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Risk Management In Banks : Emphasising On Credit Risk As A Major Issue Of Concern In Indian Banking Business

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Abstract:

Banks Play A Very Important Role In The Financial System In Mobilizing Financial Resources And Adding Value To Those Resources Through Their Various Activities. Risks Are Inherent In All Business Activities, More Particularly In Banking Business As It Is Concerned With Money, The Demand And Supply And Factors Influencing Them. The Indian Banking System, Which Was Earlier Working In A Highly Regulated Environment, Has Lately Witness Tremendous Deregulation. Rbi Has Given Greater Functional Freedom And Autonomy To Banks To Evolve Their Own Policies And Procedures For Effective Management Of Their Activities As Also The Risks Associated With Their Functioning. This Paper Aims At Highlighting The Various Risks Associated Banks In India Emphasizing On The Credit Risk Management. It Also Strives To Focus On The Cause For The Rise Of Npa's In The Banks And Attempts To Develop An Innovative Technique To Manage Risks In Indian Banks.

Key words: Risk, Business Risk, Control Risk, Credit Risk, NPA

1.Introduction

The Indian Banking Industry has witnessed a complete transformation following the reform and liberalization process initiated by the Reserve Bank of India. Banks have been given more operational freedom and autonomy in decision making in even highly regulated areas, like interest rates, assessment, monitoring and follow up of advances etc. The environments of banks are highly competitive and now banks are exposed are various types of risks. It is very essential to understand the concept of risks and its management.

The concept of risk has a long history. More than 2400 years ago the Athenians offered their capacity of assessing risks before making decisions. But the Greeks did not develop a quantitative approach to risk. They had no numbers, and without there are no odds and probabilities. And without odds and probabilities, the natural way of dealing with risk is to appeal to the Gods and the fates; a risk is wholly a matter of gut. These words are in the spirit of Peter Bernstein in *Against the Gods (1996)*¹, who describes in a fascinating way how our understanding of risk has developed over centuries. The past has been full of brilliant scientists, mathematicians, investors, technologists, and political philosophers, whose achievements were astonishing; think of the early astronomers or the builders of the pyramids. By understanding risk, measuring it and weighing its consequences, risks-taking has been converted into one of the primes catalysts that drive the modern city.

The financial stability of the international banking system has become a critical issue. The term risk management has been increasingly appropriated to incorporate the full range of potential problems with financial assets, such as administration, compliance, technology, and fraud control. The risk management is a complex function and it requires specialised skills and expertise. Banks have been moving towards the use of sophisticated models for measuring and managing risks.

Keeping in mind the global stability of banks, Bank for International Settlements (BIS) appointed the BASEL committee on Banking Regulations and Supervisory Practices which prescribed certain capital standards or key banks in major countries thereby giving rise to what is popularly known as the BASEL ACCORD.

Large banks and those operating in international markets should develop internal risk management models to be able to compete effectively with their competitors. As the domestic market integrates with the international markets, the banks should have necessary expertise and skill in managing various types of risks in a scientific manner. At a more sophisticated level, the core staff at Head Offices should be trained in risk modelling and analytical tools. It should, therefore, be the endeavour of all banks to upgrade the skills of staff.

2.Review Of Literature

There have been many studies on risk and risk management. Risk is the possibility of the actual outcome being different from the expected outcome. It includes both downside potential and upside potential (*Javier Estrada-2005*)². It can be said as the situation where the possibility of not happening can be quantified and measured (*R.P.Rustagi-2006*)³. Risk means being exposed to the probability of a bad outcome (*Dan Borge-2001*)⁴. Risks suggest that a decision maker knows the possible consequences of a

decision and their relative likelihood when making a decision, when talking about risk it can be classified into distinct categories depending on the capacity and attitude towards risk (George E Rejda-2008)⁵

Just defining the concept of risk and uncertainty is difficult. There is a debate in the literature on the right definition of risk and uncertainty (G.A.Halton-2004)⁶ proposes that a definition of risk has to take into account two essential components of observed phenomenon; exposure & uncertainty. The definition of risk and of uncertainty proposed by (F.H.Knight-1921)⁷ states that risk relates to objective probabilities and a probabilistic model can be given; uncertainty relates to subjective probabilities and no probabilistic model can be given.

