

**APPRAISAL OF CREDIT RISK IDENTIFICATION PRACTICES OF
SELECTED PUBLIC AND PRIVATE SECTOR BANKS**

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ABSTRACT

In the present study, an attempt is made to analyze and compare the credit risk identification practices of selected public and private sector banks in India namely State Bank of India, Syndicate Bank, Punjab National Bank, Union Bank of India, Bank of Baroda, Andhra Bank, Oriental Bank of Commerce, IDBI, ICICI Bank, Axis Bank Limited and HDFC in the area of Haryana and Delhi (including NCR). The collected data is analysed with the help of various statistical techniques such as frequency, percentage, mean and standard deviation. To validate the results, t-statistic and ANOVA technique has been used. The bank-wise ANOVA results of various public sector banks show that there is a significant difference among the bankers' viewpoint with regard to governance structure for identifying the credit risk, internal control system for dealing swiftly with the credit risk and system for acquiring adequate information about borrowers' status for identifying the credit risk; whereas there is no significant difference among the bankers' viewpoint with regard to the procedure and process to implement the credit risk policies. There is also a significant difference among the viewpoint of respondents of private sector banks towards the governance structure for identifying the credit risk, internal credit policy for identifying the credit risk and the system for acquiring adequate information about borrowers status for identifying the credit risk; whereas there is no significant difference among the viewpoint of respondents of private sector banks towards the internal control system for dealing swiftly with the credit risk and the procedure and process to implement the credit risk policies. The results of t-test shows the bankers' viewpoint towards the internal credit policy for identifying the credit risk, internal control system for dealing swiftly with the credit risk, the procedure and process to implement the credit risk policies and the system for acquiring adequate information about

borrowers' status for identifying the credit risk; among public and private banks is not found significantly different.

Key words: Identification, Governance, Structure, Internal Control.

INTRODUCTION:

In the post liberalization era, sea changes have been witnessed in the Indian banking sector. Expanding business arena, deregulation and globalization of financial activities emergence of new financial products and increased level of competition has necessitated a need for an effective and structured risk management in financial institutions. The risk management framework and sophistication of the process, and internal controls used to manage risks depends on the nature, size and complexity of institutions activities. 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. The intensity of the need of risk management can be well understood by the depth and severity of the crisis which were amplified by weaknesses in the banking sector such as excessive leverage, inadequate and low-quality capital, and insufficient liquidity buffers. Risk management in banking sector seeks to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spill over from the financial sector to the real economy. There is a need for comprehensive set of reforms measures to strengthen the regulation, supervision and risk management, and governance of the Indian banking sector, which in turn will improve the banking sector's ability to absorb shocks arising from financial and economic stress. In this backdrop, it is imperative that banks must have a robust credit risk identification practices which is sensitive and responsive to these factors. The effective credit risk identification practices is a critical component of comprehensive of credit risk management and is essential for the long term success of banking organisation.

REVIEW OF LITERATURE

Various articles on different aspects of credit risk management appeared in different journals and/or magazines, but they are restrictive in nature. *Singh (2013)* concluded that credit risk management policy of the bank dictates the credit risk strategy. These policies spell out the target markets, risk acceptance/avoidance levels, risk tolerance limits, prefer levels of

diversification and concentration, credit risk measurement, monitoring and controlling mechanisms. The ever-improving risk management practices in the bank will result in bank emerging stronger, which in turn would confer competitive advantage in the market. *Nabil (2012)* intended to propose a new dynamic mechanism to the risk management industry for calculating probabilities of default (PD) and calculated the realized probability of defaults and Bayesian estimates in the initial phase and then using these estimates as inputs for the core model, it generated implied Probability of Default (PD) through actuarial estimation tools and different probability distributions. This mechanism was specialized to work best for Low Default Portfolios (LDPs). *Abadi et al (2011)* concluded that banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships between credit risk and other risks. This research also studied the relationship between credit risk indices and borrower's timely payback in the bank. Financial indexes that are used to study the borrower's situation are different in credit time and one can divide them in two sets i.e. short-run and long-run. *Fabio (2011)* found that risk premium on government debt will likely be higher and more volatile than in the past. In some countries, sovereign debt has already lost its risk-free status; it may do so in the future in others. It did not assess actual sovereign risk and its impact on bank stability in individual countries at the present juncture. *Srinvas et al (2011)* focused on the design and development of the credit rating model for public sector banks in India. The need to enhance the existing model and to realize the impact of BASEL II Norms was the reason for the development of the models. It was concluded that the weighted average model can be used for predicting the credit worthiness of the clients because it has higher predictive power. *Salvador (2010)* discussed a methodology, the steps needed to design the model and the assessment and validation process that can be applied in the business area, in particular, to establish an interest rate policy with customers. How the model can be used to develop credit risk management under the Basel II IRB approaches was also explained.

