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## *Credit Risk Management in Indian Banks*

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**Abstract:** *Credit risk is the most common cause of bank failures. With the changing dynamics of banking business brings new kind of risk exposure. Credit risk is the possibility of losses associated with diminution in the credit quality of borrowers or counterparties. Credit risk is inherent to the business of lending funds to the operations linked closely to market risk variables. The essential functions of risk management are to identify measure and more importantly monitor the profile of the bank. The objective of credit risk management is to minimize the risk and maximize bank's risk adjusted rate of return. Present paper has discussed various tools and techniques to manage credit risk.*

**Keywords:** *Bank; Borrowers; Credit Risk; Return; Risk Management.*

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### I. INTRODUCTION

Risk is inherent in any walk of life in general and in financial sectors in particular. Till recently, due to regulate environment, banks could not afford to take risks. But of late, banks are exposed to same competition and hence are compelled to encounter various types of financial and non-financial risks. Risks and uncertainties form an integral part of banking which by nature entails taking risks. There are three main categories of risks; Credit Risk, Market Risk & Operational Risk. Credit risk is intrinsic to banking and it is as old as banking itself. Credit risk is defined as the possibility of losses associated with diminution in the credit quality of borrowers or counterparties. In a bank's portfolio, losses stem from outright default due to inability or unwillingness of a customer or counterparty to meet commitments in relation to lending, trading, settlement and other financial transactions. Alternatively, losses result from reduction in portfolio value arising from actual or perceived deterioration in credit quality. Credit risk emanates from a bank's dealings with an individual, corporate, bank, financial institution or a sovereign.

### II. HISTORY

The banking industry in India has a huge canvas of history, which covers the traditional banking practices from the time of British Government to the reforms period, nationalization to privatization of banks and now increasing numbers of foreign banks in India. Therefore, Banking in India has been through a long journey. Banking industry in India has also achieved a new height with the changing times. The use of technology has brought a revolution in the working style of the banks. Nevertheless, the fundamental aspects of banking i.e. trust and the confidence of the people on the institution remain the same. The majority of the banks are still successful in keeping with the confidence of the shareholders as well as other stakeholders. However, with the changing dynamics of banking business brings new kind of risk exposure. The financial sector in various economies like that of India is undergoing a monumental change factoring into account world events such as the ongoing Banking Crisis across the globe. The various aspects of increasing global competition to Indian Banks by Foreign banks, increasing Deregulation, introduction of innovative products, and financial instruments as well as innovation in delivery channels have highlighted the need for Indian Banks to be prepared in terms of risk management.

Indian Banks have been making great advancements in terms of technology, quality, as well as stability such that they have started to expand and diversify at a rapid rate. However, such expansion brings these banks into the context of risk especially at the onset of increasing Globalization and Liberalization. In banks and other financial institutions, risk plays a major part in the earnings of a bank. The higher the risk, the higher the return, hence, it is essential to maintain a parity between risk and return. Hence, management of credit risk incorporating a set systematic and professional methods especially those defined by the Base II becomes an essential requirement of banks. The more risk averse a bank is, the safer is their Capital base.

### III. CONCEPT OF CREDIT RISK

Credit Risk is the potential that a bank borrower/counter party fails to meet the obligations on agreed terms. There is always scope for the borrower to default from his commitments for one or the other reason resulting in crystallization of credit risk to the bank. These losses could take the form outright default or alternatively, losses from changes in portfolio value arising from actual or perceived deterioration in credit quality that is short of default. Credit risk is inherent to the business of lending funds to the operations linked closely to market risk variables. The objective of credit risk management is to minimize the risk and maximize bank's risk adjusted rate of return by assuming and maintaining credit exposure within the acceptable parameters. Credit risk consists of primarily two components, viz Quantity of risk, which is nothing but the outstanding loan balance as on the date of default and the quality of risk, viz, the severity of loss defined by both Probability of Default as reduced by the recoveries that could be made in the event of default. Thus credit risk is a combined outcome of Default Risk and Exposure Risk. The elements of Credit Risk are Portfolio risk comprising Concentration Risk as well as Intrinsic Risk and Transaction Risk comprising migration/down gradation risk as well as Default Risk. At the transaction level, credit ratings are useful measures of evaluating credit risk that is prevalent across the entire organization where treasury and credit functions are handled. Portfolio analysis help in identifying concentration of credit risk, default/migration statistics, recovery data, etc.

In general, Default is not an abrupt process to happen suddenly and past experience dictates that, more often than not, borrower's credit worthiness and asset quality declines gradually, which is otherwise known as migration. Default is an extreme event of credit migration. Off balance sheet exposures such as foreign exchange forward contracts, swaps options etc are classified in to three broad categories such as full Risk, Medium Risk and Low risk and then translated into risk Weighted assets.