On the other hand, (Ortobelli et al-2001)⁸ defines and distinguishes the uncertain properties in order to describe the correct use of risk and uncertainty measures and their multidimensional literature. Risk management is basically a scientific approach to the problem of managing the pure risks faced by individuals and institutions. It is the process of protecting one persons or organization intact in terms of assets and incomes (Reto Gallati-2003)⁹.

3. Concept Of Risk

The literary meaning of risk varies based on one's perception. The Websters Dictionary says that 'Risk' is the possibility of something unpleasant happening or the chance of encountering loss or harm. Risk, in present context, means the uncertainty of future cash flows. The Oxford Dictionary defines, "Risk as the possibility of loss in absolute terms or relative to expectations". There are many definitions of risk that vary by specific application and situational context. Risk is described both qualitatively and quantitatively. The dictionary meaning of risk is the possibility of loss or injury.

Often people use risk and uncertainty as interchangeably but the fact is that both these terms are entirely different in nature. Uncertainty is something that cannot be known or measured. The occurrence of events cannot be known. On the other hand risk is something that can be measured qualitatively; risk is proportional to both the expected losses which may be caused by an event and to the probability of this event. Greater loss and greater event likelihood result in a greater overall risk. Frequently in the subject matter literature, risk is defined in pseudo-formal forms where the components of the definition are vague and ill-defined, for example, risk is considered as an indicator of threat, or depends on threats, vulnerability, impact and uncertainty. In engineering, the definition of risk is:

Risk = (Probability of an accident) x (losses per accident)

4. Types Of Risks

The risks faced by banks are attributable to the nature of their business, which is basically concerned with sourcing of funds through various channels and their applications to profitable ventures with a control on the functions. As per the Reserve Bank of India guidelines issued in Oct. 1999, there are three major types of risks encountered by the banks and these are Credit Risk, Market Risk & Operational Risk. Taking all this in consideration we can say that the banking business faces two basic types of risks: a. Business Risks; b. Control Risks (S.N. Bidani: 2010)¹⁰

4.1. Business Risks

In simple terms we can say that business risks are the risks the banks are exposed. It relates to volatility of revenues and profits. Taking this in consideration we can say that the types of business risks in banks are: Credit Risk including off-balance sheet exposures, market risk, operational risks, country risk, environment risks, group risk.

4.1.1. Credit Risk

Credit risk represents the major risk faced by the banks since it is inherent in any business of lending funds, be it individuals, trade, industry, transport etc. Credit risks are defined as the possibility of losses associated with diminution in the credit quality of the borrowers or counter parties. Credit may arise from the non payment of the principal or interest. In other words, it may also be called as Default Risk.

Credit Risk also include off balance sheet exposures. Off balance sheet exposures are contingent in nature. Where banks issue guarantees, committed or back up credit lines, letter of credit etc, banks face payment obligations contingent up on some event such as failure to meet payment obligations.

4.1.2. Market Risks

Market risk is caused due to changes in the market variables as may have adverse impact on the earnings of a bank, or on its capital. The market variables include unfavourable changes in interest rates, foreign exchange rates, etc. The market risk also includes liquidity risk that arises when a bank is unable to meet its liabilities as and when these fall due, and may need to borrow funds at higher rates to fund the liabilities. The various risks associated with market risks are:

4.1.3. Liquidity Risk

Liquidity risk is caused due to mismatch in maturity of banks assets and liabilities. This risk arises out of the possibility that a bank may be unable to meet its liabilities as these become due for payment or may be able to fund the liabilities at a cost much higher than market cost. This may happen due to mismatch in the timings of inflows and outflows of funds and from funding of long-term liabilities. Banking holding surplus liquidity to avoid this risk may lead to banks suffering profitability as it indicates idle funds lying with the bank.

