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NABARD

The Chairman, Regional Rural Banks
The Managing Director, All State Cooperative Banks
The Managing Director/ Chief Executive Officer,
All District Central Cooperative Banks

Madam/Dear Sir,

Guidance Note on Credit Risk Management

Please refer to our letter No. NB.DoS.HO.POL./4586/J-1/2009-10 (Circular No. 18/DoS - 04/2010) dated 20 January 2010, in which we provided a comprehensive 'Guidance Note on Credit Risk Management (CRM).' This advisory aimed to guide banks in enhancing their risk management framework. The design of this framework should align with the unique needs of each bank, considering factors such as size, business complexity, risk philosophy, and market perception. It emphasizes a customised approach to ensure effective risk management aligned with individual institutional characteristics.

2. As the banking system's balance sheet continues to grow, so does the anticipation of increased risks. The heightened competition within the banking industry has resulted in the broadening of both the diversity and operational scope of credit functions. Consequently, this expansion introduces new sources and dimensions of credit risk, necessitating a comprehensive approach to risk management within financial institutions.

3. Historical evidence underscores the critical importance of effectively managing credit risk, as the failure to do so has previously led to insufficient capital maintenance and a decline in the capital adequacy ratio. Consequently, it becomes imperative for financial institutions to adopt robust credit risk management practices to safeguard their capital positions and overall financial health.

4. NABARD consistently adapts its supervisory methods to match the changing rural financial landscape. This involves frequent reviews, guideline updates, scheduled inspections, and rigorous monitoring of banks' compliance submissions. In line with the ongoing transition towards a risk-based supervisory approach, the Enhanced CAMELSC-based supervisory framework has been implemented for a specific set of Supervised Entities (SEs) from 01 April 2023 onwards. The integration of this framework into the supervision of the remaining SEs will be introduced in a phased manner over time. A critical aspect of the Enhanced CAMELSC framework is to provide a forward-looking risk intelligence perspective of the SEs and early intervention by the Supervisors.

5. The importance of implementing strong risk management practices has grown significantly due to increased supervisory expectations and heightened scrutiny from stakeholders, driven by the continuously evolving banking ecosystem. Accordingly, it has been felt that there is a need to revisit guidelines on credit risk management to enhance the risk management practices in SEs. SEs should have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks, and that they are adequately compensated for risks incurred. On these lines, guidance note on Credit Risk Management has been revised.

6. We shall be glad if you will place a copy of this circular before the next meeting of the Board of Directors of your bank so as to take a suitable decision on implementation of the guidelines in your bank. Banks are advised to put in place effective and robust Credit Risk Management by ***31 March 2024.***

7. Please acknowledge the receipt of this circular to our Regional Office in your State/ UT.

Yours faithfully

Sd/-
(Sudhir Kumar Roy)
Chief General Manager
Encl: Guidance Note

Main Document

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1.0	2009-10	New policy	Board of Supervision
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References

Sr. No.	Reference	Reference No.
1	Guidance Note on Credit Risk Management	Circular no. 18 / DOS-04/ 2010, Ref. no. NB.DoS.HO.POL./4586/J-1/2009-10 dated 20 January 2010

Guidance Note
on
Credit Risk Management

NABARD

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Guidance Note on Credit Risk Management

1. Introduction

Credit portfolios continue to constitute major portion of banks' balance sheets. Hence, exposure to credit risk continues to be the leading source of financial risk in banks. It has become imperative that banks should have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks, and are adequately compensated for risks incurred.

Credit risk is defined as the possibility of losses associated with decline in the credit quality of borrowers or counterparties. The credit risk may be an individual transaction risk or combination of multiple credit transactions known as portfolio risk. Transaction risk is further classified as default risk and migration of rating or downgrade rating risk. The portfolio risk comprises intrinsic and concentration risk. The credit risk of banks depends upon both external and internal factors. The internal factors are related to the bank's credit and loan policies, defective prudential and credit concentration limits, defective appraisals of borrowers' conditions, and lack of scientific risk pricing, problems in loan review process and poor/weak post sanction surveillance and monitoring. Credit risk arises from all business lines of banks such as lending, guarantees, letters of credit, treasury products, securities trading businesses, as well as cross-border exposure to varying degrees depending upon the macro-economic environment.

Credit risk management is a well-structured approach to manage uncertainties by risk assessment. Credit risk management defines identification, measurement, monitoring and control of the credit risk exposures. The effective management of credit risk is a crucial component of comprehensive risk management and important for the long-term performance of a banking organization.

2. Objectives

A sound credit risk management process aims to establish an appropriate credit risk environment for credit sanction process, maintaining an effective and appropriate credit administration, measurement and monitoring process and ensuring adequate controls over credit risk. Accordingly, the objective of the Credit Risk Management Policy is to assist banks to:

a) put in place sound principles of credit risk management
b) establish effective credit risk management process
c) optimize returns by taking informed credit decisions based on adequate assessment of the relevant factors involved in credit risk
d) comply with legal and regulatory requirements and best industry practices for the management of credit risk

3. Credit Risk Policy

Every bank should have a credit risk policy document approved by the Board. The credit risk policy should include risk identification, risk measurement, risk grading/ aggregation techniques, reporting and risk control/ mitigation techniques, documentation, legal issues, and management of problem loans.

Credit risk policies should also define target markets, risk acceptance criteria, credit approval authority, credit origination/ maintenance procedures and guidelines for portfolio management.

The credit risk policies approved by the Board should be communicated to branches/controlling offices. All dealing officials should clearly understand the bank's approach for credit sanction and must ensure that all the established policies and procedures are complied with.