### IV. TYPES OF CREDIT RISK

Credit risk can be classified as follows

**Credit default risk** — The risk of loss arising from a debtor being unlikely to pay its loan obligations in full or the debtor is more than 90 days past due on any material credit obligation; default risk may impact all credit-sensitive transactions, including loans, securities and derivatives.

**Concentration risk** — The risk associated with any single exposure or group of exposures with the potential to produce large enough losses to threaten a bank's core operations. It may arise in the form of single name concentration or industry concentration.

**Country risk** — The risk of loss arising from a sovereign state freezing foreign currency payments (transfer/conversion risk) or when it defaults on its obligations (sovereign risk); this type of risk is prominently associated with the country's macroeconomic performance and its political stability.

### V. APPROACHES OF CREDIT RISK

Banks always face the risk that some of its borrowers may default on repayment of loans, or interest on loan. This risk is called credit risk. Basel-II norms require banks to accurately measure credit risk to hold sufficient capital to cover it. Basel-II framework prescribes 3 principal approaches for estimating capital charge to cover credit risk.

**A. Standardized Approach:**

Under this approach, risk weight would be applied to each asset based on its external credit rating assigned by a rating agency. In each country, the regulator would approve the rating agencies in the country and decide on the applicable risk weight for each rating category. The Framework proposes four risk weights – 20%, 50%, 100% and 150%. The framework provides the weights to be assigned for each of Standard & Poor rating categories. For rating agencies in other countries, the regulator would be required to map the domestic rating agencies' ratings with those of S&P. In India, RBI has mapped Credit Rating Information Services of India Limited (CRISIL) and Internet Content Rating Agency (ICRA) ratings to those of Standard & Poor's (S&P) and has also prescribed risk weights for these ratings. The details of this mapping are set out in the following table:

**Table I: Credit Risk - Standardized Approach**

CRISIL/ICRA Rating	S&A Rating	Risk Weight
AAA	AAA To AA	20%
AA	A+ To A	50%
A	BBB+ To BB	100%
BBB and below	Below BB	150%
Unrated	Unrated	100%

It is observed from the table that, asset with an investment grade rating of BBB from CRISIL or ICRA would carry a risk weight of 150%, which could lead to conservative estimates of capital requirement, especially for project finance loans. For retail portfolios, the framework provides for lower risk weights to account for the higher granularity and diversification effects embedded in these portfolios. As per the framework, the risk weight would be 35% for retail mortgages and 75% for all retail portfolios including mortgages. A risk weight of 100% means that an exposure is included in the calculation of risk weighted assets value, which translates into a capital charge equal to 9% of that value. GDCCB follows standardized approach to assess its credit risk.

**B. Foundation Internal Rating Based Approach (Foundation IRB)**

In the foundation IRB approach, banks would internally estimate the Probability of Default (PD) for each rating category. The estimate of Loss Given Default (LGD) would be provided by the regulator. The framework provides a risk weight curve, which gives the risk weight for each combination of PD and LGD. A bank estimates each borrower's creditworthiness and the results are translated into estimates of a future potential loss amount, which form the basis of minimum capital requirements.

**C. Advanced Internal Rating Based Approach (Advanced IRB):**

Under the advanced IRB approach, a bank with a sufficiently developed internal capital allocation process would be permitted to use its own inputs for estimation of potential future loss. Banks seeking to use this approach would need to have LGD and Exposure at Default (EAD) data history for at least seven years, in addition to meeting all the criteria stipulated for foundation IRB Approach.

**VI. CREDIT RISK MANAGEMENT POLICIES**

Credit risk is the most common cause of bank failures, causing virtually all regulatory environments to prescribe minimum standards for credit risk management. The basis of sound credit risk management is the identification of the existing and potential risks inherent in lending activities. Measures to counteract these risks normally comprise clearly defined policies that express the bank's credit risk management philosophy and the parameters within which credit risk is to be controlled. Specific credit risk management measures typically include three kinds of policies. One set of policies includes those aimed to limit or reduce credit risk, such as policies on concentration and large exposures, adequate diversification, lending to connected parties, or over-exposures. The second set includes policies of asset classification. These mandate periodic evaluation of the collectibles of the portfolio of loans and other credit instruments, including any accrued and unpaid interest, which expose a bank to credit

risk. The third set includes policies of loss provisioning or the making of allowances at a level adequate to absorb anticipated loss – not only on the loan portfolio, but also on all other assets that are subject to losses. The assessment of a credit risk management function should consider loans and all other extensions of credit (on- and off-balance-sheet) to ensure that the following factors are considered:

- The level, distribution, and severity of classified assets;
- The level and composition of no accruing, nonperforming,
- renegotiated, rolled-over, and reduced-rate assets;
- The adequacy of valuation reserves;
- Management’s ability to administer and collect problem assets;
- Undue concentrations of credit;
- The adequacy and effectiveness of and adherence to, lending policies and credit administration procedures;
- The adequacy and effectiveness of a bank’s process for identifying and monitoring initial and changing levels of risk or risk associated with approved credit exposure.

