aspects of the credit risk assessment process including credit scoring, estimating or measuring credit risk at both the individual transaction and overall portfolio levels, portfolio administration, stress testing loans or portfolios and capital allocation. Credit risk assessment models often consider the impact of changes to borrower and loan-related variables such as the probability of default, loss given default, exposure amounts, collateral values, rating migration probabilities and internal borrower ratings.

17. As credit risk assessment models involve extensive judgement, effective model validation procedures are crucial. Banks should periodically employ stress testing and back testing in evaluating the quality of their credit risk assessment models and establish internal tolerance limits for differences between expected and actual outcomes and processes for updating limits as conditions warrant. Banks should have policies that require remedial actions be taken when policy tolerances are exceeded. Banks should also document their validation process and results with regular reporting of the results to the appropriate levels of bank management. Additionally, the validation of internal credit risk assessment models should be subject to periodic review by qualified, independent individuals (e.g., internal and external auditors).[9]

## Principle 4

***A bank should adopt and document a sound loan loss methodology, which addresses risk assessment policies, procedures and controls, for assessing credit risk, identifying problem loans and determining loan provisions in a timely manner.***

18. As part of its credit risk assessment process, a bank should develop and implement comprehensive procedures and information systems to monitor the quality of its loan portfolio. These should include criteria that identify and report problem loans to reasonably assure that they are appropriately monitored as well as administered and provided for.

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[9] This paper provides a brief overview on supervisory issues related to model validation. Working groups of the Committee are considering this topic more comprehensively and may issue further guidance.

19. The credit risk monitoring system provides the relevant information for senior management to make its experienced judgements about the credit quality of the loan portfolio and provides the foundation upon which a bank's loan loss or provisioning methodology is built. That is, the same information should be utilised by senior management to monitor the condition of the loan portfolio and in the bank's methodology for determining amounts of loan provisions for credit risk assessment, accounting and capital adequacy purposes.

20. A bank's loan loss methodology is influenced by many factors, such as an institution's sophistication, business environment and strategy, loan portfolio characteristics, loan administration procedures and management information systems. However, there are common elements a bank should incorporate in its loan loss methodology, many of which are elements of the bank's credit risk monitoring system. A bank's provisioning methodology should:

- Include written policies and procedures for the credit risk systems and controls inherent in the methodology, including roles and responsibilities of the bank's board of directors and senior management;
- Include a detailed analysis of the entire loan portfolio, performed on a regular basis;
- Identify loans to be evaluated for impairment on an individual basis and segment the remainder of the portfolio into groups of loans with similar credit risk characteristics for evaluation and analysis on a collective basis;
- Identify, for individually assessed loans that are impaired, how the amount of any impairment is determined and measured, including procedures describing the impairment measurement techniques available and steps performed to determine which technique is most appropriate in a given situation;
- Address the methods used to determine whether and how loans individually evaluated, but not considered to be individually impaired, should be grouped with other loans (excluding individually assessed loans that are impaired) that share similar credit risk characteristics (such as loan type, past-due status, and credit risk) for collective impairment evaluation;
- Be based on current and reliable data, incorporate management's experienced judgements about the credit quality of the loan portfolio and consider all known relevant internal and external factors that may affect loan collectibility (such as industry, geographical, economic, and political factors);
- Address how loss rates are determined (e.g. historical loss rates adjusted for environmental factors or migration analysis) and what factors are considered when establishing appropriate time frames over which to evaluate loss experience;
- Consider current collateral values (less costs to sell), where applicable;
- Address the bank's policies and procedures for loan charge-offs and recoveries;
- Require that analyses, estimates, reviews and other provisioning methodology functions be performed by competent and well-trained personnel and be well documented, in writing, with clear explanations of the supporting analyses and rationale;
- Include a systematic and logical method to consolidate the loss estimates and reasonably assure the loan provision balance is in accordance with the applicable accounting framework (e.g. IFRS) and relevant prudential requirements; and
- Address the methods used to validate models used for credit risk assessment and credit risk management tools (e.g. stress tests and back tests).