Senior management of a bank shall be responsible for implementing the credit risk policy approved by the Board. The policy document shall be approved by the Board and reviewed regularly (annual basis). The credit risk policy should at the minimum include following:

i. Scope
ii. Objective
iii. Applicability
iv. Credit risk management governance structure
v. Credit risk appetite and triggers
vi. Credit risk management framework
    a) Credit risk identification and assessment
    b) Credit risk measurement and analysis
    c) Credit risk mitigation and management
    d) Credit risk control and monitoring
    e) Credit risk reporting framework
vii. Interactions with internal audit
viii. Stress testing

4. Credit Risk Management Governance Structure

Sound organizational structure is prerequisite for successful implementation of an effective credit risk management system. The governance structure should identify roles and responsibility for approval of credit risk appetite, triggers and various risk processes. The governance structure should clearly define a reporting framework. Delegation of authority of the governance structure should be clearly defined in the credit risk management policy. **A detailed governance structure is laid down in Annexure I.**

Apart from governance structure mentioned above, there should be clear delineation of roles and responsibilities so as to separate credit function, credit risk management and internal audit. It is crucial for an effective credit risk management system to have three lines of defense relating to credit risk in banks. The roles of three functions are indicated as below:

Three lines of defense	Credit function (Business function)
Business department (Front office)	The business department, being the credit department, shall engage in business operations in accordance with Credit Risk Management policy and procedures. The business department engages in activities such as client selection, credit analysis, loan approval and documentation, loan disbursement, etc.
Risk Management function (Middle office)	The risk management function involves management of credit risk and includes risk identification & assessment, risk measurement, mitigation, and monitoring. Banks shall ensure that there is a clear separation of business department and risk management function.
Internal audit (Back Office)	The internal audit function shall, being an independent unit, provide an assessment on the design and operational effectiveness of the overall credit risk management framework of the bank.

*An indicative list of roles of three lines of defense is given in **Annexure II**.*

5. Credit Risk Appetite and Triggers

Risk Appetite Statement is a formal articulation of the bank's willingness to accept risk. Risk Appetite specifies the scope and focus of the Credit Risk the bank is able and willing to assume in its exposures and business activities. The Board shall take an active role in defining the risk appetite, ensuring its alignment with the bank's strategic capital, financial plans and compensation practices.

5.1 While deciding credit risk appetite, banks should:

i. include both quantitative and qualitative considerations
ii. establish types of risk, both at an individual and aggregate level, that the bank is willing to assume in advance to achieve its business activities within its risk capacity
iii. define the boundaries and business considerations in accordance with which the bank is expected to operate when pursuing its business strategy and operations

5.2 Contents of the Risk Appetite Statement shall be, but are not limited to, the following considerations:

i. Industry-wise sectoral concentration
ii. Product-wise funded loan concentration (composition of term loan, mid-term loan, demand loan, continuous loan, etc.)
iii. Product-wise non-funded loan concentration (composition of bank guarantee, acceptance, etc.)
iv. Area wise/geographical and maturity wise credit concentration
v. Business segment-wise concentrations (corporate, MSMEs, retail, micro credit, card, etc.)
vi. Client concentration based on external/internal credit rating
vii. Classification boundaries in terms of portfolio percentage, beyond which further growth may be halted

Board's risk appetite shall be communicated effectively throughout the bank, linking it to daily operational decision-making, establishing means to raise risk issues and strategic concerns across the bank. Indicative format of Risk Appetite Statement is given in **Annexure III**.

6. Credit Risk Management Framework

In the present business environment, credit risk management assumes an important place. The five components to a credit risk management framework are:

1. Credit risk identification and assessment
2. Credit risk measurement and analysis
3. Credit risk mitigation and management
4. Credit risk control and monitoring
5. Credit risk reporting framework

6.1 Credit Risk Identification and Assessment

6.1.1 Credit Risk Identification:

Identifying credit risk is the first step in credit risk management. The identification of credit risk focuses on detecting potential risks in financial transactions such as loans and leases. Banks should adopt various process and tools such as checklists, early warning signals, to identify credit risk prevalent in the bank.

The bank should undertake following techniques for identification of credit risk:

a) **Efficient Management Information System (MIS)**: Banks should have an MIS in place to ensure that exposures approaching risk limits are brought to the attention of senior management. The bank's information system should be able to aggregate credit exposures to individual borrowers and counterparties and report on exceptions to credit risk limits in a meaningful and timely basis.

b) **Continuous review**: The bank should monitor the borrower's profile to understand his/her financial stability, regularity in repayments, defaulting nature. Banks may design detailed checklists including source of income, financial position of the borrower, CIBIL score, willingness of borrower to default, etc.

   Banks should establish a mechanism of independent, ongoing review of credit risk management framework to assess the credit administration process, the accuracy of credit rating including adequacy of provisions for losses, and overall quality of credit portfolio. All facilities should be subjected to risk review at least quarterly. More frequent review should be conducted for new accounts where bank may not be familiar with the obligor, and for classified or adverse rated accounts that have higher probability of default.

c) **Root Cause Analysis**: Another effective risk identification technique is finding the root cause indicating why an event occurred. This provides information about what triggered a loss and where the bank was vulnerable. The business departments shall undertake such exercise through an operational audit exercise. The findings of such analysis may be internalised in case of new loans.

d) **SWOT analysis**: Assessing the strengths, weaknesses, opportunities and threats involved with the loan/investment shall be undertaken at the time of approval of loans/investments.

e) **Early Warning Signals**: The banks shall put in place a system of early warning signals to identify risks.

f) **Stress testing**: Stress tests are a risk identification technique which help identify downgrade risk, concentration risk, depletion in collateral, etc. The banks should undertake stress tests on credit risk to assess the impact of increasing NPA, concentration risk, etc., on capital adequacy and profitability.

6.1.2 Credit Risk Assessment and Approval:

Credit appraisal or credit assessment is undertaken by banks at the time of lending in order to address certain signals and undertake precautions when a new sanction is imposed, or an existing client's facilities are renewed. The credit assessment process includes determining eligibility for credit, quantum of credit/investment, credit delivery as well as terms and conditions of credit.