The foregoing review reveals that most of these studies were conducted in the context of foreign banks, based on small sample with a limited number of variables and analyzed different forms of relationships without comparing their relative performance. The present study is an improvement over earlier studies. Firstly, it includes large number of banks for the purpose of investigation. Secondly, a comparison between leading public sector banks in India with good standing in the market and undertaking considerable business in the market is made.

RESEARCH METHODOLOGY

Scope of Study

The present study covers some of the credit risk identification practices of selected public and private sector banks namely State Bank of India, Syndicate Bank, Punjab National Bank, Union Bank of India, Bank of Baroda, Andhra Bank, Oriental Bank of Commerce, IDBI, ICICI Bank, Axis Bank Limited and HDFC in the area of Haryana and Delhi (including NCR).

Objectives of Study

The main objective of the study is to analyze and compare the credit risk identification practices of selected public and private sector banks in India. In this broader framework, the following are the specific objectives of the study:

1. To analyze the procedure and processes to implement the credit risk policies.
2. To examine the internal credit policy for identifying the credit risk.
3. To appraise the internal control system for dealing swiftly with credit risk arising from changes in environment.
4. To study the system for acquiring adequate information about borrowers' status for identifying the credit risk.
5. To study the governance structure for identifying the credit risk.

Research Hypotheses

To validate the results of the study, the following hypotheses have been formulated and tested:

- H₀₁ There is no significant difference in the procedure and processes to implement the policies for identifying the credit risks in selected banks.
- H₀₂ There is no significant difference among the banker's viewpoint regarding the internal credit policy for identifying the credit risk in selected banks.
- H₀₃ There is no significant difference among the banker's viewpoint in the internal control system for dealing swiftly with credit risk arising from changes in environment in selected banks.
- H₀₄ There is no significant difference in the system to acquire adequate information about borrowers' status for identifying the credit risk in selected banks.

H₀₅ There is no significant difference among the banker's viewpoint regarding governance structure for identifying the credit risk in selected banks.

Sample Profile

The population for the present study is the Indian banking sector, which is divided into two categories i.e. public and private banks. Further, State Bank of India (SBI), Syndicate Bank (SYNDI), Punjab National Bank (PNB), Union Bank of India (UNION), Bank of Baroda (BARODA), Andhra Bank (ANDHRA), Oriental Bank of Commerce (OBC) and IDBI were selected from the public sector banks, and ICICI Bank, Axis Bank Limited and HDFC were selected from the private sector banks. A sample of 50 respondents was selected from each bank on the basis of judgement sampling.

Data Collection and Data Analysis

The present study is of descriptive nature and therefore used both primary data as well as secondary data. The primary data were collected through pre-tested structured questionnaire on five point Likert scale i.e. strongly disagree (SD), disagree (D), neutral (N), agree (A), and strongly agree (SA) from the officials working at managerial level in credit risk management department in the selected banks. Though 550 questionnaires were distributed, but 502 questionnaires i.e. SBI (45), IDBI (42), OBC (47), ANDRA (45), PNB (42), UNION (47), BARODA (44), SYNDI (48), HDFC (48), AXIS (47) and ICICI (47) were found complete and considered for further analysis. Secondary data were collected from various Journals, Annual Reports and Performance Highlights of the selected banks, RBI publications, IBA Bulletins, etc. The collected data is analysed with the help of various statistical techniques such as frequency, percentage, mean and standard deviation. To validate the results, t-statistic and ANOVA technique has been used.

RESULTS AND DISCUSSIONS

The analysis of responses obtained from the bankers regarding the credit risk identification practices of the selected public and private sector banks is as follows:

1 Appropriate Procedure and Processes to Implement the Credit Risk Policies

The analysis of bankers' viewpoint with regard to the existence of appropriate procedures and processes to implement the credit risk policies is given in Table 1, which shows that most of the respondents in all the banks either agree or strongly agree with the existence of appropriate procedures and processes to implement the credit risk policies. Comparatively,

OBC is ranked at number one (Mean = 4.26, SD = 0.74) in public sector banks, followed by BARODA (Mean = 4.25, SD = 0.65), PNB (Mean= 4.24, SD = 0.73), IDBI (Mean = 4.17, SD = 0.85), SYNDI (Mean = 4.17, SD = 0.86), UNION (Mean = 4.15, SD = 0.88), ANDRA (Mean = 4.13, SD = 0.87) and SBI (Mean = 3.93, SD = 0.78). On the other hand, private sector banks, AXIS is ranked at number one (Mean = 4.06, SD = 0.79) followed by HDFC (Mean = 4.04, SD = 0.80) and ICICI (Mean = 3.91, SD = 0.80).