21. A bank should have a realistic view of its lending activities and adequately consider uncertainty and risks inherent in those activities in preparing accounting information.

22. Loan accounting policies and practices should be selected and applied in a consistent way that reasonably assures that loan and loan loss provision information is reliable, verifiable and free from bias.

23. A bank should use consistent credit risk assessment and valuation policies and procedures from period to period, and consistent measurement concepts and procedures for related items.

### Principle 5

***A bank's aggregate amount of individual and collectively assessed loan provisions should be adequate to absorb estimated credit losses in the loan portfolio.***

24. To reasonably assure that the reported amount of loan provisions reflects the current collectibility of the loan portfolio, the process to assess loan losses should be reviewed annually, or more frequently, if warranted.

25. Estimates of individual and collectively assessed loan losses should reflect consideration of all significant factors that affect the collectibility of the loan portfolio as of the evaluation date. For individually assessed loans, these estimates should reflect consideration of the facts and circumstances that affect the repayment of each individual loan as of the evaluation date. The following factors are relevant to both Basel II and accounting frameworks in estimating loan losses for individually assessed loans:

- Significant financial difficulty of the borrower;
- Probable bankruptcy or other financial reorganization of the borrower;
- Breach of contract, such as a default or delinquency in interest or principal payments; or
- Concession granted by the lender, for economic or legal reasons relating to the borrower's financial difficulty, which would not otherwise be considered.

26. For groups of loans that are collectively assessed for impairment, estimated credit losses should reflect consideration of the bank's historical net charge-off rate of the groups, adjusted upward or downward for changes in trends, conditions and other relevant factors that affect repayment of the loans in these groups as of the evaluation date. Methodologies for the determination of the historical net charge-off rate on a group of loans can range from a simple average of an bank's net charge-off experience over a relevant credit cycle -- coupled with appropriate adjustments as noted above for factors that affect repayment -- to more complex techniques, such as migration analysis or models that estimate credit losses. Both Basel II and accounting frameworks require the use of historical data adjusted for current trends and conditions when collectively assessing groups of loans with similar credit risk characteristics. While methodologies for the determination of historical net charge-off rates, as adjusted for current conditions, vary depending on the sophistication and complexity of the institution, a bank should utilise consistent methodologies for determining losses for credit risk assessment, accounting and capital adequacy purposes.

### Principle 6

***A bank's use of experienced credit judgement and reasonable estimates are an essential part of the recognition and measurement of loan losses.***

27. Assessment and valuation of loan impairment cannot be based solely on prescriptive rules or formulae but must be enhanced with judgement by the appropriate levels of management.[10] Historical loss experience or observable data may be limited or not fully relevant to current circumstances; therefore, management may be required to use its experienced credit judgement to estimate the amount of any impairment loss. Both Basel II and accounting frameworks provide for the use of experienced credit judgement in assessing probability of default, loss given default and loss provisioning. While experienced credit judgements may be necessary, the scope for actual discretion should be prudently limited and documentation should be in place to enable an understanding of the procedures performed and judgements made by management, particularly within the following constraints:

- Experienced credit judgements should be subject to established policies and procedures;
- There should be an approved and documented analytical framework for assessing loan quality, which is applied consistently over time;
- Estimates should be based on reasonable and supportable assumptions and should be supported by adequate documentation; and
- Assumptions concerning the impact on borrowers of changes in general economic activity, both favourable and unfavourable, should be made with sufficient prudence.