The details of credit assessment shall be covered in the respective loan policy taking into consideration the broad factors indicated in this policy. Credit assessment process should, at a minimum, cover the factors specified in **Annexure IV**.

6.2 Credit Risk Measurement

The bank should employ measurement techniques that are appropriate to the complexity and level of the risks involved in their activities, based on robust data and periodic verification of results. The measurement of credit risk considers the specific nature of the credit, its contractual and financial conditions (maturity, interest rate, etc.), existence of collateral or guarantees and the potential for default based on the internal risk rating. It is important to ensure that risk measurement is performed on a consistent and bank-wide basis, based on inherent credit risk and residual impact. The banks may employ following techniques for measurement of credit risk:

6.2.1 Credit Rating Framework:

Prior to sanctioning a credit facility to any client/obligator, the risk level should be measured as per internal risk assessment model. The internal credit rating framework assigns a number/alphabet/symbol as a primary summary indicator of risks associated with a credit exposure. The internal credit rating framework may be mapped with credit rating from external credit rating agencies.

Risk rating models are required to be technically reviewed on a regular basis to ensure accuracy and validity of the models. An indicative credit rating framework is given in **Annexure V**.

6.2.2 Risk based Pricing:

Banks should assess the risk/return relationship in any credit as well as the overall profitability of the account relationship. Credits should be priced in such a way as to cover all the embedded costs and compensate the bank for the risks incurred. In evaluating whether, and on what terms, to grant credit, banks need to assess the risks against expected return, factoring in, to the greatest extent possible, price and non-price (e.g., collateral, restrictive covenants, etc.) terms. In evaluating risk, banks should also assess likely downside scenarios and their possible impact on borrowers or counterparties. A common problem among banks is the tendency of not pricing a credit or overall relationship properly and thus not receiving adequate compensation for the risks incurred.

In present scenario, banks may assign a risk premium that it may charge against each risk grade. A cost-plus pricing approach may be adopted on the basis of risk rating of the borrower and product / facility type.

6.2.3 Risk-Adjusted Returns / Capital:

a. **Return On Risk-Adjusted Capital**: RORAC considers the risk of unexpected loss by allocating capital and is used to evaluate projects involving a high-risk element relative to the capital required.

b. **Risk-Adjusted Return on Capital**: RAROC is a risk-based profitability framework for analyzing risk-adjusted financial performance and providing a consistent view of profitability across businesses. RAROC adjusts both return and allocated capital for the risks associated and is a ratio of profitability used to compare alternative investments based on risks involved at the business unit level.

6.3 Credit Risk Mitigation and Management

Credit Risk Mitigation implies a reduction of credit risk in an exposure by utilising tangible and realizable securities like third party guarantee/insurance, etc.

Methods of risk mitigation:

1. Portfolio risk management
2. Collateral management
3. Financial guarantees

6.3.1 Portfolio Risk Management:

Loan portfolios should be monitored on a regular basis to check if there is a breach in exposure limits resulting in increase in risk weights and increase in capital requirement. Portfolio risk management emanates primarily from a clearly spelled out risk appetite of the organization to meet its strategic objectives. Portfolio risk management is predominantly driven through 'concentration risk management'. Concentration risk refers to overall spread of bank's outstanding loan accounts in industry/sectors, products, region/geography and individual/group of borrowers to whom the bank has exposure to.

Banks shall focus on following areas with respect to credit concentration risk:

- Sector wise exposure,
- Division wise exposure (geographic concentration),
- Group wise exposure (outstanding amount more than),
- Single borrower wise exposure (outstanding amount more than),
- Top borrower wise exposure (top 10-50 borrowers will be counted)

Banks must establish internal limits to concentration across all the possible dimensions of concentration risk and must endeavour to reduce the volume of loans in that category, raise capital, or take a combination of both actions. The bank should appropriately and periodically assess the credit portfolio to ensure that bank is not involved in a situation of high concentration risk.

6.3.2 Collateral Management:

At its core, collateral management is a credit enhancement technique that protects assets against a credit event associated with banks' exposures. Collateral cannot be a substitute for a comprehensive assessment of the borrower or counterparty, nor can it compensate for insufficient information. It should be recognised that any credit enforcement actions (e.g. foreclosure proceedings) can eliminate the profit margin on the transaction. In addition, it must be noted that the value of collateral may well be impaired by the same factors that have led to the diminished recoverability of the credit. The banks shall obtain requisite credit risk insurance and financial guarantees to mitigate loss against exposures. Accordingly, banks shall comprise a comprehensive collateral management system having following aspects:

1. Board approved collateral management policy outlining principles for the acceptability of various forms of collateral, legal documentation, custody, insurance, procedures, and suitable methodologies for ongoing valuation of collateral.
2. There is a process to ensure that collateral is, and continues to be, enforceable and realizable.
3. Periodicity for fair valuation is defined for different categories of collaterals.
4. There are well defined courses of action and responsible authorities in case of deterioration in value of collateral.
5. The plan for recoveries/collections is properly documented with clear guidelines to choose a particular type of credit risk mitigants depending on the nature, attributes, and legal implications of the types of credit risk mitigants.
6. The senior managers consider all factors such as standing and market reputation of the borrower, competition among the banks for procuring a good borrower, demand for credit in the economy for obtaining a particular type and level of credit risk mitigants.

6.4 Credit Risk Control & Monitoring

6.4.1 Credit Risk Monitoring framework:

The banks shall put in place a credit risk monitoring framework for monitoring of credit risk in the bank. The monitoring framework shall endeavour to:

i. Evaluate the payment behaviour of borrowers, including any deviations from the requirements of credit agreements, including late, missed, or partial payments.
ii. Monitor adherence to exposure limits set by the banks.
iii. Identify any breaches of exposure limits and decide corrective action.
iv. Monitor concentration risk at sector, geography, product, or group levels.

v. Assess impairments, reversals of impairments, write-offs, and other decisions regarding value adjustments for a credit exposure.
vi. Put in place adequate control measures to bring risk exposure to acceptable level.