4.1.4. Interest Rate Risk

Interest rate risk that forms a part of market risk has become more prominent after removal of regulatory interest rates restrictions by Reserve Bank of India. Deregulation of interest rates has caused keen competition and exposed banks to greater interest rate

risks. A bank's net interest income, difference between interest received on its assets (loans/ advance, investments) and interest paid on its liabilities (deposits) that is a major source of profit has been shrinking. The interest rate risk may be on account of the following:

4.1.4.1. Mismatch Risk or Gap Risk

In a situation where short-term deposit of say, one year maturity have been utilized for investment in long-term government securities of say, three years would result in mismatch. In case interest rates on deposits increase while the interest income on government securities remain the same during the 3-year period, the interest spread would get reduced, having an adverse impact on bank's interest income.

4.1.4.2. Curve Risk

In floating interest rate scenario, banks may price their assets and liabilities based on different benchmarks, i.e treasury bills' yields, fixed deposit rates, call money rates etc. In case the banks use two different instruments maturing at different time horizon for pricing their assets and liabilities, any non parallel movements in yield curve are rather frequent. Thus, banks should evaluate the movements in yield curves and impact of that on the portfolio values and incomes.

4.1.4.3. Basis Risk

The risk that the interest rate of different assets, liabilities and off balance sheet items may change in different magnitude is termed as Basis risk.

The degree of basis risk is fairly high in respect of banks that create composite assets out of composite liabilities. In a regime where interest rates are falling, the interest rate on assets may be lowered while the interest rates on deposits particularly fixed deposits may continue at the contracted higher interest rates. Such a situation may result in reduction in interest income and hence interest rate risk.

4.1.4.4. Price Risk

A bank's value of investment made at a specific rate of interest suffer a set back or depreciate if there is an increase in market interest rates. However, any decline in interest rate may result in a gain in the value of the investments in a bank's portfolio.

4.1.5. Foreign Exchange Risk

Forex risk is caused as a result of adverse exchange rate movement on a bank's foreign currency exposure, when it is holding foreign exchange assets or liabilities that have not been hedged. Foreign exchange risks may include three types of commonly understood risks, such as *transaction exposure* (arises due to adverse exchange rate movement when a bank enters into a international trade), *translation exposure* (arises from change in the value of assets and liabilities due to a change in exchange rates) and *economic exposure* (risks arising due to change in exchange rate affecting the banks earning, cash flow and investments).

4.1.6. Operational Risk

Under this category fall all the types of market and credit risks. Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, systems and procedures or from external events. It includes legal risks but excludes strategic risk. Operational risk may be caused due to the actions of the banks which are not in conformity with the laws of the country or may be due to lack of knowledge or skilled personnel. Banks also face technological risks arising with the rapid advancement in the IT related factors in the banking industry.

4.2. *Control Risks*

This is basically the internal risks of the bank. It arises due to failure or violation of a banks internal control system. Such risks may also cause due to lack of proper and effective organizational framework, inefficient management and non-compliance of regulatory measures. The issues may be:

- The risks related to internal control policies and procedures may arise due to failure of control systems, particularly at the branch levels. Such risks may be caused due to lacking control on credit management function, poor house-keeping relating balancing of the books, non reconciliation of entries etc. They also arise due to casual treatment in inspection and auditing.
- Due to lack of proper organizational set up in banks which is inadequate to handle various activities, risk arises. The organizational structure should be in line with the business and legal requirement and should be properly defined in terms of job responsibility and authority to all functional departments.
- In case of non compliance of various legal, statutory and prudential requirements and supervisory directives/ guidelines issues by the government and RBI, banks fall under the compliance risk and may lead to severe penalties.

5. Credit Risk Management

Banks are exposed to various types of risks but the major risk component is Credit Risk. As we know, Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms (Basel-2000)¹¹. Credit risk or default risk involves inability or unwillingness of a customer or counterparty transactions. The Credit Risk is generally made up of transaction risk or default risk and portfolio risk. The credit risk of a bank's portfolio depends on both external and internal factors. The external factors are the state of the economy, wide swings in commodity/equity prices, foreign exchange rates and interest rates, trade restrictions, economic sanctions, Government policies, etc.