28. The method of determining aggregate loan provisions should reasonably assure the timely recognition of loan losses. While historical loss experience and recent economic conditions are a reasonable starting point for the institution's analysis, these factors are not, by themselves, a sufficient basis to determine the appropriate level for the aggregate loan provisions. Management should also consider any current factors that are likely to cause losses associated with the bank's portfolio to differ from historical loss experience, including:

- Changes in lending policies and procedures, including underwriting standards[11] and collection, charge-off, and recovery practices;
- Changes in international, national and local economic and business conditions and developments, including the condition of various market segments;
- Changes in the trend, volume and severity of past due loans and loans graded as low quality, as well as trends in the volume of impaired loans, troubled debt restructurings and other loan modifications;
- Changes in the experience, ability, and depth of lending management and staff;

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[10] There are instances wherein no adjustments are needed to the data in the recognition and measurement of loans as the data is consistent with current conditions.

[11] The bank's general lending policy will typically be supplemented by more detailed underwriting standards, guidelines and procedures to steer the bank's loan approval process and maintain desired levels of risk. For instance, underwriting standards may specify amortisation requirements, maturity standards, collateral coverage, collateral valuation, and guarantor standards.

- Changes in the quality of the bank's loan review system and the degree of oversight by the bank's senior management and board of directors;
- The existence and effect of any concentrations of credit, and changes in the level of such concentrations;
- The effect of external factors such as competition and legal and regulatory requirements on the level of estimated credit losses in the institution's current portfolio; and
- Changes in the credit risk profile of the portfolio as a whole.

29. Experienced credit judgement should also be used to determine an acceptable period that will yield reliable historical loss rates as loss rate periods should not be restricted to a fixed time period to determine the average historical loss experience for any group of loans with similar credit risk characteristics. A bank should maintain sufficient historical loss data over a full credit cycle to provide robust and meaningful statistical loan loss estimates for establishing the level of collective impairment losses for each group of similar loans.

30. In estimating probability of defaults, loss given defaults and loan losses under both Basel II and accounting frameworks, banks may determine either a single amount or a range of possible amounts. In the latter case, a bank should recognise an impairment loss equal to the best estimate within the range after considering all relevant information about conditions existing at the measurement date that is available before it completes its prudential reports or financial statements. When determining an amount of an impairment loss within a range, banks will rely upon factors that are consistent with credit risk characteristics evaluated under the Basel II framework.

**Principle 7**

***A bank's credit risk assessment process for loans should provide the bank with the necessary tools, procedures and observable data to use for credit risk assessment purposes, account for impairment of loans and the determination of regulatory capital requirements.***

31. As described above, a bank's credit risk monitoring system should meet fundamental requirements and procedures including the appropriate tools to assess credit risk accurately. These fundamental requirements, procedures and tools are equally necessary for assessment of credit risk, accounting and consideration for regulatory capital adequacy purposes. Accordingly, these fundamentals serve as common elements in assessing credit risk for all three purposes. Therefore, this commonality allows use of the same systems for each of the three purposes. Common systems strengthen the reliability and consistency of the resulting figures, enhance the consistency in the outcomes achieved for the three different purposes, and minimise the potential risk of disincentives to follow sound provisioning practices for one or more of the measurement purposes. Generally, common types of data that are used in assessment and valuation processes include credit risk grades, historical loss rates, characteristics used to group loans for collective assessment and observable data used to estimate losses or to adjust historical loss rates.

32. If a bank determines that observable data does not indicate impairment exists for an individually assessed loan, the bank should include the loan in a group of loans with similar credit risk characteristics and collectively assess the group of loans for impairment. All loans that have not been individually assessed for impairment should also be included in groups of loans with similar credit risk characteristics for collective impairment assessment. These actions should be taken because impairment may be evident in a group of similar loans even though observable data may not yet indicate that any individual loan in that group is

impaired. This collective assessment is an interim step pending the identification of impairment losses on an individual loan.

33. Banks may use different methods to group loans for the purpose of assessing credit risk and valuation. For example, loans may be grouped on the basis of one or more of the following characteristics: estimated default probabilities or credit risk grades, type of loan, geographical location, collateral type or past-due status. More sophisticated credit risk assessment models or methodologies for estimating expected future cash flows, including credit risk grading processes, may combine several of these characteristics.