The details entailing the frequency, stages of monitoring, corrective actions and reporting shall be covered in the credit risk control and monitoring framework.

6.4.2 Credit Rating Migration:

Internal risk rating system is an important tool for monitoring the quality of individual loan/investment, as well as the total portfolio. The ratings assigned to individual borrowers or counterparties at the time of sanction/investment must be reviewed by the business departments on a periodic basis and a new rating should be assigned when conditions either improve or deteriorate.

6.4.3 NPA Monitoring:

NPA monitoring is an important technique of credit risk monitoring. It aims to identify and classify a potential problem credit at an early stage in-order to take corrective actions. Assets under substandard category may be brought back to standard category upon restructuring/re-scheduling on regular NPA monitoring, subject to potential viability of the projects. NPA monitoring framework shall at a minimum include:

- A Board approved NPA management policy which provides a framework for identification of early signs of weakness (i.e. when the account starts showing first signs of weakness).
- The senior management in the bank ensures that the lapse in the credit approval process, identified in case of quick mortality cases, are rectified on a priority basis to prevent future events of quick mortality cases.
- A framework for identification of reasons and responsible authorities in quick mortality cases.
- A system to identify and classify potential problems of credit on a timely basis for effective monitoring.
- Conduct of operational audit of such potential problem credits to assess the reasons for impairment of the asset and take appropriate action to enable upgradation of the account in due course.
- Set of legal and other actions that may be taken for recovery of other categories of NPAs (doubtful and loss assets).

6.4.4 Credit Risk in Off-balance sheet Exposures:

For reducing credit risk on account of off-balance sheet exposures, banks may adopt a variety of measures, some of which are indicated below:

- Banks must ensure that the security, which is available to the funded lines, also covers the Letter of Credit (LC) lines and the guarantee facilities. On some occasions, it will be appropriate to take a charge over the fixed assets as well, especially in the case of long-term guarantees.
- In the case of guarantees covering contracts, banks must ensure that the clients have the requisite technical skills and experience to execute the contracts. The value of the contracts must be determined on a case-by-case basis, and separate limits should be set up for each contract. The progress vis-à-vis physical and financial indicators should be monitored regularly, and any slippages should be highlighted in the credit review.
- The strategy to sanction non-fund facilities with a view to increase earnings should be properly balanced vis-à-vis the risk involved and extended only after a thorough assessment of credit risk is undertaken.

6.4.5 Loan Review Mechanism / Credit Audit:

Loan review mechanism is an independent assessment, which evaluates the effectiveness of the loan administration, integrity of the credit rating process and assesses the loan loss provisions, portfolio quality, etc. It examines compliance with extant sanction and post sanction processes / procedures laid down by the bank from time to time.

a) Loan Review Mechanism (LRM) aims to:

i. Promptly identify loans which develop credit weaknesses and initiate timely corrective action.
ii. Evaluate portfolio quality and isolate potential problem areas.
iii. Provide information for determining adequacy of loan loss provision.
iv. Monitor adherence to loan policies and procedures as well as compliance with relevant laws and regulations.
v. Provide top management with information on credit administration, including credit sanction process, risk evaluation and post sanction monitoring/follow-up.
vi. Provide an independent review of credit risk assessment.
vii. Initiate steps to preserve desired portfolio quality.
viii. Undertake portfolio reviews, evaluate portfolio quality and isolate potential problems.

b) Structure of Loan Review Mechanism / Credit Audit

The credit audit / loan review mechanism may be assigned to a specific Department or the Inspection and Audit Department.

c) Scope and Coverage of Loan Review Mechanism

The focus of credit audit needs to be broadened from the account level to look at the overall portfolio and the credit process being followed. The important areas are:

Portfolio Review: Examine the quality of credit portfolio and suggest measures for improvement, including reduction of concentrations in certain sectors to levels indicated in the Loan Policy and Prudential Limits suggested by NABARD/RBI.

Loan Review: Review of the sanction process and status of post sanction processes/ procedures (not just restricted to large accounts)

- all fresh proposals and proposals for renewal of limits (within 3 – 6 months from date of sanction)
- all existing accounts with sanction limits equal to or above a cut-off depending upon the size of activity.
- randomly selected (say 5-10%) proposals from the rest of the portfolio.
- accounts of sister concerns/group/associate concerns of above accounts, even if limit is less than the cut-off.

d) Frequency of Review

The frequency of review should vary depending on the magnitude of risk (say, for the high risk accounts - 3 months, for the average risk accounts - 6 months, for the low risk accounts - 1 year). The review framework should have the following points:

- Feedback on general regulatory compliance.
- Examine adequacy of policies, procedures and practices.
- Review the credit risk assessment methodology.
- Examine reporting system and exceptions thereof.
- Recommend corrective action for credit administration and credit skills of staff.
- Forecast likely happenings in the near future.

e) Procedure to be followed for Loan Review Mechanism / Credit Audit

i. Credit audit is conducted on site, i.e., at the branch which has appraised the advance and where the main operative credit limits are made available.
ii. Report on conduct of accounts of allocated limits are to be called from the corresponding branches.
iii. Credit auditors are not required to visit borrowers' factory/ office premises.

