Risk Management Techniques: A Comparative Study on Public and Private Sector Banks

Komal Taneja

Abstract: The world is witnessing financial meltdown since many years and every global business has faced this crisis. And so the banking sector also got affected by it. The disappearance of Lehman Brothers and Bear Sterns are the results of this meltdown. Risk Management discourse has been an important factor which gained attention. The failures of banking industry to an extent were the result of weaknesses of the regulatory framework and lack of risk management practices by banks. This present research has been done to analyze the understanding of Public and Private Sector Banks on four important steps of risk management: Risk Understanding, Risk Identification, Risk Analysis and Risk Controlling.

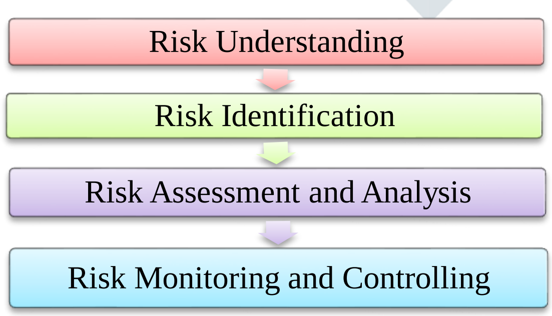
Keywords: Risk, Banks, Public Sector Banks, Private Sector Banks, Management.

Introduction: "Banking is the epicenter of economic development and sound management is the basic need to create confidence and accelerate the process of economic growth" (Desai, 2010). As per section 5(c) of the Banking Regulation Act, 1949 a "Banking Company means any company which transacts the business of banking in India." Section 5(b) defines banking as "accepting, for the purpose of lending or investment, of deposits of money from the public, repayable on demand or otherwise and withdrawable by cheque, draft, and order or otherwise."

Risks may be defined as uncertainties resulting in adverse outcome, adverse in relation to planned objective or expectations (Kumar, Chatterjee, Chandrasekhar & Patwardhan 2005). Risk Management is described as "the performance of activities designed to minimize the negative impact (cost) of uncertainty (risk) regarding possible losses" (Schmidt and Roth, 1990).

Risk Management Process:

Risk Management Process



1. Risk Understanding:

The risk management can be implemented successfully in a bank when all the managers who are concerned with this have a basic understanding of risk. So, it is very important that the roles and responsibilities are of all the risk managers should be clearly defined.

2. Risk Identification:

Risk identification includes identifying risks which arise at transaction level and evaluating its impact on portfolio and capital requirement. The banks face multiple risks at a same time, so it's important for banks to prioritize its risks.

3. Risk Assessment and Analysis:

RBI also suggested guidelines to measure different risks. Risk measurement generally includes quantitative techniques. The risk measures try to find variations in earnings, market value, loss due to default etc., arising out of uncertainties associated with various risk elements.

4. Risk Monitoring and Controlling:

The important factor in managing a risk is increasing the Risk Adjusted Return on Capital (RAROC). The implementation of risk and business policy should go hand in hand. So, usually the risk management is carried out at corporate level.

Literature Review:

Singh, J.P., et al. (2006) in their research on "Managing risk in banking industry: Mapping the changing contours" highlighted the changing face of the Indian Banking industry to develop a better understanding about the risk threats which will facilitate a more efficient and effective management of risk. The authors suggested that every bank should build a vigorous platform that is strong enough to resist risk by taking various measures into considerations. The division of risk was also discussed under credit risk in bank, market risk in bank, and operational risk which will form the basic super structure of a healthy, sound, consistent and proactive risk management system not only for banking business, but for all business entities. Three pillars to tolerate the risks were also highlighted which were bare minimum capital, supervisory process and market discipline.

Prakash, P. (2016) in his article "A Study on the Significance of Risk Management in Banking Sector" attempted to understand different types of risks and to analyze the risk management process. The author also examines the importance of risk management and the plans which banks have to deal with these risks. The study conducted on secondary data and the researcher concluded that the success of any bank depends on the efficiency of its risk management system.

Research Methodology:

Objective of the Research Paper:

- To identify and compare the types of risk faced by Public and Private Sector Banks
- To analyse and compare management's awareness and understanding of the significant steps of risk management by Public and Private Sector Banks.