The sector-wise analysis of viewpoint of the bankers for the existence of appropriate procedures and processes to implement the credit risk policies exhibits that most of the bankers either agree or strongly agree in both categories of banks with the exception of 28.9 percent and 15.0 percent who fall under neutral category in private and public sector banks, respectively. Comparatively, public sector is placed at first rank with Mean = 4.16 and SD = 0.80 followed by private sector with Mean = 4.01 and SD = 0.79 in terms of the existence of appropriate procedures and processes to implement the credit risk policies.

Bank-wise ANOVA results of various public sector banks and private sector banks as exhibited in Table 1 show that there no significant difference among the bankers' viewpoint with regard to the existence of appropriate procedures and processes to implement the credit risk policies as *p*-value is more than 0.05. Therefore, the null hypothesis (H_{01}) is accepted. Analytically, the results of t-test show that there is no significant difference among the viewpoint of public and private banks towards the existence of appropriate procedures and processes to implement the credit risk policies. Therefore, the null hypothesis (H_{01}) at 0.05 level of significance (Sig. = 0.052, df = 1, 500) is accepted.

2. Internal Credit Policy Manual Guidelines/Rules

The analysis of bankers' viewpoint with regard to existence of internal credit policy manual guidelines/rules and concrete policies and procedures with respect to the credit risk identification system is given in Table 2, which shows that most of the respondents in all the banks either agree or strongly agree with the existence of internal credit policy manual guidelines/rules and concrete policies and procedures. Comparatively, BARODA is ranked at number one (Mean = 4.50, SD = 0.73) in public sector banks, followed by SYNDI (Mean = 4.46, SD = 0.55), SBI (Mean = 4.31, SD = 0.92), IDBI (Mean = 4.24, SD = 0.82), ANDRA (Mean = 4.18, SD = 0.78), PNB (Mean = 4.17, SD = 0.70), UNION (Mean = 4.17, SD = 0.73) and OBC (Mean = 4.13, SD = 0.85). On the other hand, private sector banks, AXIS is ranked at number one (Mean = 4.36, SD = 0.64) followed by ICICI (Mean = 4.17, SD = 0.70) and HDFC (Mean = 3.98, SD = 0.82).

The sector-wise analysis of viewpoint of the bankers for the existence of internal credit policy manual guidelines/rules and concrete policies and procedures exhibits that most of the bankers either agree or strongly agree in both category of banks with the exception of 17.6 percent and 14.7 percent who fall under neutral category in private and public sector banks, respectively. Comparatively, public sector is placed at first rank with Mean = 4.27 and SD = 0.77 followed by private sector with Mean = 4.17 and SD = 0.73 in terms of internal credit policy manual guidelines/rules and concrete policies and procedures.

Bank-wise ANOVA results of selected public sector banks as exhibited in Table 2 show that there is no significant difference among the bankers' viewpoint with regard to existence of internal credit policy manual guidelines/rules for identifying the credit risks as p -value is more than 0.05. Therefore, the null hypothesis (H_{02}) is accepted. On the contrary, there is significant difference among the viewpoint of respondents' of various private sector banks as p -value is less than 0.05. Therefore, the null hypothesis (H_{02}) is rejected. Analytically, the results of t-test shows the bankers' viewpoint towards the existence of internal credit policy manual guidelines/rules and concrete policies and procedures among public and private banks, which is not found to be significantly different. Therefore, the null hypothesis (H_{02}) at 0.05 level of significance (Sig. = 0.183, df = 1, 500) is accepted.

3. Capability of Internal Control System Dealing Swiftly with Credit Risks Arising from Changes in Environment

The analysis of bankers' viewpoint with regard to capability of an internal control system to deal swiftly with credit risks arising from changes in environment is given in Table 3. The analysis shows that most of the respondents in all the banks either agree or strongly agree with the existence of an internal control system for identifying credit risks. Comparatively, SYNDI is ranked at number one (Mean = 4.54, SD = 0.54) in public sector banks, followed by OBC (Mean = 4.45, SD = 0.72), BARODA (Mean = 4.36, SD = 0.78), ANDRA (Mean = 4.20, SD = 0.73), PNB (Mean = 4.19, SD = 0.81), SBI (Mean = 4.16, SD = 0.82), UNION (Mean = 4.12, SD = 0.88) and IDBI (Mean = 4.00, SD = 0.62). On the other hand, private sector banks, AXIS is ranked at number one (Mean = 4.45, SD = 0.69) followed by HDFC (Mean = 4.33, SD = 0.69) and ICICI (Mean = 4.19, SD = 0.82).

