Guidelines on Internal Credit Risk Rating Systems

1 Introduction:

1.1 Credit risk arises from the potential that an obligor is either unwilling to perform on an obligation or its ability to perform such obligation is impaired resulting in economic loss to the bank. Bank's failure to assess and manage credit risk proactively may be detrimental to the financial health of a bank and may lead to severe losses to the bank.

1.2 An effective management of credit risk requires that the risk is identified and measured properly. One of the building blocks of credit risk management is the process of properly evaluating the obligor, not only at the time of initiating relationship but also regularly during the course of continued relationship. SBP is cognizant that a number of banks are using some of the evaluation processes with a limited use to only expedite their credit approval process, yet there is a need to expand the scope of these evaluations towards the risk assessment and measurement during the continued relationship.

1.3 To serve the purpose a number of evaluation methods have evolved over time. The outcome of the evaluation process is generally a rating grade/score assigned to the borrower. These grades depict the degree of credit risk associated with the borrower. Continuous up-dating of these grades, act as a basis for a continued loan review process and helps the banks to focus attention on deteriorating credits well before they become impaired.

1.4 When efficiently used, a well structured credit rating system helps the credit monitoring functions to have consistent check on credit assessment. It also helps in the implementation of active credit risk management both at the individual transaction and at the overall portfolio levels. A well established credit rating system can be integrated into decision making process of management and also helps banks in determining the break-even interest rates needed to cover the loan's expected losses so that banks demand appropriate margin for the credit risk or unexpected losses.

1.5 Although the usage of external credit ratings is increasing but still loans to unrated clients form the major portion of banks' credit portfolio. This necessitates that banks should simultaneously use their internal resources to know their customers to such extent and in such a manner, which help them to effectively and efficiently manage their portfolios.

1.6 Keeping in view the importance of internal risk rating systems, all banks and DFIs are advised to develop an objective and rigorous methodology to assign internal risk ratings to their borrowers based on the following instructions. All banks/DFIs will be required to further strengthen their internal risk rating systems as per the detailed requirements already issued for the Internal Rating Based (IRB) approach of Basel II to qualify for the usage of internal rating systems for capital calculations.

2. General:

2.1 A number of rating techniques and methodologies have evolved over time. The methodologies range from a spectrum of purely expert/professional judgment taking into account only qualitative factors, to a sophisticated statistical model based methodology solely taking into account the quantitative factors. Although the degree of subjectivity becomes lesser with the movement on the spectrum towards statistical methods, yet neither of the two extremes is advisable. An ideal internal risk rating system is based on both quantitative and qualitative factors concluding the decision based on many different attributes, involving the human judgment.

2.2 The degree of usage of qualitative factors depends on the quality and frequency of the quantitative information, the model used by the banks and the modalities of the products, e.g. for more structured products qualitative information may become more important. For an optimal internal rating system, the human judgment, experience and general considerations become more important than any mathematical methodology used. The mathematical models should be used prudently. So, a proper weight-age should be given to such qualitative factors. Banks/DFIs, based on their portfolios, clientele and products, may use the qualitative and quantitative factors with a varied degree in their different rating models. However, the essence should remain the same to quantify the risk of obligor in an ordinal way.

2.3 Banks are free to adopt any of the methodologies/techniques keeping in view their size, complexity of operations and clientele base. The methodologies/techniques should be flexible to accommodate present and future risk profile of the bank, the anticipated level of diversification and sophistication in lending activities. However, whatever the method used, the result of the evaluation should be in such a shape that provides meaningful information which can be further used for effective credit risk measurement and management of the credit exposure at an individual level as well as at a portfolio level.

2.4 A rating methodology may be used based on asset class/product lines, e.g. corporate loans/consumer finance or based on line of credit, e.g. for over draft/running finance etc. Within each asset class, a bank may utilize multiple rating methodologies/systems. However, these methodologies should be able to be integrated in overall risk management system i.e. the ratings developed by different methods should be comparable with each other. When multiple systems are used, it is required that, the rationale for assigning a borrower to a rating system must be documented and applied in a manner that best reflects the level of risk of the borrower.

