
MANAGEMENT OF RISK IN BANKING SECTOR IN INDIA

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ABSTRACT

Banking institutions are the pillars of a strong and sound economy. However, banks all over the globe are comparably fragile institutions, which are built on customers' trust, brand reputation and more importantly dangerous leverage. In case of any trouble, banks can collapse and significantly, failure of one bank can trigger crisis in the economy. That is why banks need constant policing by the Central bank so as to assess their risk exposure as well as their financial health. Thus, as risk is indispensable for banking business, proper assessment of risk is an integral part of a bank's risk management system. Banks are focusing on the magnitude of their risk exposure and formulating strategies to tackle those effectively. Moreover, the RBI has adopted a series of steps to ensure that individual banks tackle risks effectively by setting up risk management cells and also through internal assessment of their risk exposure. Apart from this, RBI has opted for on-site and off-site surveillance methods for effective risk management in the Indian Banking sector, so that systemic risk and financial turmoil can be averted in the country. Present paper is to make an attempt to identify various types of risks faced by the banking industry and the process and techniques of risk management adopted by the banking sector.

KEYWORDS: Risk Management, Banking Industry, RBI, Technique of Risk Management, Risk Exposure

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INTRODUCTION

Risk is defined as anything that can create hindrances in the way of achievement of certain objectives. It can be because of either internal factors or external factors, depending upon the type of risk that exists within a particular situation. Exposure to that risk can make a situation more critical. A better way to deal with such a situation; is to take certain proactive measures to identify any kind of risk that can result in undesirable outcomes. In simple terms, it can be said that managing a risk in advance is far better than waiting for its occurrence. Risk Management is a measure that is used for identifying, analysing and then responding to a particular risk. It is a process that is continuous in nature and a helpful tool in decision making process. According to the Higher Education Funding Council for England (HEFCE), Risk Management is not just used for ensuring the reduction of the probability of bad happenings but it also covers the increase in likeliness of occurring good things. A model called “Prospect Theory” states that a person is more likely to take on the risk than to suffer a sure loss.

OBJECTIVES THE STUDY

The following are the objectives of the study.

- i. To identify the types of risks faced by the banking industry.
- ii. To find out risk management practices in India
- iii. To examine the techniques adopted by banking industry for risk management.

RESEARCH METHODOLOGY

This paper is theoretical modal based on the extensive research for which the secondary source of information has gathered. The sources include online publications, Books and journals.

TYPES OF RISKS IN BANKING SECTOR

In view of growing complexity of banks,, business and the dynamic operating environment, risk management has become very significant, especially in the financial sector. Risk at the apex level may be visualized as the probability of a banks,, financial health being impaired due to one or more contingent factors. While the parameters indicating the banks,, health may vary from net interest margin to market value of equity, the factor which can cause the important are also numerous. For instance, these could be default in repayment of loans by borrowers, change in value of assets or disruption of operation due to reason like

technological failure. While the first two factors may be classified as credit risk and market risk, generally banks have all risks excluding the credit risk and market risk as operational risk.

Risk may be defined as ‘possibility of loss’, which may be financial loss or loss to the image or reputation. Banks like any other commercial organisation also intend to take risk, which is inherent in any business. Higher the risk taken, higher the gain would be. But higher risks may also result into higher losses. However, banks are prudent enough to identify, measure and price risk, and maintain appropriate capital to take care of any eventuality. The major risks in banking business or ‘banking risks’, as commonly referred, are listed below –

- a. Liquidity Risk
- b. Interest Rate Risk
- c. Market Risk
- d. Credit or Default Risk
- e. Operational Risk

Liquidity Risk The liquidity risk of banks arises from funding of long-term assets by short-term liabilities, thereby making the liabilities subject to rollover or refinancing risk (Kumar et al., 2005). It can be also defined as the possibility that an institution may be unable to meet its maturing commitments or may do so only by borrowing funds at prohibitive costs or by disposing assets at rock bottom prices. The liquidity risk in banks manifest in different dimensions -

(a) Funding Risk: Funding Liquidity Risk is defined as the inability to obtain funds to meet cash flow obligations. For banks, funding liquidity risk is crucial. This arises from the need to replace net outflows due to unanticipated withdrawal/ non-renewal of deposits (wholesale and retail).

(b) Time Risk: Time risk arises from the need to compensate for non-receipt of expected inflows of funds i.e., performing assets turning into non-performing assets.

(c) Call Risk: Call risk arises due to crystallisation of contingent liabilities. It may also arise when a bank may not be able to undertake profitable business opportunities when it arises.