The internal factors are deficiencies in loan policies/administration, absence of prudential credit concentration limits, inadequately defined lending limits for Loan Officers/Credit Committees, deficiencies in appraisal of borrowers' financial position, excessive dependence on collaterals and inadequate risk pricing, absence of loan review mechanism and post sanction surveillance, etc.

Credit risk is by far the largest component of RWAs, representing 86 percent on average according to IMF working paper (Vanessa Le Leslé and Sofiya Avramova)¹². Market and operational risks are broadly equal at 6.5 percent and 7.5 percent respectively, but they are spread differently. US banks, who do not yet report under Basel II, do not disclose any operational risk. Market risk is limited for most banks, but is concentrated in large global investment banks (and a few universal banks), mostly American and European, whose average is 17 percent. The range between maximum and minimum for credit risk is 38.4 percent across all business models and regions, whereas the range for market risk is 36.7 percent.

Credit risk, particularly are related with loans and advances. The gross credit of public sector banks for the year ended June 2012 was Rs 35.46 lakh crores, out of which Rs 1,23,462 crores (source: Economic Times Aug 22, 2012) is tied up as Non performing loans that act as a drag on the profitability of banks in two ways:

- De-recognition of interest income, and
- Making heavy loan loss provisions in such accounts.

Banks are concerned with their heavy NPA (non performing Assets) portfolio, which has been increasing over the years mainly due to low recovery and fresh slippage of standard accounts to NPA category. RBI has been stressing upon banks to take effective steps to bring about substantial reduction of NPA's and is closely monitoring the progress achieved by banks in this regard.

6. Non Performing Assets

As per the RBI, an asset becomes non-performing when it ceases to generate income for the bank. Earlier an asset was considered as non-performing asset (NPA) based on the concept of 'Past Due'. A 'non performing asset' (NPA) was defined as credit in respect of which interest and / or instalment of principal has remained 'past due' for a specific period of time. However, with effect from March 31, 2001 the 'past due' concept has been dispensed with and the period is reckoned from the due date of payment. Banks should classify their Non performing assets into the following broad groups, viz. –

6.1. Sub-standard Assets

With effect from March 31, 2005 an asset would be classified as sub-standard if it remained NPA for a period less than or equal to 12 months. An asset where the terms of the loan agreement regarding interest and principal have been re-negotiated or rescheduled after commencement of production, should be classified as sub-standard and should remain in such category for at least 12 months of satisfactory performance under the re-negotiated or rescheduled terms. In other words, the classification of an asset should not be upgraded merely as a result of rescheduling, unless there is satisfactory compliance of this condition.

6.2. Doubtful Assets

With effect from March 31, 2005, an asset is required to be classified as doubtful, if it has remained NPA for more than 12 months. A loan classified as doubtful has all the weaknesses inherent as that classified as sub-standard, with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of currently known facts, conditions and values, highly questionable and improbable.

6.3. Loss Assets

A loss asset is one where loss has been identified by the bank or internal or external auditors or by the Co-operation Department or by the Reserve Bank of India inspection but the amount has not been written off, wholly or partly. In other words, such an asset is considered un-collectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value.

	Gross NPA	Gross Advances	NPL Ratio*
State Bank of India	371560	7578886	4.90
Bank of India	51697	1779502	2.91
Bank of Baroda	38818	2054536	1.86
IDBI	45514	1772092	2.57
ICICI	92926	1923338	4.83
HDFC	18149	1909689	0.95
Axis Bank	17202	1459049	1.18

Figure 1: Bank Wise Gross Advances And NPA In 2012

*NPL Ratio Is Computed As A Ratio Of Net Npas To Net Advances

Source: [Http://Www.Rbi.Org.In/Scripts/Publicationsview.aspx?Id=14709](http://www.Rbi.Org.In/Scripts/Publicationsview.aspx?Id=14709)

NPA to Advances ratio is a measure to judge the overall quality of bank loan book. Banks such as ICICI Bank and SBI have the highest NPA ratio depict an aggressive nature. As the banks lends out strongly to customers, the chances of them defaulting also rises. At the same time, the NPA ratio of a relatively much conservative bank such as HDFC Bank remain low indicating a low default cases.