The sector-wise analysis of viewpoint of the bankers for the existence of an internal control system capable of swiftly dealing with credit risks arising from changes in environment exhibits that most of the bankers either agree or strongly agree in both category of banks with the exception of 16.2 percent and 14.7 percent who fall under neutral category in private and

public sector banks, respectively. Comparatively, private sector is placed at first rank with Mean = 4.32 and SD = 0.74 followed by public sector with Mean = 4.26 and SD = 0.76 in terms of an internal control system capable of dealing swiftly with credit risks.

Bank-wise ANOVA results of selected public sector banks as exhibited in Table 3 show that there is a significant difference among the bankers' viewpoint with regard to existence of an internal control system capable of dealing swiftly with credit risks as *p*-value is less than 0.05. Therefore, the null hypothesis (H_{03}) is rejected. On the contrary, there is no significant difference among the viewpoint of respondents of various private sector banks as *p*-value is more than 0.05. Therefore, the null hypothesis (H_{03}) is accepted. Analytically, the results of *t*-test shows bankers' viewpoint towards the existence of an internal control system for identifying the credit risk among public and private banks which is not found significantly different. Therefore, the null hypothesis (H_{03}) at 0.05 level of significance (Sig. = 0.378, df = 1, 500) is accepted.

4. Effectiveness of the System to Acquire Adequate Information about Borrowers' Status

The analysis of bankers' viewpoint with regard to effectiveness of the system to acquire adequate information about borrowers that enables the bank to properly identify risks associated with individual borrowers and credit portfolio is given in Table 4. The analysis shows that most of the respondents in all the banks either agree or strongly agree with the existence of effective systems to acquire adequate information about borrowers to properly identify credit risks. Comparatively, BARODA is ranked at number one (Mean = 4.11, SD = 0.65) in public sector banks, followed by OBC (Mean = 4.06, SD = 0.48), PNB (Mean = 4.00, SD = 0.73), SBI (Mean = 3.98, SD = 0.54), ANDRA (Mean = 3.87, SD = 0.89), IDBI (Mean = 3.74, SD = 0.86), UNION (Mean = 3.64, SD = 1.15) and SYNDI (Mean = 3.35, SD = 1.02). On the other hand, private sector banks, HDFC is ranked at number one (Mean = 4.13, SD = 0.70) followed by AXIS (Mean = 3.83, SD = 0.76) and ICICI (Mean = 3.47, SD = 1.02).

The sector-wise analysis of bankers' viewpoint for the effectiveness of the system to acquire adequate information about borrowers that enables the bank to properly identify risks associated with individual borrowers and credit portfolio, exhibits that most of the bankers either agree or strongly agree in both categories of banks with the exception of 26.1 percent and 16.4 percent who fall under neutral category in private and public sector banks, respectively. Comparatively, public sector is assigned the first rank with Mean = 3.84 and SD

= 0.85 followed by private sector with Mean = 3.81 and SD = 0.87 in terms of effectiveness of the system to acquire adequate information about borrowers for identifying the said risk.

Bank-wise ANOVA results as of various public sector banks and private sector banks exhibited in Table 4 show that there is a significant difference among the bankers' viewpoint with regard to effectiveness of the system to acquire adequate information about borrowers for identifying the credit risks as p -value is less than 0.05. Therefore, the null hypothesis (H_{04}) is rejected. Analytically, the results of t-test shows bankers' viewpoint towards the existence of effective systems to acquire adequate information about borrowers for identifying the credit risk among public and private banks which is not found significantly different. Therefore, the null hypothesis (H_{04}) at 0.05 level of significance (Sig. = 0.733, df = 1, 500) is accepted.

5. Governance Structure for Identifying the Credit Risk

The analysis of bankers' viewpoint with regard to existence of governance structures for identifying the credit risk is given in Table 5, which shows that most of the respondents in all the banks either agree or strongly agree with the existence of governance structure for identifying the credit risk. Comparatively, OBC is ranked at number one (Mean = 4.53, SD = 0.50) in public sector banks, followed by SYNDI (Mean = 4.48, SD = 0.55); BARODA (Mean = 4.45, SD = 0.70); SBI (Mean = 4.38, SD = 0.91); ANDRA (Mean = 4.27, SD = 0.75); IDBI (Mean = 4.17, SD = 0.82); UNION (Mean = 4.11, SD = 0.94) and PNB (Mean = 3.93, SD = 0.78). On the other hand, AXIS is ranked at number one (Mean = 4.32, SD = 0.69) followed by ICICI (Mean = 4.11, SD = 0.79) and HDFC (Mean = 3.92, SD = 0.79) in private sector banks.