2.5 The ultimate objective of internal rating system should be to generate accurate and consistent risk ratings. The process must provide for a meaningful differentiation of risk, grouping of satisfactory homogenous exposures, and must allow for accurate and consistent estimation of loss characteristics at pool level.

2.6 The internal risk rating system should be integrated with other systems of the banks such as portfolio monitoring, loan loss reserves analysis for provisioning, pricing of the loan, internal capital planning and return on capital analysis. Banks should not use separate rating systems for lending purposes, risk quantification and capital allocation.

3. Scope of Ratings:

3.1 All banks/DFIs are required to assign internal risk ratings across all their credit activities including consumer portfolio.

3.2 The internal risk ratings should be based on a two tier rating system.

1. ***An obligor rating,*** based on the risk of borrower default and representing the probability of default by a borrower or group in repaying its obligation in the normal course of business and that can be easily mapped to a default probability bucket.
2. ***A facility rating,*** taking into account transaction specific factors, and determining the loss parameters in case of default and representing loss severity of principal and/or interest on any business credit facility.

3.3 The obligor rating must be oriented to the risk of borrower default. Separate exposures to the same borrower must be assigned to the same borrower grade, irrespective of any differences in the nature of each specific transaction. There are two exceptions to this. Firstly, in the case of country transfer risk, where a bank may assign different borrower grades depending on whether the facility is denominated in local or foreign currency. Secondly, when the treatment of associated guarantees to a facility may be reflected in an adjusted borrower grade. In either case, separate exposures may result in multiple grades for the same borrower. Guarantor’s rating may also be assigned to the borrower if there is an absolute guarantee and in case of default the bank has 100% recourse on the guarantor.

3.4 The facility rating must be oriented to the loss severity of principal and/or interest on any exposure. A Bank/DFI may have extended to a single counter party a number of credit facilities against different collaterals, having different priority rules and legal recourse to the recovery in case of default. The banks should consider the relevant transactions specific facts, based on the type of facility and collateral, while assigning the facility rating. This process may result in different facility ratings to the same entity. The banks are required to calculate and report loss severity of each facility provided to the borrowers.

4. Rating grades/structure:

4.1 The appropriate number of credit risk grades is an important feature of any internal risk rating system. The number of grades should be such that a bank has a meaningful distribution of exposures across grades with no excessive concentrations, on both its borrower-rating and its facility-rating scales.

4.2 For obligor ratings, the banks/DFIs should have at least nine credit risk grades for non-defaulted borrowers and three for defaulted borrowers. Facility ratings should be at least on six grades showing expected zero loss to loss of full credit exposure. Banks/DFIs are free to have more than the prescribed rating grades, for both obligor and facility ratings.

4.3 Rating definitions, processes and criteria for assigning exposures to these credit grades should clearly be defined. The rating definitions and criteria must be both plausible and intuitive and must result in a meaningful differentiation of risk. Written rating definitions must be clear and detailed enough to allow third parties to understand the assignment of ratings, such as internal audit or an equally independent function, to replicate rating assignments and evaluate the appropriateness of the grade/pool assignments.

4.4 The banks should develop a calibration methodology that allows the differentiation in a meaningful way between the credit qualities of two consecutive grades. The descriptions and criteria must be sufficiently detailed to allow those charged with assigning ratings to consistently assign the same grade to borrowers or facilities posing similar risk. This consistency should exist across lines of business, departments and geographical locations. If rating criteria and procedures differ for different types of borrowers or facilities, the bank must monitor for possible inconsistency, and must alter rating criteria to improve consistency when appropriate. The criteria must also be consistent with the bank's internal lending standards and its policies for handling troubled borrowers and facilities.

4.5 A bank must articulate in its credit policy the relationship between borrower grades in terms of the level of risk each grade implies. Perceived and measured risk must increase as credit quality declines from one grade to the next. The policy must articulate the risk of each grade in terms of both; description of the probability of default risk typical for borrowers assigned the grade and the criteria used to distinguish that level of credit risk

5. Rating criteria:

5.1 To ensure that banks are consistently taking into account available information, they must use all relevant and material information in assigning ratings to borrowers and facilities. They must take into consideration the maximum available attributes of an obligor; financial as well as managerial, quantitative as well as qualitative. They should also make optimal use of market generated information.