34. Estimates of loan losses may differ from country to country for various reasons including differences in accounting and regulatory frameworks. The implementation of Basel II and convergence of international accounting frameworks (e.g. through the implementation of IFRS) may reduce these differences. In any case, sound credit risk assessment and valuation policies and practices are independent of the purpose for measuring provisions or estimated credit losses. That is, the same sound credit risk assessment system provides the information or outputs to be utilised in measuring losses for credit risk assessment and accounting purposes and for assessing the adequacy of a bank's capital. Accordingly, this may result in similar loss figures being used as input for credit risk assessment, accounting and capital adequacy purposes.

35. While a single credit risk assessment system provides the credit risk information to be used in determining provisions, the information, once verified for reliability, may be utilised differently depending upon the purpose of the reporting or measurement objective.

36. Observable data used in measuring expected credit losses for credit risk assessment may differ from that used for accounting purposes. While the processes for estimating probability of default and impairment under Basel II and accounting frameworks both consider all credit exposures, not only those reflecting a severe credit deterioration, accounting frameworks that apply an incurred loss approach require observable data that provides evidence of events occurring after initial recognition of the assets to recognise losses. For prudential purposes, including for both credit risk assessment and capital adequacy purposes under Basel II, the calculation of expected losses may not require the same observable data as needed for accounting recognition of losses. This difference in the approach to recognising losses may result in different application of credit risk information in the measurement of losses for credit risk assessment and accounting purposes, particularly for newly originated loans. Further, Basel II's one-year time horizon may also result in a difference in estimated losses for a particular timeframe.

37. Banks that utilise a loan classification system based upon the prudential expected loss approach measure losses in all credit risk grades irrespective of whether the loan is newly originated. This approach does not require migration of an individual loan to a lower quality credit risk grade than that assigned upon loan origination to recognise the measurable probability of loss. However, an external or internal rating deterioration, which establishes or increases the expectation of losses in a loan, would have to be considered for accounting loss recognition purposes.

38. A further difference in how credit loss information is applied surrounds the time horizon utilised to measure losses. Under Basel II, expected losses over a one-year time horizon are identified for regulatory capital adequacy purposes. Although accounting frameworks allow incurred but not yet identified loss events to be considered in the measurement of provisions, such events are not limited to the one-year time horizon, thereby creating a difference between accounting and prudential frameworks.

39. Thus, it can be concluded that potential differences between the level of impairment recognised under accounting frameworks and expected losses under the Basel II framework may result, among other things, from the potential exclusion of newly funded loans, and estimated loan losses exceeding a one-year time horizon.

40. It should be noted that the approach under Basel II does not result in the creation of a separate loan loss provision for capital assessment purposes. Rather it results in a deduction from or addition to regulatory capital for any difference between accounting provision amounts and Basel II's required expected losses over a one-year time horizon.

## Supervisory evaluation of credit risk assessment for loans, controls and capital adequacy[12]

### Principle 8

***Banking supervisors should periodically evaluate the effectiveness of a bank's credit risk policies and practices for assessing loan quality.***

41. Banking supervisors have policies that call for the prudential review of a bank's lending and credit risk assessment functions on a periodic basis along with recommendations for improvements where necessary. Supervisors should be satisfied that:

- The quality of a bank's loan review system for identifying, classifying, monitoring and addressing loans with credit quality problems in a timely manner is adequate;
- Appropriate information about the credit quality of the loan portfolio and related provisions is provided to the board of directors and senior management on a regular and timely basis; and
- Management judgement has been exercised in an appropriate manner and is reasonable.

42. In making these evaluations, supervisors may elect to obtain information through regular supervisory reporting or on-site examinations that banks do not publicly disclose. Supervisors could also use these possible approaches for obtaining information when performing evaluations called for below in Principles 9 and 10.