Interest Rate Risk Interest Rate Risk arises when the Net Interest Margin or the Market Value of Equity (MVE) of an institution is affected due to changes in the interest rates. In other words, the risk of an adverse impact on Net Interest Income (NII) due to variations of interest rate may be called Interest Rate Risk (Sharma, 2003). It is the exposure of a Bank’s

financial condition to adverse movements in interest rates. IRR can be viewed in two ways – its impact is on the earnings of the bank or its impact on the economic value of the bank's assets, liabilities and Off-Balance Sheet (OBS) positions. Interest rate Risk can take different forms. The following are the types of Interest Rate Risk –

(a) Gap or Mismatch Risk: A gap or mismatch risk arises from holding assets and liabilities and Off-Balance Sheet items with different principal amounts, maturity dates or re-pricing dates, thereby creating exposure to unexpected changes in the level of market interest rates.

(b) Yield Curve Risk: Banks, in a floating interest scenario, may price their assets and liabilities based on different benchmarks, i.e., treasury bills' yields, fixed deposit rates, call market rates, MIBOR etc. In case the banks use two different instruments maturing at different time horizon for pricing their assets and liabilities then any non-parallel movements in the yield curves, which is rather frequent, would affect the NII. Thus, banks should evaluate the movement in yield curves and the impact of that on the portfolio values and income.

(c) Basis Risk: Basis Risk is the risk that arises when the interest rate of different assets, liabilities and off-balance sheet items may change in different magnitude. For example, in a rising interest rate scenario, asset interest rate may rise in different magnitude than the interest rate on corresponding liability, thereby creating variation in net interest income.

(d) Embedded Option Risk: Significant changes in market interest rates create the source of risk to banks' profitability by encouraging prepayment of cash credit/demand loans, term loans and exercise of call/put options on bonds/ debentures and/ or premature withdrawal of term deposits before their stated maturities. The embedded option risk is experienced in volatile situations and is becoming a reality in India. The faster and higher the magnitude of changes in interest rate, the greater will be the embedded option risk to the banks' Net Interest Income. The result is the reduction of projected cash flow and the income for the bank.

(e) Reinvested Risk: Reinvestment risk is the risk arising out of uncertainty with regard to interest rate at which the future cash flows could be reinvested. Any mismatches in cash flows i.e., inflow and outflow would expose the banks to variation in Net Interest Income. This is because market interest received on loan and to be paid on deposits move in different directions.

(f) Net Interest Position Risk: Net Interest Position Risk arises when the market interest rates adjust downwards and where banks have more earning assets than paying liabilities. Such banks will experience a reduction in NII as the market interest rate declines and the NII increases when interest rate rises. Its impact is on the earnings of the bank or its impact is on the economic value of the banks' assets, liabilities and OBS positions.

Market Risk The risk of adverse deviations of the mark-to-market value of the trading portfolio, due to market movements, during the period required to liquidate the transactions is termed as Market Risk. This risk results from adverse movements in the level or volatility of the market prices of interest rate instruments, equities, commodities, and currencies. It is also referred to as Price Risk. Price risk occurs when assets are sold before their stated maturities. In the financial market, bond prices and yields are inversely related. The price risk is closely associated with the trading book, which is created for making profit out of short-term movements in interest rates.

The term Market risk applies to

- (i) that part of IRR which affects the price of interest rate instruments,
- (ii) Pricing risk for all other assets/ portfolio that are held in the trading book of the bank and
- (iii) Foreign Currency Risk. (

a) Forex Risk: Forex risk is the risk that a bank may suffer losses as a result of adverse exchange rate movements during a period in which it has an open position either spot or forward, or a combination of the two, in an individual foreign currency.

(b) Market Liquidity Risk: Market liquidity risk arises when a bank is unable to conclude a large transaction in a particular instrument near the current market price.

Default or Credit Risk Credit risk is more simply defined as the potential of a bank borrower or counterparty to fail to meet its obligations in accordance with the agreed terms. In other words, credit risk can be defined as the risk that the interest or principal or both will not be paid as promised and is estimated by observing the proportion of assets that are below standard. Credit risk is borne by all lenders and will lead to serious problems, if excessive. For most banks, loans are the largest and most obvious source of credit risk. It is the most significant risk, more so in the Indian scenario where the NPA level of the banking system is significantly high (Sharma, 2003). The Asian Financial crisis, which emerged due to rise in NPAs to over 30% of the total assets of the financial system of Indonesia, Malaysia, South

Korea and Thailand, highlights the importance of management of credit risk. There are two variants of credit risk which are discussed below –

(a) Counterparty Risk: This is a variant of Credit risk and is related to non-performance of the trading partners due to counterparty's refusal and or inability to perform. The counterparty risk is generally viewed as a transient financial risk associated with trading rather than standard credit risk.