5.2 In order to assign obligor ratings the banks are required to consider, but not limited to, the following aspects of the borrower:

A. Financial Condition including:
   a. Economic and financial situation
   b. Leverage
   c. Profitability
   d. Cash flows

B. Management and ownership structure
   a. Ownership structure
   b. Management and quality of internal controls
   c. Promptness/ assessment of the willingness to pay
   d. Strength of Sponsors

C. Qualitative factors:
   a. CIB report
   b. Sector of business
   c. Industry properties and its future prospects

D. Others:
   a. Country risk
   b. Comparison to external ratings.
   c. Credit information from other sources

5.3 In order to assign the facility ratings, the bank should consider the relevant and material information including :

A. Facility
   a. Nature and purpose of loan
   b. Loan structure
   c. Product type
   d. Priority of rights in case of bankruptcy
   e. Degree of collateralization
   f. Composition of collateral

B. Collateral
   a. Nature
   b. Quality
   c. Liquidity
   d. Market value
   e. Exposure of the collateral to different risks
   f. Quality of the charge

g. Legal status of rights
h. Legal enforceability
i. Time required to dispose off

5.4 In the case of credits to individuals, factors such as personal income, wealth, debt burden and other relevant personal information should also be considered.

5.5 Although the qualitative factors are not sometimes measurable, however, the persons analyzing these aspects should be careful and conservative in their approach. Banks should be vigilant about the quality and reliability of the data. Given the difficulty in forecasting future events and the influence they will have on a particular borrower's financial condition, a bank must take a conservative view of projected information.

6. Rating assignment horizon:

6.1 Although the time horizon for probability of default estimation is one year, banks are expected to use a longer time horizon while assigning ratings.

6.2 A borrower rating must represent the bank's assessment of the borrower's ability and willingness to contractually perform despite adverse economic conditions or the occurrence of unexpected events. For example, a bank may base rating assignments on specific, appropriate stress scenarios. Alternatively, a bank may take into account borrower characteristics that are reflective of the borrower's vulnerability to adverse economic conditions or unexpected events, without explicitly specifying a stress scenario. The range of economic conditions that are considered when making assessments must be consistent with current conditions and those that are likely to occur over a business cycle within the respective industry/geographic region.

7. Use of external ratings:

7.1 When a credit risk rating, whether solicited or unsolicited, assigned by some external credit rating agencies is available, the banks should also consider these ratings while finalizing their internal ratings. The intent should not be to align the internal risk rating with an external rating but rather to ensure that all appropriate risk issues have been factored in the final internal risk rating. This process should be considered as a sort of sanity check. When an external rating differs significantly from the proposed internal rating, an explanation is required. If deemed appropriate, the internal rating should be adjusted downward **–** it should never be adjusted upward.

8. Rating migrations/back testing:

8.1 For an active credit risk management, it is imperative to continuously monitor the performance of borrowers and the value of collateral to ascertain the true level of risk at a later stage. So it becomes necessary that borrowers and facilities must have their ratings refreshed at least on annual basis. Certain credits, especially higher risk borrowers or problem exposures, must be subject to more frequent review. In addition, banks must initiate a new rating if material information on the borrower or facility comes to light. The bank must have an effective process to obtain and update relevant and material information on the borrower's financial condition, and on facility characteristics. Upon receipt, the bank needs to have a procedure to update the borrower's rating in a timely fashion.

8.2 Credit risk rating system should be complemented by a robust information system, enabling a bank to track historical default and loss experience. The banks should retain their borrower's credit histories including default or credit loss information to conduct validation tests. There should be a defined mechanism to carry out recalibration and back testing of the internal rating system.

8.3 The banks should keep a track record of changes/migrations in their risk ratings and convert it to meaningful information for developing an objective and effective credit risk management system. They should also ascertain the factors affecting the changes in credit ratings, and based on these factors, they should keep on improving their internal rating systems..

8.4 Banks must maintain rating histories on borrowers and recognized guarantors, including the rating since the borrower/guarantor was assigned an internal grade, the dates the ratings were assigned, the methodology and key data used to derive the rating and the person/model responsible. The identity of borrowers and facilities that default, and the timing and circumstances of such defaults, must be retained.