Steps to be performed during loan review:

i. Determine what is to be reviewed and when, given time and resource limitations.
ii. Loans reviewed should be representative of the portfolio as a whole.

iii. Establish a minimum loan amount for review.
iv. Employ random sampling on a statistical basis.
v. (Suspected) Industry concentrations must be detected and examined.
vi. Borrowers with certain financial characteristics should be scrutinized, e.g., erratic earnings, interest-sensitive leverage which exceeds industry standards.
vii. Examine credits of a particular branch or officer where weakness or incompetence is suspected.
viii. Frequency of loan review is based on risk rating – the higher the risk, the more frequent the review.
ix. Monitor situations where corrective action has been recommended.
x. Be present at loan department meetings to review loan activity for conformity with original repayment programs, pricing, funds management goals, appropriate monitoring.

f) Contents of Loan Review: Five specific issues should be addressed when examining individual credits:

i. Credit Quality -

a. Credit risk re-assessment - In examining a credit, loan review must either confirm the risk rating assigned by the lender or change it and substantiate the change.

b. Verification of operation of accounts and follow-up measures to ascertain the probability of repayment in accordance with terms.

ii. Documentation - Loan review should point out errors with the aim of improving protection for the bank, strengthening the position of the bank in the event of a problem. Additional protection may well be recommended in the case of deteriorating credits. Loan review should be concerned both with identifying existing problems and eliminating future problems. The adequacy of documentation must be determined by considering the list of mandatory documents to be obtained as per the loan policy.

iii. **Liquidation Value of Collateral -** The loan review mechanism shall review the adequacy of collateral by determining its liquidation value and not book value. Loan review personnel must be experienced in working with collateral, in identifying liquidation values, in knowing what is involved in liquidations. It is the responsibility of loan review to provide an objective third-party opinion so that realistic loan-to-collateral relationships are maintained by lenders.

iv. **Pricing and Funds Management Objectives** - The review should include evaluation of profitability of individual credit along with profitability of the portfolio as a whole. The loan review should ascertain the pricing of the credit, considering the risk involved in the individual credit. It should also ensure if the pricing is in line with the fund management objectives of that particular loan portfolio.

v. **Compliance with loan policy, laws and regulations** – The loan review mechanism process should include verification of compliance of bank's laid down policies and regulatory compliance with regard to sanction. Further, it should include general regulatory compliance on examining adequacy of policies, procedures, and practices.

The loan review of exposures taken by the banks may be done on a sample basis which are chosen on basis of statistical approach along with judgment of bank's professionals. The loan review mechanism / policy should mention the frequency, intervals, procedures, of review process. Detailed checklist to be developed as a part of loan review procedures for type of exposure, borrower-wise as well as facility wise.

6.5 Credit Risk Reporting framework

A key component of effective management of risks requires the presentation of the right information to the right people at the right time. Hence, credit risk reporting, based on accurate, clear, and complete data is a critical element of the credit risk management process. The bank must have a reporting framework which facilitates management action and modification of existing limits. To achieve these objectives, the following principles should be complied with:

1. Risk management reports should be accurate and precise to ensure the bank's Board and senior management can rely with confidence on the aggregated information to make critical decisions about risk. The reports should be presented to the appropriate decision makers in a timeframe that enables an effective response.
2. Credit risk reports should include all material components of the area, including risk components, concentration, industry, etc. and should be in line with the complexity of the bank's operation and the recipients' requirements.
3. Risk management reports should be distributed to the relevant parties while ensuring confidentiality is maintained.

Overall, various stakeholders in the credit risk management process would be required to provide information to the Board, senior management and external parties to assist them to understand credit risk at the bank.

7. Interactions with Internal Audit

The Inspection & Audit Department shall, being an independent unit, provide an assessment on the design and operational effectiveness of the overall credit risk management framework at the bank. The periodic review shall include, but is not limited to:

1. Effectiveness of implementation of credit risk management framework including the overall adequacy of the laid down policies, procedures, system, tools, etc.
2. Bank's compliance with RBI / NABARD guidelines and established credit risk policies and procedures
3. Credit risk policies and procedures are reviewed, approved, and clearly communicated by the appropriate authorities on a periodic basis.
4. Risk assessment systems are effectively implemented as per the prescribed policies and procedures, and all obligors and facilities are rated.
5. Credit proposals are appraised and approved by the appropriate level of authority prior to disbursement.
6. Internal rating grades are appropriately defined, and they are consistently applied across business units.
7. Appropriate level and frequency of credit risk measurement and stress testing is maintained.
8. There are adequate IT systems in place and the same are implemented for usage as prescribed.
9. Exposures are maintained within the limits prescribed through regulatory guidelines and bank's policies.
10. Reports, both regulatory and internal, are prepared and reviewed as prescribed in the regulatory guidelines and bank's internal policies.

8. Stress testing

Stress testing is a risk management technique which analyses what could potentially go wrong with individual credits and the overall credit portfolio if conditions/environment, in which borrowers operate, change significantly. The stress test for credit risk aims to assess the impact of credit risk factors on bank's financial performance and capital adequacy.

Banks should conduct sensitivity stress tests as per RBI/NABARD guidelines to quantify impact of stress scenarios on its performance and assists senior management in making business strategy, risk management and capital management decisions.

Each stress test should be followed by a contingency plan as regards recommended corrective actions. Senior management must regularly review the results of stress tests and contingency plans. The results must serve as an important input into a review of credit risk management framework and setting limits and provisioning levels.

9. Annexure I - Governance Structure

(i) Board of Directors:

Board of Directors has a critical role to play in overseeing the credit-granting and credit risk management functions of the bank. It is *responsible for overall management of risk* including credit risk. The bank's Board shall approve its credit risk strategy, risk appetite and significant policies relating to credit risk.

(ii) Risk Management Committee (RMC):

Risk Management Committee (RMC) will be a Board level sub-committee including CEO and heads of Credit, Market and Operational Risk Management Committees. Since the volume, size and nature of operations of Regional Rural Banks and Rural Cooperative Banks are small as compared to the Commercial Banks, they may consider having a small Credit and Operational Risk Management Cell immediately, to begin with. Based on the quantum of investment portfolio, the Boards of the respective banks can decide to have a separate Market Risk Committee at a later stage.