The sector-wise analysis of bankers' exhibits that most of the bankers either agree or strongly agree in both categories of banks with the exception of 24.6 percent and 12.8 percent who fall under neutral category in private and public sector banks, respectively. Comparatively, public sector is assigned the first rank with Mean = 4.29 and SD = 0.77 followed by private sector with Mean = 4.11 and SD = 0.77 in terms of governance structure for identifying the said risk.

Bank-wise ANOVA results of various public sector banks and private sector banks as exhibited in Table 5 show that there is a significant difference among the bankers' viewpoint with regard to existence of governance structure for identifying the credit risk as p -value is less than 0.05. Therefore, the null hypothesis (H_{05}) is rejected. Analytically, the results of t-test show the bankers' viewpoint towards the existence of governance structure for

identifying the credit risk among selected public and private banks, which is found significantly different. Therefore, the null hypothesis (H_{05}) at 0.05 level of significance ($\text{Sig.} = 0.018$, $df = 1, 500$) is rejected.

CONCLUSION

To sum up, bank-wise ANOVA results of various public sector banks show that there is a significant difference among the bankers' viewpoint with regard to governance structure for identifying the credit risk, internal control system for dealing swiftly with the credit risk and system for acquiring adequate information about borrowers' status for identifying the credit risk; whereas there is no significant difference among the bankers' viewpoint with regard to the procedure and process to implement the credit risk policies. There is also a significant difference among the viewpoint of respondents of private sector banks towards the governance structure for identifying the credit risk, internal credit policy for identifying the credit risk and the system for acquiring adequate information about borrowers status for identifying the credit risk; whereas there is no significant difference among the viewpoint of respondents of private sector banks towards the internal control system for dealing swiftly with the credit risk and the procedure and process to implement the credit risk policies. The results of t-test shows the bankers' viewpoint towards the internal credit policy for identifying the credit risk, internal control system for dealing swiftly with the credit risk, the procedure and process to implement the credit risk policies and the system for acquiring adequate information about borrowers' status for identifying the credit risk; among public and private banks is not found significantly different.

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Table 1: Appropriate Procedures and Processes to Implement the Credit Risk Policies

| Sector | Bank Name | N/P | SD | D | N | A | SA | Total | Mean | Ranks | S.D | ANOVA (Sig.) | Independent Sample t Test (Sig.) |
|----------------------|-----------|-----|------------|------------|-------------|-------------|-------------|--------------|-------------|-------|-------------|----------------------------|----------------------------------|
| Public Sector Banks | SBI | N | 0 | 3 | 6 | 27 | 9 | 45 | 3.93 | 8 | 0.78 | 0.623 (df = 07, 352) | 0.052 (df = 1, 500) |
| | | % | 0.0 | 6.7 | 13.3 | 60.0 | 20.0 | 100.0 | | | | | |
| | IDBI | N | 0 | 1 | 9 | 14 | 18 | 42 | 4.17 | 4 | 0.85 | | |
| | | % | 0.0 | 2.4 | 21.4 | 33.3 | 42.9 | 100.0 | | | | | |
| | OBC | N | 0 | 0 | 8 | 19 | 20 | 47 | 4.26 | 1 | 0.74 | | |
| | | % | 0.0 | 0.0 | 17.0 | 40.4 | 42.6 | 100.0 | | | | | |
| | ANDRA | N | 0 | 3 | 5 | 20 | 17 | 45 | 4.13 | 7 | 0.87 | | |
| | | % | 0.0 | 6.7 | 11.1 | 44.4 | 37.8 | 100.0 | | | | | |
| | PNB | N | 0 | 0 | 7 | 18 | 17 | 42 | 4.24 | 3 | 0.73 | | |
| | | % | 0.0 | 0.0 | 16.7 | 42.9 | 40.5 | 100.0 | | | | | |
| | UNION | N | 0 | 2 | 9 | 16 | 20 | 47 | 4.15 | 6 | 0.88 | | |
| | | % | 0.0 | 4.3 | 19.1 | 34.0 | 42.6 | 100.0 | | | | | |
| | BARODA | N | 0 | 0 | 5 | 23 | 16 | 44 | 4.25 | 2 | 0.65 | | |
| | | % | 0.0 | 0.0 | 11.4 | 52.3 | 36.4 | 100.0 | | | | | |
| SYNDI | N | 0 | 3 | 5 | 21 | 19 | 48 | 4.17 | 5 | 0.86 | | | |
| | % | 0.0 | 6.3 | 10.4 | 43.8 | 39.6 | 100.0 | | | | | | |
| Total | N | | 0 | 12 | 54 | 158 | 136 | 360 | 4.16 | | 0.80 | | |
| | % | | 0.0 | 3.3 | 15.0 | 43.9 | 37.8 | 100.0 | | | | | |
| Private Sector Banks | HDFC | N | 0 | 0 | 14 | 18 | 16 | 48 | 4.04 | 2 | 0.80 | 0.621 (df = 02, 139) | |
| | | % | 0.0 | 0.0 | 29.2 | 37.5 | 33.3 | 100.0 | | | | | |
| | AXIS | N | 0 | 0 | 13 | 18 | 16 | 47 | 4.06 | 1 | 0.79 | | |
| | | % | 0.0 | 0.0 | 27.7 | 38.3 | 34.0 | 100.0 | | | | | |
| | ICICI | N | 0 | 1 | 14 | 20 | 12 | 47 | 3.91 | 3 | 0.80 | | |
| | | % | 0.0 | 2.1 | 29.8 | 42.6 | 25.5 | 100.0 | | | | | |
| Total | N | | 0 | 1 | 41 | 56 | 44 | 142 | 4.01 | | 0.79 | | |
| | % | | 0.0 | 0.7 | 28.9 | 39.4 | 31.0 | 100.0 | | | | | |