Sample Size:

10 banks (which consist of 5 Public Sector Banks and 5 Private Sector Banks were selected for the study.

Table 1: Names of Selected Banks

S.No.	PSBs	S.No.	Pvt.SBs
1	State Bank of India	1	Axis Bank
2	Bank of Baroda	2	HDFC Bank
3	IDBI Bank Ltd.	3	ICICI Bank
4	Indian Bank	4	Kotak Mahindra Bank
5	UCO Bank	5	Yes Bank

A combination method was used in the questionnaire which included Yes/No and likert scale, the Yes/No is used for filtering, Likert scale for knowing the further response.

75 managers of different departments have been randomly selected to obtain the responses regarding risk management practices in their banks. 60 questionnaires have been finalized for the further analysis, 30 each of PSBs and Pvt. SBs, which depicts a good response rate of 80%.

Data Analysis:

Different Types of Risks and Techniques for Risk Management:

Table 2: Different Types of Risks in Selected Banks

SN	Risk	Degree of Acceptance (Yes or No) in percentage		
		PSBs	Pvt.SBs	Overall
1	Counterparty Risk	93.33	76.67	85.00
2	Market Risk	96.67	93.33	95.00

3	Liquidity Risk	90.00	93.33	91.67
4	Operational Risk	100.00	100.00	100.00
5	Strategic Risk	50.00	73.33	61.67
6	Technology Risk	83.33	90.00	86.67
7	Foreign Exchange Risk	90.00	86.67	88.33
8	Country Risk	80.00	63.33	71.67
9	Credit Risk	100.00	100.00	100.00
10	Off-Balance sheet Risk	90.00	80.00	85.00
11	Equity Risk	63.33	56.67	60.00
12	IRR	86.67	93.33	90.00
13	Legal and Regulatory Risk	80.00	66.67	73.33
14	Solvency Risk	0.00	10.00	5.00

Above table shows fourteen different categories of risks in selected banks which have been recognized during the research.

Table 3: The Top Five Most Important Risks

SN	Risk	Frequency	Percentage
1	Credit Risk	60	100.00
2	Operational Risk	60	100.00
3	Market Risk	57	95.00
4	Liquidity Risk	55	91.67
5	Interest Rate Risk	54	90.00

Table 3 shows the five most important types of risks in chosen banks.

Table 4: Managers' Responses on Important Method(S) for Risk Identification

SN	Method	Degree of Acceptance (Yes or No) in percentage		
		PSBs	Pvt.SBs	Overall
1	Inspection by Bank Risk Committee	87	93	90.00
2	Internal Audit	100	93	96.67
3	Risk Survey	80	60	70.00
4	Process Analysis	87	73	80.00
5	SWOT Analysis	93	87	90.00
6	Benchmarking	83	80	81.67
7	Scenario Analysis	80	83	81.67
8	Internal Communication (Periodical Risk Reports)	93	80	86.67

The above table shows the important methods which banks use for identification of risks. Internal Audit is employed by maximum banks for risk identification and risk survey is least used by banks. The second most popular methods for risk identification are inspection by bank risk committee and SWOT analysis.

Table 5: Managers' Responses on Important Method(S) for Risk Measurement and Analysis:

SN	Method	Degree of Acceptance (Yes or No) in percentage		
		PSBs	Pvt.SBs	Overall
1	Statistical Models for Risk Measurement	90	80	85.00
2	Duration Analysis	73	83	78.33
3	Gap Analysis	87	87	86.67
4	Credit Worthiness Analysis	100	83	91.67
5	Maturity Matching Analysis	87	80	83.33
6	Sensitivity Analysis	90	100	95.00

7	Financial Statement Analysis	87	100	93.33
8	Stress Testing	60	53	56.67

The above table shows the important methods which banks use for measurement and analysis of risks. Sensitivity Analysis is adopted by maximum banks use for risk measurement and very few banks use stress testing. The second most popular method for risk measurement is financial statement analysis.