7. Causes For Rise In NPA In Indian Banks

7.1. Factors Relating Bank For NPA

- Deficiencies in techno economic appraisal of loan proposal and credit worthiness and financial of borrower.
- Lack of an effective post sanction monitoring system of loan accounts and delayed identification and corrective actions in weak accounts.
- Inadequately defined lending policies and procedures and an ineffective review system.
- Absence of credit concentration limits for various industries/ business and other segments.
- Over optimistic assessment of thrust and potential areas of credit and liberal financing in these areas.
- Lack of knowledge and skills of officials processing loan proposals and subjectivity of credit worthiness.
- Lack of proper coordination among various departments of banks looking into credit functions.
- Lack of well defined organizational structure and lack of clarity within the organization regarding responsibilities.
- Inadequate and improper credit scoring system.
- Lack of reliability and integrity of data being used for managing credit risks.

7.2. Other Factors

- Time consuming and slow legal process for recovery of bank dues and absence of punitive measures for wilful defaulters.
- Slow function of judiciary system including debt recovery tribunals, or other government measures for recovery of debt.
- Lack of support by the central or the state government.
- Lack of proper monitoring at project implementation state leading soaring costs.
- Low priority given to promoters to upgrade on research and development.

8. Credit Risk Management Process

The management process of risk in banks involves a continuous process. We can design a process for risk management (Indian Institute of Banking & Finance)¹³:

Risk Identification ➡ Risk Measurement ➡ Risk Monitoring & Control ➡ Risk Mitigation.

8.1. Risk Identification

All the products and transactions should be analysed for risks associated with them. While, various risks associated with a standardized product stands analyzed, that in case of a non standard and non-standard product needs to be analyzed. Generally, we have seen that the guidance for risk managements in banks come at a corporate level. So we should ensure that products should be properly screened and safeguard measures taken for its exposure.

8.2. Credit Risk Measurement

Risks are based on two major factors: Sensitivity and Downside potential. Sensitivity captures deviation of market price due to unit movement of a single market parameter. Sensitivity is measured as the change in market value due to change in unit change in the variable. On the other hand, downside potential captures possible losses ignoring profit potential. Downside risk is the most comprehensive measure of risk as it integrates sensitivity and volatility with the adverse effect of uncertainty.

8.2.1. Measurement Of Credit Risk Consists Of

- Measurement of risk through credit rating/scoring
- Credit rating is done with primary objective to determine whether the account after the expiry of a given period will be in a position to meet its obligation to its creditors, including bank and would not be in default.
- Quantifying the risk through estimating expected loan losses i.e. the amount of loan losses that bank would experience over a chosen time horizon (through tracking portfolio behaviour over 5 or more years) and unexpected loan losses i.e. the amount by which actual losses exceed the expected loss (through standard deviation of losses or the difference between expected loan losses and some selected target credit loss quantile);
- c) Risk pricing on a scientific basis; and
- d) Controlling the risk through effective Loan Review Mechanism and portfolio management.

8.3. Credit Risk Monitoring & Control

Risk monitoring and control calls for implementation of risk and business policies simultaneously. It consists of setting limits and control, based on economic measures of risk while ensuring best risk adjusted return, controlling risk means keeping the variations of the value of a given portfolio within given boundary values through actions on limits. This can be achieved through activities like; policy guidelines, performance measurements, systems and procedures lay down to unbundle products to capture all risks, risk monitoring at all levels of the bank etc.

Risk taking through lending activities needs to be supported by a very effective control and monitoring mechanism, firstly because this activity is widespread, and secondly, because of very high share of credit risk in the total risk taking activity of a bank. Consequently, credit risk control and monitoring is directed both at transaction level and portfolio level.

8.4. Credit Risk Mitigation

Risk arises due to volatility of financial instruments. The volatility of financial instruments is instrumental for both profits and risk. Risk mitigation measures aims to reduce downside variability in net cash flow but also reduces upside potential or profit potential simultaneously. Credit risk mitigation refers to the process through which credit risk is reduced or is transferred to a counter party.