[12] A primary objective of prudential supervisors is to maintain the financial soundness of individual financial institutions and the stability of the financial system as a whole. Prudential supervisors achieve this objective partly by issuing guidance on sound risk management, assessing the risk profile of each regulated institution and imposing a risk-based capital requirement. The International Accounting Standards Board (IASB) has acknowledged this important role of supervisors in paragraph BC 79 of an amendment to IAS 39.

## Principle 9

***Banking supervisors should be satisfied that the methods employed by a bank to calculate loan loss provisions produce a reasonable and prudent measurement of estimated credit losses in the loan portfolio that are recognized in a timely manner.***

43. In assessing the methods employed by a bank to calculate loan loss provisions, supervisors should be satisfied that:

- The procedures used by a bank to establish loan provisions on individually impaired loans are prudent and take into account criteria such as updated valuation of collateral and cash flow predictions based on current assessments of economic conditions;
- The framework for establishing collectively assessed provisions is adequate and that the methodology used is reasonable;
- Aggregate loan provisions are appropriate in relation to total credit risk exposure in the loan portfolio;
- Loans (or portions thereof) determined to be uncollectible have been recognised in a timely and appropriate manner through provisions or charge-offs; and
- The bank is following policies and practices consistent with those outlined in this paper.

44. Supervisors may make use of the work performed by internal and external auditors in reviewing a bank's lending and credit risk assessment functions. The Basel Committee has issued extensive guidance on the cooperation with internal auditors including *Internal Audit in Banks and the Supervisor's Relationship with Auditors (*August 2001) and *Internal Audit in Banks and the Supervisor's Relationship with Auditors: A Survey* (August 2002). Further, in association with International Auditing Practices Committee of the International Federation of Accountants, the Committee published a paper on *The Relationship Between Banking Supervisors and Banks' External Auditors* (January 2002).

## Principle 10

***Banking supervisors should consider credit risk assessment and valuation practices when assessing a bank's capital adequacy.***

45. In assessing the appropriateness of loan provisions as an element of a bank's overall capital adequacy, it is important to recognise that the related process, methodology and underlying assumptions require a substantial degree of experienced credit judgement. Even when a bank maintains sound loan administration and collection procedures and effective internal systems and controls, the estimation of credit losses will not be precise due to the wide range of factors that must be considered. Further, the ability to estimate credit losses on individual loans and groups of loans improves over time as substantive information accumulates regarding the factors affecting repayment prospects. Therefore, supervisors will generally accept management's estimates in their assessment of the appropriateness of loan provisions when management has: (i) maintained effective systems and controls for identifying, monitoring and addressing asset quality problems in a timely manner, (ii) analysed all significant factors that affect the collectibility of the portfolio in a reasonable manner and (iii) established an acceptable loan provisioning process that meets the fundamental requirements previously described.

46. In communicating deficiencies or recommending improvements in a bank's credit risk assessment practices, supervisors consider the full range of supervisory measures at their disposal to bring deficiencies to the attention of management and encourage correction by management in a timely manner. The supervisory response should be commensurate with the severity of the deficiencies and management's responsiveness in addressing concerns. For example, supervisory responses could include the following approaches and measures:

- Routine communication of concerns to the bank's senior management, together with management's response and indication of how it is addressing these concerns;
- Factoring into supervisory ratings any concerns with respect to a bank's loan provisioning and credit risk assessment practices (e.g. factoring this into prudential risk management or capital adequacy ratings);
- Communication of significant concerns to the bank's senior management and board of directors; or
- Informal or formal supervisory actions (which can be of a non-public or public nature) requiring senior management and the board of directors to remedy the deficiencies in a specified timeframe and to provide the supervisor with periodic written progress reports.