(b) Country Risk: This is also a type of credit risk where non-performance of a borrower or counterparty arises due to constraints or restrictions imposed by a country. Here, the reason of non-performance is external factors on which the borrower or the counterparty has no control.

Operational Risk Basel Committee for Banking Supervision has defined operational risk as 'the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events'. Thus, operational loss has mainly three exposure classes namely people, processes and systems. Managing operational risk has become important for banks due to the following reasons

1. Higher level of automation in rendering banking and financial services
2. Increase in global financial inter-linkages

Other Risks Apart from the above mentioned risks, following are the other risks confronted by Banks in course of their business operations –

(a) Strategic Risk: Strategic Risk is the risk arising from adverse business decisions, improper implementation of decisions or lack of responsiveness to industry changes. This risk is a function of the compatibility of an organisation's strategic goals, the business strategies developed to achieve those goals, the resources deployed against these goals and the quality of implementation.

(b) Reputation Risk: Reputation Risk is the risk arising from negative public opinion. This risk may expose the institution to litigation, financial loss or decline in customer base.

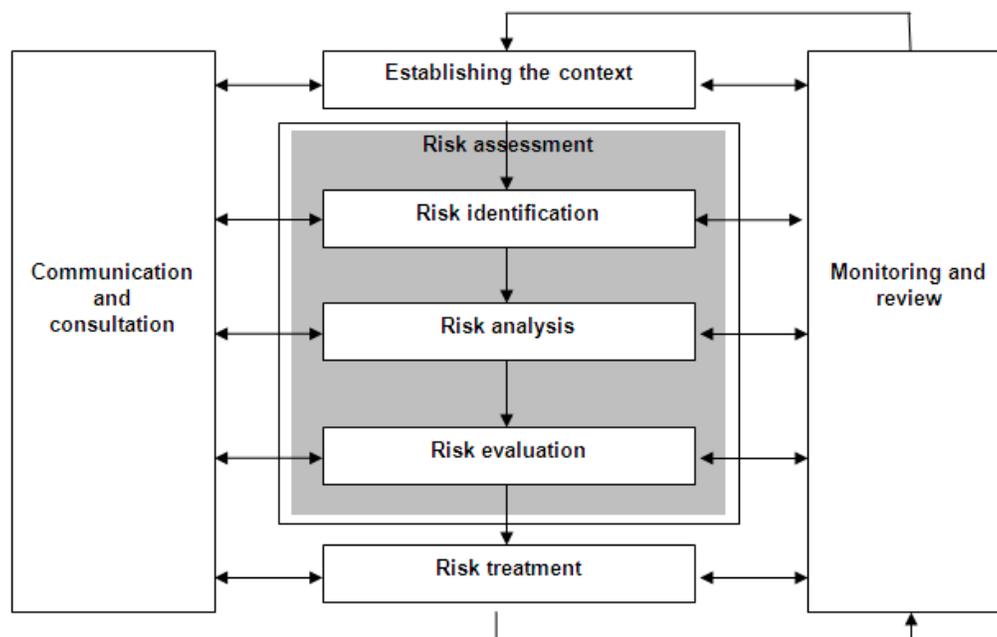
Risk Management Practices in India

Risk Management, according to the knowledge theorists, is actually a combination of management of uncertainty, risk, equivocality and error (Mohan, 2003). Uncertainty – where outcome cannot be estimated even randomly, arises due to lack of information and this uncertainty gets transformed into risk (where estimation of outcome is possible) as

information gathering progresses. As information about markets and knowledge about possible outcomes increases, risk management provides solution for controlling risk. Equivocality arises due to conflicting interpretations and the resultant lack of judgment. This happens despite adequate knowledge of the situation. That is why, banking as well as other institutions develop control systems to reduce errors, information systems to reduce uncertainty, incentive system to manage agency problems in risk-reward framework and cultural systems to deal with equivocality.