RMC will *devise the policy and strategy for integrated risk management* containing various risk exposures of the bank including the credit risk. For this purpose, RMC should effectively coordinate between Credit Risk Management Committee (CRMC), Asset Liability Management Committee (ALCO) and other risk committees of the bank, if any. It is imperative that the independence of RMC is preserved. Board should, therefore, ensure that this is not compromised at any cost. In the event of the Board not accepting any recommendation of this committee, systems should be put in place to spell out the rationale for such an action and should be properly documented. This document should be made available to the internal and external auditors for their scrutiny and comments. The credit risk strategy and policies adopted by RMC should be effectively communicated throughout the organization.

(iii) Credit Risk Management Committee (CRMC):

Each bank should, depending on the size of the organization or loan/investment book, constitute a high-level Credit Risk Management Committee (CRMC). The committee members should be other than business line managers i.e., other than those having credit appraisal and sanctioning responsibilities. It should be headed by the Chairman/ Managing Director/GM and should comprise of heads of Credit Department, Treasury and Credit Risk Management Cell/Department (CRMc/CRMD).

Role of CRMC:

a) Oversee credit risk management and obtain assurance that the principal credit risks facing the bank have been properly identified and are being appropriately managed.
b) Review and recommend the credit risk management related policies and ensure that the process is in conformity with the guidelines issued by the regulator.
c) Review the overall risk appetite and credit risk management strategy.
d) Periodical review of exposure limits, including methodology for determination of limits and ensure their inclusion in the risk policies/processes.
e) Review bank's credit rating process.
f) Review of portfolio composition and concentration, quality, rating migration, transition matrix, slippages, delinquencies and Non-Performing Assets (NPAs).
g) Review of credit risk profile and any major development, internal and external, and their impact on portfolio and on the bank.
h) Review of non-compliance, limit breaches, audit/regulatory findings, and policy exceptions.

(iv) Roles of Senior Management:

The responsibility of senior management is to transform strategic directions set by the Board in the shape of policies and procedures. Senior management has to ensure that the policies are embedded in the culture of the bank. Senior management is responsible for implementing the bank's credit risk management strategies and policies, and ensuring that procedures are put in place to manage and control credit risk and the quality of credit portfolio in accordance with these policies.

The responsibilities of senior management with regard to credit risk management shall include:

a) Developing credit policies and credit administration procedures for Board approval.
b) Implementing credit risk management policies to ensure an effective credit risk management process.
c) Ensuring the development and implementation of appropriate reporting system.
d) Monitoring and controlling the nature and composition of the bank's credit portfolio.
e) Monitoring the quality of credit portfolio.
f) Establishing internal controls and setting clear lines of accountability and authority.

10. Annexure II - Roles of Three Lines of Defence

(i) Business Departments

Business Departments are required to comply with credit risk management policies and processes in the management of credit risks. Business departments shall be responsible to:

a) Ensure that their policies and guidelines are in consonance with Credit Risk Management Policy, as well as New Product Approval Framework laid down in Operational Risk Management Policy.
b) Segregate sanction and administration function
c) Identification and assessment of risks as mentioned in the policy.
d) Operationalizing the rating models and record rating migrations
e) Identifying any potential weaknesses and limitations of credit risk models that may restrict their applicability or appropriateness.
f) Adhere to the exposure norms as stipulated in the Board approved policy.
g) Recording and approving any deviations within the defined parameters and communicate them to the CRMD.
h) Capturing data for business and credit risk management purposes and ensuring that the data collected is of appropriate quality, accurate and complete.
i) Reporting to Credit Information Companies (CICs).
j) Report SMA and NPA data to CRMD as per the instructions issued from time to time.
k) Identify early warning signals in loan account and carry out default forecasting.

(ii) Credit Risk Management Cell/Department

It would have the following roles and responsibilities:

a) Formulate and review the bank's various credit risk management policies/frameworks, methodologies.
b) Measure and monitor credit risk within the approved risk parameters and prudential limits at bank level.
c) Ensure that the policies and standards related to credit risk management are communicated.
d) Develop models and carry out appropriate validations and approval process.
e) Performing credit risk stress testing.
f) Develop framework for effective credit risk mitigation by collateral management in the bank.

(iii) Internal Audit Function

Internal Audit shall, being an independent unit, provide an assessment on the design and operational effectiveness of the overall credit risk management framework at the bank. The periodic review inter alia, shall include the following:

a) Effectiveness of implementation of credit risk management framework including the overall adequacy of the laid down policies, procedures, system, tools, models including validation, stress testing, data integrity, etc.
b) Bank's compliance with the regulatory guidelines and credit risk policies and procedures.
c) Credit risk policies and guidelines are approved/reviewed periodically.
d) Risk assessment systems are implemented as per the prescribed policies and procedures and all obligors and facilities are rated.
e) Credit proposals are appraised and approved by competent authority prior to disbursement.
f) Internal rating grades are defined and they are applied across business units.
g) Exposures are maintained within the limits prescribed through regulatory guidelines and bank's policies.
h) Reports, both regulatory and internal, are prepared and reviewed as prescribed in the regulatory guidelines and bank's internal policies.
i) Conduct credit audit.
j) Implement effective loan review mechanism and report to the Audit Committee of the Board/ Board of Directors.

11. Annexure III - Sample Risk Appetite Statement

Suppose the banks follow internal credit rating grade in a scale of 1 (being credit low risk) to 4 (being high risk).