N= Number of Respondents, % = Percent, SD = Standard Deviation

Source: Survey (Processed and analyzed through IBM SPSS 19.0 version)

Table 2: Internal Credit Policy Manual Guidelines/Rules

| Sector | Bank Name | N/P | SD | D | N | A | SA | Total | Mean | Ranks | S.D | ANOVA (Sig.) | Independent Sample t Test (Sig.) | |
|----------------------|-----------|----------|------------|------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|----------------------------|----------------------------------|-------------|
| Public Sector Banks | SBI | N | 0 | 3 | 5 | 12 | 25 | 45 | 4.31 | 3 | 0.92 | 0.147 (df = 07, 352) | 0.183 (df = 1, 500) | |
| | | % | 0.0 | 6.7 | 11.1 | 26.7 | 55.6 | 100.0 | | | | | | |
| | IDBI | N | 0 | 0 | 10 | 12 | 20 | 42 | 4.24 | 4 | 0.82 | | | |
| | | % | 0.0 | 0.0 | 23.8 | 28.6 | 47.6 | 100.0 | | | | | | |
| | OBC | N | 0 | 2 | 8 | 19 | 18 | 47 | 4.13 | 8 | 0.85 | | | |
| | | % | 0.0 | 4.3 | 17.0 | 40.4 | 38.3 | 100.0 | | | | | | |
| | ANDRA | N | 0 | 1 | 7 | 20 | 17 | 45 | 4.18 | 5 | 0.78 | | | |
| | | % | 0.0 | 2.2 | 15.6 | 44.4 | 37.8 | 100.0 | | | | | | |
| | PNB | N | 0 | 0 | 7 | 21 | 14 | 42 | 4.17 | 6 | 0.70 | | | |
| | | % | 0.0 | 0.0 | 16.7 | 50.0 | 33.3 | 100.0 | | | | | | |
| | UNION | N | 0 | 0 | 9 | 21 | 17 | 47 | 4.17 | 7 | 0.73 | | | |
| | | % | 0.0 | 0.0 | 19.1 | 44.7 | 36.2 | 100.0 | | | | | | |
| | BARODA | N | 0 | 0 | 6 | 10 | 28 | 44 | 4.50 | 1 | 0.73 | | | |
| | | % | 0.0 | 0.0 | 13.6 | 22.7 | 63.6 | 100.0 | | | | | | |
| | SYNDI | N | 0 | 0 | 1 | 24 | 23 | 48 | 4.46 | 2 | 0.55 | | | |
| | | % | 0.0 | 0.0 | 2.1 | 50.0 | 47.9 | 100.0 | | | | | | |
| | Total | | N | 0 | 6 | 53 | 139 | 162 | 360 | 4.27 | | | | 0.77 |
| | | | % | 0.0 | 1.7 | 14.7 | 38.6 | 45.0 | 100.0 | | | | | |
| Private Sector Banks | HDFC | N | 0 | 1 | 13 | 20 | 14 | 48 | 3.98 | 3 | 0.82 | 0.039 (df = 02, 139) | | |
| | | % | 0.0 | 2.1 | 27.1 | 41.7 | 29.2 | 100.0 | | | | | | |
| | AXIS | N | 0 | 0 | 4 | 22 | 21 | 47 | 4.36 | 1 | 0.64 | | | |
| | | % | 0.0 | 0.0 | 8.5 | 46.8 | 44.7 | 100.0 | | | | | | |
| | ICICI | N | 0 | 0 | 8 | 23 | 16 | 47 | 4.17 | 2 | 0.70 | | | |
| | | % | 0.0 | 0.0 | 17.0 | 48.9 | 34.0 | 100.0 | | | | | | |
| Total | | N | 0 | 1 | 25 | 65 | 51 | 142 | 4.17 | | 0.73 | | | |
| | | % | 0.0 | 0.7 | 17.6 | 45.8 | 35.9 | 100.0 | | | | | | |