Table 6: Managers' Responses on Important Techniques for Risk Controlling and Monitoring:

SN	Method	Degree of Acceptance (Yes or No) in percentage		
		PSBs	Pvt.SBs	Overall
1	Risk Reporting	93	93	93.33
2	Establishing Standards	87	93	90.00
3	Adoption of Advanced Technology	80	93	86.67
4	Contingency Plan	73	67	70.00
5	Assets Diversification	87	77	81.67
6	Derivatives(Futures, forwards, options and swaps)	73	60	66.67
7	Hedging	93	77	85.00
8	Collateral Arrangements	93	73	83.33
9	Deposit Collection	93	83	88.33
10	Contracts	87	80	83.33
11	Security Deposits	87	73	80.00
12	On balance sheet netting	87	90	88.33
13	Reserves for loan loss	100	93	96.67

The above table shows the important techniques of risk controlling and monitoring which banks adopt. Reserve for loan loss is used by maximum banks for risk controlling and derivative investment is a method, only 66% banks use. The second most popular method for risk controlling is risk reporting where every risk is reported properly so that timely action can be taken.

Table 7: Managers' Responses on Important Reports for Risk Reporting:

SN	Report	Degree of Acceptance (Yes or No) in percentage		
		PSBs	Pvt.SBs	Overall
1	Capital at Risk	90	83	86.67
2	Credit Risk	93	93	93.33
3	Market Risk	87	90	88.33
4	Interest Rate Risk	90	83	86.67
5	Liquidity Risk	100	87	93.33
6	Forex Risk	97	83	90.00
7	Operational Risk	93	100	96.67
8	Country Risk	87	63	75.00

The above table shows the important reports which banks use for reporting of risks. Approximately all the banks prepare operational risk report. The second most popular report is liquidity risk report. Overall it can be said that almost all the respondents were agree that their banks prepare all the reports. The lowest score of country risk report states that this is the least common report which is prepared by the banks.

Findings:

1. The research studied four steps of overall risk management process. The results of first step which is risk understanding shows that the PSBs give maximum importance in defining the roles and responsibilities of various functionaries of banks more clearly. On the contrary, private banks give

importance to take necessary steps to keep themselves updated for modern risk handling techniques. The low values of standard deviation show fewer differences in the opinions among PSBs employees in comparison to Pvt.SBs.

2. The second step of risk management is risk identification which was analyzed on four different parameters. Both the banks' responses clearly show that the bank carries out a systematic identification of its risk that is related to its objectives. Until and unless the objectives are clear, it is very difficult to carry out the risk identification process. 100 percent PSBs and 93% Pvt.SBs use Internal Audit method for identifying risk. Only 70% of the selected banks undergo risk surveys as it involves cost and time both.
3. Risk Assessment and Analysis is the third step in the process of risk management. The responses by public sector employees show that they give much importance to credit risk. While the Pvt.SBs assesses costs and benefits of analyzed risk. All the selected PSBs apply credit worthiness analysis for assessing risk and all the selected Pvt.SBs use sensitivity analysis and financial statement analysis for assessing and analyzing risk. Stress testing is the least popular method and sensitivity analysis is the most popular method among selected banks to carry out risk analysis.
4. The last step is controlling the risk which can be done with the methods like asset diversification, use of derivatives, hedging etc. The risk controlling has been judged on 5 parameters and the results by PSBs show that they evaluate the effectiveness of existing risk management and controlling before taking any further decision. Highest mean score by Pvt.SBs shows that Bank monitors the credit limit of everyone effectively. All the PSBs keep reserves for loan losses to control risk. 93% Pvt.SBs employ following methods to control risk – risk reporting, establishing standards, adopting advance technology and reserve for loan loss.

Conclusion: Due to dynamic changes in economic environment all over the world, the risk management has become very crucial for banks. To strengthen the risk management system, the central banks of different countries are putting rigorous efforts. This study focused broadly on examining the treasury risk management of selected banks in India by comparing the risk management practices in public and private banks. It depends upon the good understanding of risk and risk management among bank employees. Besides, it is very significant for banks to formulate an active risk management process to identify, measure, monitor and control different risks including market, liquidity and other risks in a bank.

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