Exposure limits based on internal credit rating:

	Exposure limits (for each credit rating grade)
Borrower-wise (Single/Individual borrower and Group Borrower)	1. as % of Capital Funds 2. as % of Loan book (net of NPAs) 3. No. of times the Net-worth of Borrower 4. In terms of value
Product-wise	1. as % of Capital Funds 2. as % of Loan book (net of NPAs) 3. No. of times the Net-worth of Borrower. 4. In terms of value

The banks should also define risk appetite on the basis credit risk thresholds:

Sr. No.	Attribute	Appetite
1	Concentration risk – Sector	Maximum % of exposure to a particular sector w.r.t. total loan portfolio
2	Concentration risk – NPA	Maximum aggregate levels of net NPA
3	Concentration risk – NPA	Maximum % of NPA borrower-wise (Individual/Group) to be maintained
4	Concentration risk – NPA	Maximum % of NPA of each sector to be maintained
5	Minimum eligible rating for exposure	Minimum rating eligible for exposure to be taken
6	Credit rating	Minimum credit rating to be maintained
7	Recovery risk	Minimum amount of collateral to be obtained from a borrower
8	Recovery risk	Minimum % of secured loans to total loans to be maintained

12. Annexure IV - Credit Appraisal and Assessment

Bank may design detailed procedures for appraisal of all loan products. The analysis of various loan products should at a minimum cover following aspects:

(i) Credit appraisal process:

Category	Areas to be assessed
Borrower profile	1. Borrower profile covering borrower's background, purpose of the credit and source of income
	2. Net-worth of the borrower
	3. Legal capacity to assume the liability, such as borrowing power, board resolution, etc.
	4. Equity / own investment by the borrower
	5. History of payment of bills and/or repayment of previous loans
	6. References from known parties, accessing credit registries, market sources
	7. Assessment of Management related risks
	8. Integrity and reputation of the borrower
Financial assessment	1. Sufficient information related to financial health of the borrower considering:
	a. Balance sheet analysis
	b. Ratio analysis considering solvency ratios, profitability ratios, coverage ratios, leverage ratio, productivity ratios, turnover ratios.
	c. Trend analysis of last 3-5 years considering year-on-year growth rates.
	2. Assess risk and reward relationship and overall profitability.
	3. Borrower's repayment history and current capacity to repay based on future cash flow projections
	4. Borrower's business expertise in the relevant sector, its positioning, and the sectoral outlook
	5. Current risk profile including the nature and aggregate amount of risk of the borrower
	6. External ratings, wherever applicable
Collateral assessment	1. Adequacy and enforceability of collateral or guarantees including under various scenarios
	2. Acceptability of various forms of collateral as per the collateral management policy of the bank and procedures for the ongoing valuation for such collateral and the process to ensure that collateral is and continues to be enforceable and realizable
	3. In respect of guarantees to secure the credit, bank shall evaluate the level of coverage being provided in relation to the credit quality and legal capacity of the guarantor

Conditions	The proposed terms and conditions of the facility including covenants designed to limit risks on account of changes in risk profile of the borrower

Note:

a. Appropriate mechanism to classify a group of obligors as connected counterparties and, thus, as a single obligor. This would include aggregating exposures to groups of accounts exhibiting financial interdependence, including corporate or non-corporate, where they are under common ownership/control or with strong connecting links (for example common management, familial ties)

b. Any other factor relevant to the product, client, loan, investment, etc.

(ii) Assessment of credit risk on basis of type of financing: Financial assessment of the proposal will depend on type of loan sought. The nature of analysis to be conducted will vary depending on the facility type viz. short term loan or long term loan. Banks shall develop separate processes for each type of facility covering aspects as specified below:

a) Credit risk assessment for short-term/retail loans: Credit assessment of small amount loans vary from wholesale loans in terms of loan size, complexity of transaction, costs involved. Therefore, banks shall put in place different credit assessment process for retail financing. Retail financing is score-card driven wherein if a borrower fits into a pre-defined credit matrix and gets a score which is above the threshold, the loan is sanctioned / approved. These scorecards may be embedded in the loan management systems of the banks.

The scorecard-based portfolio of loan products shall be decided by CRMC and approved by the Board. It should be closely monitored at regular frequency and parameters also to be modified based on portfolio performance.

Alternatively, banks may choose to use only external ratings for this type of loans.

b) Wholesale financing: Credit assessment for wholesale financing involves a case-to-case basis of transaction with greater emphasis on the five C's (character, capacity, collateral, capital, conditions). As a part of due diligence, a detailed appraisal note or Information Memorandum capturing all information of the borrower, proposed facility, etc., shall be enumerated.

Assessment of credit risk in non-fund business: Credit risk in non-fund based business of banks need to be assessed in a manner similar to the assessment of fund based business since it has the potential to become a funded liability in case the borrower is not able to meet his commitments. Financial guarantees are generally long term in nature, and assessment of these requirements should be similar to the evaluation of requests for term loans. As contracts are generally for a term of 2-3 years, banks must obtain cash flows over this time horizon, arising from the specific contract they intend to support, and determine the viability of financing the contract.

13. Annexure V - Basic Architecture of Credit Rating Framework

The following elements outline the basic architecture of Credit Rating Framework (CRF) employed by banks:

1. Grading system – The grades (symbols, numbers, alphabets, descriptive terms) used in the internal credit risk grading system should represent, without any ambiguity, the default risks associated with an exposure. The grading system should enable comparisons of risks for purposes of analysis and top management decision-making. It should also reflect regulatory requirements of the supervisor on asset classification (e.g., asset classification prescribed by RBI). It is anticipated that, over a period, the process of risk identification and risk assessment will be further refined. The grading system should, therefore, be flexible and should accommodate the refinements in risk categorisation.

Bank should have a well-defined checklist for various tasks in credit sanctioning process (such as due diligence of borrower, creditworthiness, specifics about the financials of borrower, legal enforceability of collaterals).

a. Nature of grading system: The grading system adopted in a CRF could be an alphabetic or numeric or an alpha-numeric scale. Since rating agencies follow a particular scale (AAA, AA+, BBB, etc.), it would be prudent to adopt a different rating scale to avoid confusion in internal communications. Besides, adoption of a different rating scale would permit comparable benchmarking between the two mechanisms. Several banks utilise a numeric rating scale. The number of grades for the "acceptable" and the "unacceptable" credit risk categories would depend on the finesse of risk gradation. Normally, numeric scales developed for CRFs are such that the lower the credit risk, the lower is the calibration on the scale.

b. Number of grades used: The number of grades used in the CRF depends on the anticipated spread in credit quality of the exposures taken by the bank. This, in turn, is dependent on the present and the future business profile of the bank and the anticipated level of specialisation/diversification in the credit portfolio. CRFs with many levels/ grades on the rating scale are, as evident, more expensive to operate as the costs of additional information for (very) fine gradation of credit quality increase sharply. A bank can initiate the risk grading activity on a relative smaller/narrower scale and introduce new categories as the risk gradation improves.