N= Number of Respondents, % = Percent, SD = Standard Deviation

Source: Survey (Processed and analyzed through IBM SPSS 19.0 version)

Table 3: Capability of Internal Control System Dealing Swiftly with Credit Risks Arising from Changes in Environment

| Sector | Bank Name | N/P | SD | D | N | A | SA | Total | Mean | Ranks | S.D | ANOVA (Sig.) | Independent Sample t Test (Sig.) |
|----------------------|-----------|-----|------------|------------|-------------|-------------|-------------|--------------|-------------|-------|-------------|----------------------------|----------------------------------|
| Public Sector Banks | SBI | N | 0 | 3 | 3 | 23 | 16 | 45 | 4.16 | 6 | 0.82 | 0.010 (df = 07, 352) | 0.378 (df = 1, 500) |
| | | % | 0.0 | 6.7 | 6.7 | 51.1 | 35.6 | 100.0 | | | | | |
| | IDBI | N | 0 | 0 | 8 | 26 | 8 | 42 | 4.00 | 8 | 0.62 | | |
| | | % | 0.0 | 0.0 | 19.0 | 61.9 | 19.0 | 100.0 | | | | | |
| | OBC | N | 0 | 0 | 6 | 14 | 27 | 47 | 4.45 | 2 | 0.72 | | |
| | | % | 0.0 | 0.0 | 12.8 | 29.8 | 57.4 | 100.0 | | | | | |
| | ANDRA | N | 0 | 0 | 8 | 20 | 17 | 45 | 4.20 | 4 | 0.73 | | |
| | | % | 0.0 | 0.0 | 17.8 | 44.4 | 37.8 | 100.0 | | | | | |
| | PNB | N | 0 | 0 | 10 | 14 | 18 | 42 | 4.19 | 5 | 0.81 | | |
| | | % | 0.0 | 0.0 | 23.8 | 33.3 | 42.9 | 100.0 | | | | | |
| | UNION | N | 0 | 2 | 9 | 17 | 19 | 47 | 4.12 | 7 | 0.88 | | |
| | | % | 0.0 | 4.3 | 19.1 | 36.2 | 40.4 | 100.0 | | | | | |
| | BARODA | N | 0 | 0 | 8 | 12 | 24 | 44 | 4.36 | 3 | 0.78 | | |
| | | % | 0.0 | 0.0 | 18.2 | 27.3 | 54.5 | 100.0 | | | | | |
| SYNDI | N | 0 | 0 | 1 | 20 | 27 | 48 | 4.54 | 1 | 0.54 | | | |
| | % | 0.0 | 0.0 | 2.1 | 41.7 | 56.3 | 100.0 | | | | | | |
| Total | N | | 0 | 5 | 53 | 146 | 156 | 360 | 4.26 | | 0.76 | | |
| | % | | 0.0 | 1.4 | 14.7 | 40.6 | 43.3 | 100.0 | | | | | |
| Private Sector Banks | HDFC | N | 0 | 0 | 6 | 20 | 22 | 48 | 4.33 | 2 | 0.69 | 0.246 (df = 02, 139) | |
| | | % | 0.0 | 0.0 | 12.5 | 41.7 | 45.8 | 100.0 | | | | | |
| | AXIS | N | 0 | 0 | 5 | 16 | 26 | 47 | 4.45 | 1 | 0.69 | | |
| | | % | 0.0 | 0.0 | 10.6 | 34.0 | 55.3 | 100.0 | | | | | |
| | ICICI | N | 0 | 0 | 12 | 14 | 21 | 47 | 4.19 | 3 | 0.82 | | |
| | | % | 0.0 | 0.0 | 25.5 | 29.8 | 44.7 | 100.0 | | | | | |
| Total | N | | 0 | 0 | 23 | 50 | 69 | 142 | 4.32 | | 0.74 | | |
| | % | | 0.0 | 0.0 | 16.2 | 35.2 | 48.6 | 100.0 | | | | | |

N= Number of Respondents, % = Percent, SD = Standard Deviation

Source: Survey (Processed and analyzed through IBM SPSS 19.0 version)