9. Innovative Risk Management Tools For Indian Banks

In India, Banks have responded superbly to the financial reforms in terms of improving their profitability, adhering to the prudential norms relating to income recognition, capital adequacy and provisioning. However, with growing pace of deregulation and associated changes in the consumers behaviour banks will be more exposed to risk. The need of the hour is to follow certain risk management norms like BIS capital adequacy requirements, return on economic capital (ROEC), risk adjusted return on capital (RAROC). The risk based capital standard has been adopted by central bankers of major industrialized countries. The following are the techniques for better management of risk in Indian banks:

9.1. Asset And Liability Management (ALM)

It refers to management of balance sheet, income statement and/or cash flow exposures. They can also be used aggressively or defensively. Aggressive approach is to increase level of asset exposures, revenue and cash inflows denominated currencies and to increase liabilities, expensive and cash outflows denominated in weak currencies.

9.2. Computer Modelling For Balance Sheet Management

Employing modelling techniques to measure the degree to which earnings are at risk through interest rate changes. The use of geometric shapes helps the bank executive rapidly to see the macro implications of balance sheet management.

9.3. Asset-Liability Committee (ALCO)

Liability raisers and asset bookers must work in sync under the umbrella of a committee called ALCO, the formation of which should be mandatory. Fund management, risk detection and quantification systems should form basis on which banks must come under direct monitoring of central bank.

9.4. The Concept Of Narrow Banking

“Narrow banking” has been advocated as a rational way to contain systematic risks as well as means to allow breathing hours to ailing outfits by reassigning business specifications. Narrow banks opt to bank deposits with government securities or other very safe assets and aim to engage only in limited range of activities.

9.5. System Of Stress Liquidity Tests

Stress liquidity scenarios should be developed to provide information on different business scenarios under which the bank's strategies/positions would be most vulnerable.

9.6. Effective Debt Recovery Tribunals

Legislation is also imperative in getting debt recovery tribunals effective to ensure “pay or perish” for economic offenses like squandering deposits hard earned money. In Japan, for instance, repeated dishonour of cheques could invite expulsion of a drawer from the whole banking system.

9.7. Managing NPA'S

Lack of success in containing incremental rise in NPA has always worried bankers. A proper defence mechanism should be implemented to reduce the ratio of NPA to advances. We can use techniques like:

- Method of greening NPA's need to be curbed to assess the real value of assets base.
- Banks need to guard themselves from ‘cross lending’ to second rung customers exploiting inter-bank exposures with the bank for diversion of funds from one bank to another.
- Basis of the definition of ‘sick unit’ to be changed from the existing erosion of net worth to debt doubtful.

Likewise, there can be many methods of having a stringent law for reduction of defaulters.

9.8. Merger Of Banks

Mergers option can be used to make banks ‘too big to fall’. But mergers should aim at ‘better economies of scale’ and establishing synergy between banks.

9.9. System Of Value At Risk

Basel committee advocated “value at risk” VaR to be the standard measure for risk exposures. It is an estimate of the maximum loss in the value of a portfolio over a given period of time with a certain level of confidence. The level of confidence is represented by the probability that the actual loss will not exceed a prescribed ‘maximum’.

9.10. Information Technology On Risk Management

The last and foremost issue is the impact of information technology on risk management. Banks world-wide are better equipped to manage risks with the striking advances in information technology. Securitization becomes hassle free with the servicing software that controls and monitors cash flows.

10. Conclusion

Risk management in banks became a hot topic after 2008 financial crises. We have seen in this paper that the banking business is exposed to various types of risks but the major risk that affects the profitability of the bank is the credit risk. Even the Basel Accord has laid emphasis on the credit risk exposure. We can see that the major cause of credit risk is lack of proper credit standards of borrowers and counter parties. Indian banks have to keep up with the international banks in terms of credit information and information technology so as to reduce defaulters and to also have a strict credit recovery system.

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