47. To the extent credit risk assessment or provisioning deficiencies are significant or are not remedied on a timely basis, the supervisor may consider whether such deficiencies should be reflected in supervisory ratings or through a higher capital requirement. For example, if a bank lacks appropriate credit risk assessment policies, systems or controls, the supervisor may consider these deficiencies when assessing whether the bank's capital position is adequate in relation to its credit risk exposures. Moreover, the supervisor should consider how these deficiencies affect the level of provisions and when deficiencies exist, the supervisor should discuss this with the bank and take other appropriate actions when necessary. In addition, when assessing capital adequacy, supervisors should consider how a bank's loan accounting and credit risk assessment policies and practices affect the quality of the bank's reported earnings and, therefore, its capital position.

# Appendix: Significant IASB Impairment Guidance

As previously noted, the principles in the preceding paper are intended to be consistent with those set forth in the International Financial Reporting Standards (IFRS) applicable to loan impairment. The IFRS or other relevant accounting standards are not included or referenced in the preceding paper. For the reader's convenience, some relevant excerpts from IAS 39 and its application guidance that outline the guidance for loan impairment are included in this Appendix in the following paragraphs. This Appendix is not a formal part of the paper.

## International Accounting Standard (IAS) 39, "Financial Instruments: Recognition and Measurement:

59. A financial asset or a group of financial assets is impaired and impairment losses are incurred if, and only if, there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated. It may not be possible to identify a single, discrete event that caused the impairment. Rather the combined effect of several events may have caused the impairment. Losses expected as a result of future events, no matter how likely, are not recognised. Objective evidence that a financial asset or group of assets is impaired includes observable data that comes to the attention of the holder of the asset about the following loss events:

(a) significant financial difficulty of the issuer or obligor;

(b) a breach of contract, such as a default or delinquency in interest or principal payments;

(c) the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;

(d) it becoming probable that the borrower will enter bankruptcy or other financial reorganisation;

(e) the disappearance of an active market for that financial asset because of financial difficulties; or

(f) observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the group, including:

    (i) adverse changes in the payment status of borrowers in the group (eg an increased number of delayed payments or an increased number of credit card borrowers who have reached their credit limit and are paying the minimum monthly amount); or

    (ii) national or local economic conditions that correlate with defaults on the assets in the group (eg an increase in the unemployment rate in the geographical area of the borrowers, a decrease in property prices for mortgages in the relevant area, a decrease in oil prices for loan assets to oil producers, or adverse changes in industry conditions that affect the borrowers in the group).

62. In some cases the observable data required to estimate the amount of an impairment loss on a financial asset may be limited or no longer fully relevant to current circumstances. For example, this may be the case when a borrower is in financial difficulties and there are few available historical data relating to similar borrowers. In such cases, an entity uses its experienced judgement to estimate the amount of any impairment loss. Similarly an entity uses its experienced judgement to adjust observable data for a group of financial assets to reflect current circumstances (see paragraph AG89). The use of reasonable estimates is an essential part of the preparation of financial statements and does not undermine their reliability

64. An entity first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant, and individually or collectively for financial assets that are not individually significant (see paragraph 59). If an entity determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is or continues to be recognised are not included in a collective assessment of impairment.

## Appendix A: Application Guidance; Measurement

Impairment and Uncollectibility of Financial Assets

Financial Assets Carried at Amortised Cost (paragraphs 63-65 of IAS 39)

AG84. Impairment of a financial asset carried at amortised cost is measured using the financial instrument's original effective interest rate because discounting at the current market rate of interest would, in effect, impose fair value measurement on financial assets that are otherwise measured at amortised cost. If the terms of a loan, receivable or held-to-maturity investment are renegotiated or otherwise modified because of financial difficulties of the borrower or issuer, impairment is measured using the original effective interest rate before the modification of terms. Cash flows relating to short-term receivables are not discounted if the effect of discounting is immaterial. If a loan, receivable or held-to-maturity investment has a variable interest rate, the discount rate for measuring any impairment loss under paragraph 63 is the current effective interest rate(s) determined under the contract. As a practical expedient, a creditor may measure impairment of a financial asset carried at amortised cost on the basis of an instrument's fair value using an observable market price. The calculation of the present value of the estimated future cash flows of a collateralised financial asset reflects the cash flows that may result from foreclosure less costs for obtaining and selling the collateral, whether or not foreclosure is probable.