PROCESS OF RISK MANAGEMENT

To overcome the risk and to make banking function well, there is a need to manage all kinds of risks associated with the banking. Risk management becomes one of the main functions of any banking services risk management consists of identifying the risk and controlling them, means keeping the risk at acceptable level. These levels differ from institution to institution and country to country. The basic objective of risk management is to stakeholders; value by maximising the profit and optimizing the capital funds for ensuring long term solvency of the banking organisation. In the process of risk management following functions comprises:



TECHNIQUES OF RISK MANAGEMENT

GAP Analysis

It is an interest rate risk management tool based on the balance sheet which focuses on the potential variability of net-interest income over specific time intervals. In this method a maturity/ re-pricing schedule that distributes interest-sensitive assets, liabilities, and off-balance sheet positions into time bands according to their maturity (if fixed rate) or time remaining to their next re-pricing (if floating rate), is prepared. These schedules are then used to generate indicators of interest-rate sensitivity of both earnings and economic value to changing interest rates. After choosing the time intervals, assets and liabilities are grouped into these time buckets according to maturity (for fixed rates) or first possible re-pricing time (for flexible rates). The assets and liabilities that can be re-priced are called rate sensitive assets (RSAs) and rate sensitive liabilities (RSLs) respectively. Interest sensitive gap (DGAP) reflects the differences between the volume of rate sensitive asset and the volume of rate sensitive liability and given by, $GAP = RSAs - RSLs$. The information on GAP gives the management an idea about the effects on net-income due to changes in the interest rate. Positive GAP indicates that an increase in future interest rate would increase the net interest income as the change in interest income is greater than the change in interest expenses and vice versa. (Cumming and Beverly, 2001)

Duration-GAP Analysis

It is another measure of interest rate risk and managing net interest income derived by taking into consideration all individual cash inflows and outflows. Duration is value and time weighted measure of maturity of all cash flows and represents the average time needed to recover the invested funds. Duration analysis can be viewed as the elasticity of the market value of an instrument with respect to interest rate. Duration gap (DGAP) reflects the differences in the timing of asset and liability cash flows and given by, $DGAP = DA - u DL$. Where DA is the average duration of the assets, DL is the average duration of liabilities, and u is the liabilities/assets ratio. When interest rate increases by comparable amounts, the market value of assets decrease more than that of liabilities resulting in the decrease in the market value of equities and expected net-interest income and vice versa. (Cumming and Beverly, 2001)

Value at Risk (VaR)

It is one of the newer risk management tools. The Value at Risk (VaR) indicates how much a firm can lose or make with a certain probability in a given time horizon. VaR summarizes

financial risk inherent in portfolios into a simple number. Though VaR is used to measure market risk in general, it incorporates many other risks like foreign currency, commodities, and equities. (Jorion, 2001)

Risk Adjusted Rate of Return on Capital (RAROC)

It gives an economic basis to measure all the relevant risks consistently and gives managers tools to make the efficient decisions regarding risk/return trade-off in different assets. As economic capital protects financial institutions against unexpected losses, it is vital to allocate capital for various risks that these institutions face. Risk Adjusted Rate of Return on Capital (RAROC) analysis shows how much economic capital different products and businesses need and determines the total return on capital of a firm. Though Risk Adjusted Rate of Return can be used to estimate the capital requirements for market, credit and operational risks, it is used as an integrated risk management tool (Crouhy and Robert, 2001)

Securitization

It is a procedure studied under the systems of structured finance or credit linked notes. Securitization of a bank's assets and loans is a device for raising new funds and reducing bank's risk exposures. The bank pools a group of income-earning assets (like mortgages) and sells securities against these in the open market, thereby transforming illiquid assets into tradable asset backed securities. As the returns from these securities depend on the cash flows of the underlying assets, the burden of repayment is transferred from the originator to these pooled assets.

Sensitivity Analysis

It is very useful when attempting to determine the impact, the actual outcome of a particular variable will have if it differs from what was previously assumed. By creating a given set of scenarios, the analyst can determine how changes in one variable(s) will impact the target variable.

Internal Rating System

An internal rating system helps financial institutions manage and control credit risks they face through lending and other operations by grouping and managing the credit-worthiness of borrowers and the quality of credit transactions.

CONCLUSION

Risk Management is the application of proactive strategy to plan, lead, organize, and control the wide variety of risks that are rushed into the fabric of an organization's daily and long-term functioning. Like it or not, risk has a say in the achievement of our goals and in the overall success of an organization. The functions of risk management should actually be bank specific dictated by the size and quality of balance sheet, complexity of functions, technical/professional manpower and the status of MIS in place in that bank. Risk Management Committee, Credit Policy Committee, Asset Liability Committee, etc. are such committees that handle the risk management aspects. Risk management underscores the fact that the survival of an organization depends heavily on its capabilities to anticipate and prepare for the change rather than just waiting for the change and react to it. 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. The effectiveness of risk measurement in banks depends on efficient Management Information System, computerization and networking of the branch activities. The banks can take risk more consciously, anticipates adverse changes and hedges accordingly; it becomes a source of competitive advantage, as it can offer its products at a better price than its competitors. Regarding use of risk management techniques, it is found that internal rating system and risk adjusted rate of return on capital are important.

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