Clearly defined levels of authority for credit approval help to ensure that decisions are prudent and are made within defined parameters. Institutions should have procedures in place to govern the collection of principal, interest and other charges in accordance with established terms of repayment. Some kind of mechanism to address the issue of nonperforming loans should also exist, as well as mechanisms for enforcing a creditor’s rights in the case of loss loans. A bank reporting system should generate accurate and timely reports on its credit exposure, while the maintenance of detailed, up-to-date information on borrowers is a prerequisite for ongoing risk assessment.

## VII. TOOLS OF CREDIT RISK MANAGEMENT

The instruments and tools, through which credit risk management is carried out, are detailed below:

- A. Exposure Ceilings:** Prudential Limit is linked to Capital Funds – say 15% for individual borrower entity, 40% for a group with additional 10% for infrastructure projects undertaken by the group, Threshold limit is fixed at a level lower than Prudential Exposure; Substantial Exposure, which is the sum total of the exposures beyond threshold limit should not exceed 600% to 800% of the Capital Funds of the bank (i.e. six to eight times).
- B. Review/Renewal:** Multi-tier Credit Approving Authority, constitution wise delegation of powers, Higher delegated powers for better-rated customers; discriminatory time schedule for review/renewal, Hurdle rates and Bench marks for fresh exposures and periodicity for renewal based on risk rating, etc are formulated.
- C. Risk Rating Model:** Set up comprehensive risk scoring system on a six to nine point scale. Clearly define rating thresholds and review the ratings periodically preferably at half yearly intervals. Rating migration is to be mapped to estimate the expected loss.
- D. Risk based scientific pricing:** Link loan pricing to expected loss. High-risk category borrowers are to be priced high. Build historical data on default losses. Allocate capital to absorb the unexpected loss. Adopt the RAROC framework.
- E. Portfolio Management** The need for credit portfolio management emanates from the necessity to optimize the benefits associated with diversification and to reduce the potential adverse impact of concentration of exposures to a particular borrower, sector or industry. Stipulate quantitative ceiling on aggregate exposure on specific rating categories, distribution of borrowers in various industry, business group and conduct rapid portfolio reviews. The existing framework of tracking the non-performing loans around the balance sheet date does not signal the quality of the entire

loan book. There should be a proper & regular on-going system for identification of credit weaknesses well in advance. Initiate steps to preserve the desired portfolio quality and integrate portfolio reviews with credit decision-making process.

**F. Loan Review Mechanism** This should be done independent of credit operations. It is also referred as Credit Audit covering review of sanction process, compliance status, review of risk rating, pick up of warning signals and recommendation of corrective action with the objective of improving credit quality. It should target all loans above certain cut-off limit ensuring that at least 30% to 40% of the portfolio is subjected to LRM in a year so as to ensure that all major credit risks embedded in the balance sheet have been tracked. This is done to bring about qualitative improvement in credit administration. Identify loans with credit weakness. Determine adequacy of loan loss provisions. Ensure adherence to lending policies and procedures. The focus of the credit audit needs to be broadened from account level to overall portfolio level. Regular, proper & prompt reporting to Top Management should be ensured. Credit Audit is conducted on site, i.e. at the branch that has appraised the advance and where the main operative limits are made available. However, it is not required to visit borrower's factory/office premises.

### VIII. CONCLUSION

Business grows mainly by taking risk. Greater the risk, higher the profit and hence the business unit must strike a tradeoff between the two. The essential functions of risk management are to identify measure and more importantly monitor the profile of the bank. While Non-Performing Assets are the legacy of the past in the present, Risk Management system is the pro-active action in the present for the future. Managing risk is nothing but managing the change before the risk manages. While new avenues for the bank has opened up they have brought with them new risks as well, which the banks will have to handle and overcome. The objective of risk management is not to prohibit or prevent risk taking activity, but to ensure that the risks are consciously taken with full knowledge, clear purpose and understanding so that it can be measured and mitigated. It also prevents an institution from suffering unacceptable loss causing an institution to fail or materially damage its competitive position.

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