AG85. The process for estimating impairment considers all credit exposures, not only those of low credit quality. For example, if an entity uses an internal credit grading system it considers all credit grades, not only those reflecting a severe credit deterioration.

AG86. The process for estimating the amount of an impairment loss may result either in a single amount or in a range of possible amounts. In the latter case, the entity recognises an impairment loss equal to the best estimate within the range,* taking into account all relevant information available before the financial statements are issued about conditions existing at the balance sheet date.

* IAS 37, paragraph 39 contains guidance on how to determine the best estimate in a range of possible outcomes.

AG87. For the purpose of a collective evaluation of impairment, financial assets are grouped on the basis of similar credit risk characteristics that are indicative of the debtors' ability to pay all amounts due according to the contractual terms (for example, on the basis of a credit risk evaluation or grading process that considers asset type, industry, geographical location, collateral type, past-due status and other relevant factors). The characteristics chosen are relevant to the estimation of future cash flows for groups of such assets by being indicative of the debtors' ability to pay all amounts due according to the contractual terms of the assets being evaluated. However, loss probabilities and other loss statistics differ at a group level between (a) assets that have been individually evaluated for impairment and found not to be impaired and (b) assets that have not been individually evaluated for impairment, with the result that a different amount of impairment may be required. If an entity does not have a group of assets with similar risk characteristics, it does not make the additional assessment.

AG88. Impairment losses recognised on a group basis represent an interim step pending the identification of impairment losses on individual assets in the group of financial assets that are collectively assessed for impairment. As soon as information is available that specifically identifies losses on individually impaired assets in a group, those assets are removed from the group.

AG89. Future cash flows in a group of financial assets that are collectively evaluated for impairment are estimated on the basis of historical loss experience for assets with credit risk characteristics similar to those in the group. Entities that have no entity-specific loss experience or insufficient experience, use peer group experience for comparable groups of financial assets. Historical loss experience is adjusted on the basis of current observable data to reflect the effects of current conditions that did not affect the period on which the historical loss experience is based and to remove the effects of conditions in the historical period that do not exist currently. Estimates of changes in future cash flows reflect and are directionally consistent with changes in related observable data from period to period (such as changes in unemployment rates, property prices, commodity prices, payment status or other factors that are indicative of incurred losses in the group and their magnitude). The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

AG90. As an example of applying paragraph AG89, an entity may determine, on the basis of historical experience that one of the main causes of default on credit card loans is the death of the borrower. The entity may observe that the death rate is unchanged from one year to the next. Nevertheless, some of the borrowers in the entity's group of credit card loans may have died in that year, indicating that an impairment loss has occurred on those loans, even if, at the year-end, the entity is not yet aware which specific borrowers have died. It would be appropriate for an impairment loss to be recognised for these 'incurred but not reported' losses. However, it would not be appropriate to recognise an impairment loss for deaths that are expected to occur in a future period, because the necessary loss event (the death of the borrower) has not yet occurred.

AG91. When using historical loss rates in estimating future cash flows, it is important that information about historical loss rates is applied to groups that are defined in a manner consistent with the groups for which the historical loss rates were observed. Therefore, the method used should enable each group to be associated with information about past loss experience in groups of assets with similar credit risk characteristics and relevant observable data that reflect current conditions.

AG92. Formula-based approaches or statistical methods may be used to determine impairment losses in a group of financial assets (eg for smaller balance loans) as long as they are consistent with the requirements in paragraphs 63-65 and AG87-AG91. Any model used would incorporate the effect of the time value of money, consider the cash flows for all of the remaining life of an asset (not only the next year), consider the age of the loans within the portfolio and not give rise to an impairment loss on initial recognition of a financial asset.