9. Documentation of rating system design:

9.1 An important feature of any efficient rating system is that it is applied consistently throughout the bank, and over the time. This characteristic is achieved when the rating process is well documented and there are provisions for systemic training of the raters to avoid inconsistencies.

9.2 Banks must document in writing their rating systems' design and operational details. The documentation must address topics such as portfolio differentiation, rating criteria, responsibilities of parties that rate borrowers and facilities, definition of what constitutes a rating exception, parties that have authority to approve exceptions, frequency of rating reviews, and management oversight of the rating process. A bank must document the rationale for its choice of internal rating criteria and must be able to provide analyses demonstrating that rating criteria and procedures are likely to result in ratings that meaningfully differentiate risk.

9.3 In addition, a bank must document a history of major changes in the risk rating process, and such documentation must support identification of changes made to the risk rating process. The organization of rating assignment, including the internal control structure, must also be documented.

9.4 If a bank employs statistical models in the rating process, the bank must document their methodologies. This material must:

1. Provide a detailed outline of the theory, assumptions and/or mathematical and empirical basis of the assignment of estimates to grades, individual obligors, exposures, or pools, and the data source(s) used to estimate the model;
2. Establish a rigorous statistical process (including out-of-time and out-of-sample performance tests) for validating the model; and
3. Indicate any circumstances under which the model does not work effectively.

9.5 Use of a model obtained from a third-party vendor that claims proprietary technology is not a justification for exemption from documentation or any other of the requirements for internal rating systems.

10. Corporate Governance and oversight:

10.1 This is the responsibility of the Board of Directors to approve an internal risk rating policy, which should be implemented by the management. This policy may be approved separately or made part of the Credit Risk Policy or Risk Management Policy. The Board should also exercise appropriate oversight over the system in a consistent manner. Rating policy including criteria and procedures must be periodically reviewed to determine whether it remains fully applicable to the current portfolio and to external conditions.

10.2 Risk ratings provide an insight into the credit quality of the portfolio of a bank and hence, the credit quality based on these ratings must be an essential part of regular reporting of bank's changing portfolio quality over time to the board of directors and management. Reporting may include portfolio breakdown by credit grade, major portfolio segments breakdown by credit grade, and analysis of realized default rates against expectations. Adequate trend and migration analysis should also be conducted to identify any deterioration in credit quality.

10.3 Banks must have independent credit risk control function that are responsible for the design or selection, implementation and performance of their internal rating systems. This function must be functionally independent from the personnel and management functions responsible for originating exposures. This function should be responsible for testing and monitoring internal grades, implementing procedures to verify that rating definitions are consistently applied across departments and geographic areas; reviewing and documenting any changes to the rating process, including the reasons for the changes; and reviewing the rating criteria to evaluate if they remain predictive of risk.

10.4 A credit risk control function must actively participate in the development, selection, implementation and validation of rating models. It must assume oversight and supervision responsibilities for any models used in the rating process, and ultimate responsibility for the ongoing review and alterations to rating models.

10.5 Rating assignments and periodic rating reviews must be completed or approved by a party that does not directly stand to benefit from the extension of credit. Independence of the rating assignment process can be achieved through a range of practices. These operational processes must be documented in the bank's procedures and incorporated into bank policies. Credit policies and underwriting procedures must reinforce and foster the independence of the rating process.

11. Reporting requirements:

11.1 All banks and DFIs are required to develop their internal risk rating policy duly approved by their Board of Directors and formulate their internal risk rating systems based on the two tier rating system as mentioned earlier. The policy should provide for objective criteria for grading of the exposures on the rating scales for both borrower and facility ratings. The criteria should be clear and well documented.

11.2 In order to effectively manage their credit portfolios, banks may have as many credit grades as they wish. However, for reporting purpose to the State Bank, banks are required to map their borrower ratings in nine performing categories i.e. 1 to 9 and three default categories i.e. 10 to 12. For facility ratings banks are required to map their ratings to six facility rating grades i.e. A to F showing expected zero loss to full exposure loss.

11.3 These regulatory grades are broadly defined in the Annexure A. The mapping should be based on the given definitions and the bank's internal definitions of credit ratings.

11.4 All banks DFIs are advised to submit the borrower's ratings in the field IBRATING and facility rating in the field (to be informed later) in their credit information reports submitted in eCIB.