The scale, starting from "1" (which would represent lowest level credit risk and highest level of safety/ comfort) and ending at "9" (which would represent the highest level of credit risk and lowest level of safety/comfort), could be deployed to calibrate, benchmark, compare and monitor credit risk associated with the bank's exposures and give indicative guidelines for credit risk management activities. Each bank may consider adopting suitable alphabetic prefix to their rating scales, which would make their individual ratings scale distinct and unique.

An indicative illustration is given below:

<table>
<tr><th colspan="2">Rating score</th><th>Rating scale</th><th>Risk category</th><th>Rating grade</th><th>Risk premium</th></tr>
<tr><td>90</td><td>100</td><td>1</td><td>Very low</td><td rowspan="5">Acceptable grade</td><td rowspan="9">Should be decided by the banks</td></tr>
<tr><td>80</td><td>90</td><td>2</td><td>Low</td></tr>
<tr><td>70</td><td>80</td><td>3</td><td>Moderately low</td></tr>
<tr><td>60</td><td>70</td><td>4</td><td>Moderate</td></tr>
<tr><td>50</td><td>60</td><td>5</td><td>Fair</td></tr>
<tr><td>40</td><td>50</td><td>6</td><td>Medium</td><td rowspan="4">Unacceptable grade</td></tr>
<tr><td>30</td><td>40</td><td>7</td><td>Moderately high</td></tr>
<tr><td>20</td><td>30</td><td>8</td><td>Very high</td></tr>
<tr><td>0</td><td>20</td><td>9</td><td>Extremely high</td></tr>
</table>

The rating grade is to be assessed at the time of approving a loan proposal. A rating scale could consist of 9 levels, of which levels 1 to 5 represent various grades of acceptable credit risk and levels 6 to 9 represent various grades of unacceptable credit risk associated with an exposure.

The risk category should be used to decide the applicable risk premium over interest rates as per the rating score obtained and the risks associated with it. The risk category shall be arrived at the time of approving a loan as well on subsequent assessment. The bank should monitor the risk rating and category on a regular basis and take necessary actions in case of risk rating migration as mentioned in 6.4.2.

2. Operating design of CRF

a) Exposures to be rated: A credit rating process is required to reflect two distinct and separate dimensions:

1. Risk of obligor default i.e., default by a particular type of borrower type – Rating modules for obligor / borrower will be developed based on various factors including financial indicators, non-financial parameters, management, security offered, etc.
2. Transaction specific (loan product type) factors captured using facility risk rating – It is important to develop the facility-wise risk rating as risk involved is different for different products.

b) Risk rating process: “Risk Rating Framework” shall specify the methodologies used in developing the risk rating models like selection of parameters, weightage, qualitative and quantitative tools, expert/professional judgement, mapping of obligor and facility risk ratings, mapping of internal and external ratings, etc.

The stepwise activities outline the indicative process of designing a risk rating model:

Step 1: Identify components for risk rating – The risk rating model for risk of obligor default shall include quantitative indicators as well as qualitative indicators. The bank may decide whether to include only quantitative indicators at an initial stage.

Step 2: Allocate weights to principal business and financial risk components – An illustrative list of business and financial risks is shown below for assessment of risks of a borrower default:

Indicator type	Principal Risk components	Weights (Indicative only)	Factors to be considered
Quantitative	Financial risk	50%	Financial statements, ratio analysis, trend analysis, projections, off-balance sheet exposures.
Qualitative	Management risk, Compliance	50%	Experience of the management of the borrower, succession plan or any adverse information such as non-payment of dues, frauds or criminal activities.

Step 3: Key parameters of principal risk components – Establish the key parameters (sub-components of the principal risk elements)

Quantitative indicators and associated weights

Indicative components	Score obtained	Weights
Profitability (Net profit, Operating profit, ROE, ROA)		
Leverage ratios (Debt to Equity, Debt to Total Assets ratio, Debt to Tangible Net-worth)		
Liquidity ratios (Current ratio, Liquid ratio, Prime assets ratio, Cash ratio)		
Coverage ratios (Debt Service Coverage ratio, Interest Coverage ratio, Operating Cash Flow to Financial Debt ratio, Cash Flow Coverage ratio.		
Earnings Quality (Operating Cash Flow to Sales)		

Operational efficiency (Asset turnover ratio, Stock Turnover, Debtors Turnover ratio)		
Total		**100%**

Banks may develop range of values for each parameter to arrive at the score for the same. For example:

Indicative parameter						**Weight**
Net Interest Margin (NIM)						10%
Range of values	2.00%	2.50%	2.75%	3.00%	3.25%	
Score	1	2	3	4	5	
If a borrower has a NIM of 2.50%, it will be assigned a score of 2 out of 5						

Qualitative indicators

Indicative components	**Range of values**	**Score**	**Weights**
Management			
Experience of the management			
Quality of the management based on total number of years of experience of the senior management in the industry			
Existence of succession plan			
Compliance			
Repayment history of borrower			
Total			**100**

The list of parameters under each risk component will be decided upon by Credit Risk Management Committee for all type of borrowers taking into consideration risk of obligor default.

Step 4: Arrive at the credit-risk rating on the CRF.

Step 5: Compare with previous risk-ratings of similar exposures and check for consistency.

Step 6: Conclude the credit risk calibration on the CRF.