Annexure A

Regulatory Definitions of Rating Grades:

The banks are required to establish criteria to map their internal obligor ratings according to the broad definitions provided below:

1

The rating grade ***1*** means that the credit exposure is of the highest quality and has minimum credit risk. This rating should be assigned only when the creditor's capacity and willingness to meet its financial obligations in time is extremely strong and is unlikely to be adversely affected by the economic or foreseeable events.

2

The rating grade ***2*** should be assigned to very good quality creditors that are lower than grade ***1*** in only small degree and denotes somewhat larger credit risk than grade ***1*** creditors. This distinction may be based on the facts which lead to show that the margins of protections may not be as large as in the highest quality grade or there are other elements present which make the long term risk appear somewhat larger. The obligor's capacity to meet its financial commitment on the obligation is very strong and is not significantly vulnerable to foreseeable events.

3

The rating scale ***3*** should be assigned to good quality creditors, whose capacity to meet their financial commitment to the obligation is still strong, however there are elements present, however minor, which may suggest a susceptibility to impairment some time in the future. This category is more susceptible to adverse effects of changes in circumstances and economic conditions than obligations in higher rated categories.

4

The rating grade of ***4*** should be assigned to medium quality obligor and bears average security and certainty of timely fulfillment of financial obligations. Although capability and willingness of the obligor are adequate however, certain protective elements may be lacking or may be characteristically unreliable over any greater length of time. Although adequate protection parameters are present yet, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment to the obligation.

5

The rating grade of ***5*** should be assigned to the lower medium quality obligor, whose future cannot be considered as well assured. Such customers bear high risk associated with their capability or willingness to fulfill their financial obligations in a timely manner and face major uncertainties or exposure to adverse business, financial or economic variations which could lead to their inadequate capacity to meet financial commitment.

6
The rating grade of ***6*** means poor quality creditors. Fulfillment of financial obligations over any longer period of time may be uncertain. Although the obligor currently has the capacity and willingness to meet its financial obligations, yet is more vulnerable to non payment than obligations rated **5.** Capacity for continued payment is contingent on a sustained, favorable business, financial and economic conditions. Even non-distinct variations in the business, financial or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitment on the obligation.

7
The obligors graded ***7*** are of poor standing and there may be elements of danger with respect to fulfillment of their financial obligations. They are currently vulnerable to nonpayment, and their capability to meet financial obligations is dependent upon favorable business, financial, and economic conditions. Very high risk factors are present and negative variations of business, financial and economic conditions of any scope mean real risk of default.

8
The rating grade of ***8*** means that the capacity of the obligor to meet its financial commitments is currently highly vulnerable and at any time may discontinue its payments. Its capability to meet its financial obligations depends on distinctively positive development of the sector and industry of the operation of the obligor.

9
The obligor bears the highest default risk exposure and is virtually in default but payments on the obligations are still continued. Even the positive development of the business, financial and economic conditions need not mean its capability to meet its financial obligations.

10 denotes substandard loans as defined by SBP from time to time
11 denotes doubtful loans as defined by SBP from time to time
12 denotes loss category as defined by SBP from time to time.

Facility Grades

Facility grades should be assigned according to the severity of the expected losses in case of default, keeping in view the factors listed above. For reporting purposes the definitions of the facility grades would be:

Facility grade ***A*** would represent the facilities where severity of loss would be minimal and close to zero in case of default. In other words the bank is expected to recover almost whole of the principal and interest and other outstanding charges.

Facility grade ***B*** would represent that the severity of loss in case of default is mild and bank would be able to recover most of its principal and interest in case obligor defaults.

Facility grade ***C*** would represent the facilities where the severity of loss is medium.

Facility grade ***D*** would be assigned to the facilities where the expected loss of principal and interest would be high.

Facility grade ***E*** means that the expected loss would be very high.

Facility grade ***F*** shows that the loss severity would be highest in case of default and bank may not recover all the principal or interest.

Broadly the facility grades listed above would represent the following expected recovery rates as a percentage of outstanding exposure.

Grade	Expected loss of exposure
A	0%
B	Upto 20%
C	20% to 40%
D	40% to 60%
E	60% to 80%
F	80% to 100%