Table 4: Effectiveness of the System to Acquire Adequate Information about Borrowers' Status

| Sector | Bank Name | N/P | SD | D | N | A | SA | Total | Mean | Ranks | S.D | ANOVA (Sig.) | Independent Sample t Test (Sig.) |
|----------------------|-----------|-----|------------|------------|-------------|-------------|-------------|--------------|-------------|-------|-------------|-------------------------|----------------------------------|
| Public Sector Banks | SBI | N | 0 | 0 | 7 | 32 | 6 | 45 | 3.98 | 4 | 0.54 | 0.000 (df = 07, 352) | 0.733 (df =1, 500) |
| | | % | 0.0 | 0.0 | 15.6 | 71.1 | 13.3 | 100.0 | | | | | |
| | IDBI | N | 2 | 2 | 4 | 31 | 3 | 42 | 3.74 | 6 | 0.86 | | |
| | | % | 4.8 | 4.8 | 9.5 | 73.8 | 7.1 | 100.0 | | | | | |
| | OBC | N | 0 | 0 | 4 | 36 | 7 | 47 | 4.06 | 2 | 0.48 | | |
| | | % | 0.0 | 0.0 | 8.5 | 76.6 | 14.9 | 100.0 | | | | | |
| | ANDRA | N | 0 | 4 | 9 | 21 | 11 | 45 | 3.87 | 5 | 0.89 | | |
| | | % | 0.0 | 8.9 | 20.0 | 46.7 | 24.4 | 100.0 | | | | | |
| | PNB | N | 0 | 1 | 8 | 23 | 10 | 42 | 4.00 | 3 | 0.73 | | |
| | | % | 0.0 | 2.4 | 19.0 | 54.8 | 23.8 | 100.0 | | | | | |
| | UNION | N | 2 | 6 | 12 | 14 | 13 | 47 | 3.64 | 7 | 1.15 | | |
| | | % | 4.3 | 12.8 | 25.5 | 29.8 | 27.7 | 100.0 | | | | | |
| | BARODA | N | 0 | 0 | 7 | 25 | 12 | 44 | 4.11 | 1 | 0.65 | | |
| | | % | 0.0 | 0.0 | 15.9 | 56.8 | 27.3 | 100.0 | | | | | |
| SYNDI | N | 0 | 14 | 8 | 21 | 5 | 48 | 3.35 | 8 | 1.02 | | | |
| | % | 0.0 | 29.2 | 16.7 | 43.8 | 10.4 | 100.0 | | | | | | |
| Total | N | | 4 | 27 | 59 | 203 | 67 | 360 | 3.84 | | 0.85 | | |
| | % | | 1.1 | 7.5 | 16.4 | 56.4 | 18.6 | 100.0 | | | | | |
| Private Sector Banks | HDFC | N | 0 | 0 | 9 | 24 | 15 | 48 | 4.13 | 1 | 0.70 | 0.001 (df = 02, 139) | |
| | | % | 0.0 | 0.0 | 18.8 | 50.0 | 31.3 | 100.0 | | | | | |
| | AXIS | N | 0 | 3 | 9 | 28 | 7 | 47 | 3.83 | 2 | 0.76 | | |
| | | % | 0.0 | 6.4 | 19.1 | 59.6 | 14.9 | 100.0 | | | | | |
| | ICICI | N | 0 | 8 | 19 | 10 | 10 | 47 | 3.47 | 3 | 1.02 | | |
| | | % | 0.0 | 17.0 | 40.4 | 21.3 | 21.3 | 100.0 | | | | | |
| Total | N | | 0 | 11 | 37 | 62 | 32 | 142 | 3.81 | | 0.87 | | |
| | % | | 0.0 | 7.7 | 26.1 | 43.7 | 22.5 | 100.0 | | | | | |

N= Number of Respondents, % = Percent, SD = Standard Deviation

Source: Survey (Processed and analyzed through IBM SPSS 19.0 version.)

Table 5: Governance Structure for Identifying the Credit Risk

| Sector | Bank Name | N/P | SD | D | N | A | SA | Total | Mean | Ranks | S.D | ANOVA (Sig.) | Independent Sample t-test (Sig.) |
|----------------------|-----------|-----|------------|------------|-------------|-------------|-------------|--------------|-------------|-------|-------------|----------------------------|----------------------------------|
| Public Sector Banks | SBI | N | 0 | 3 | 4 | 11 | 27 | 45 | 4.38 | 4 | 0.91 | 0.001 (df = 07, 352) | 0.018 (df = 1, 500) |
| | | % | 0.0 | 6.7 | 8.9 | 24.4 | 60.0 | 100.0 | | | | | |
| | IDBI | N | 0 | 1 | 8 | 16 | 17 | 42 | 4.17 | 6 | 0.82 | | |
| | | % | 0.0 | 2.4 | 19.0 | 38.1 | 40.5 | 100.0 | | | | | |
| | OBC | N | 0 | 0 | 0 | 22 | 25 | 47 | 4.53 | 1 | 0.50 | | |
| | | % | 0.0 | 0.0 | 0.0 | 46.8 | 53.2 | 100.0 | | | | | |
| | ANDRA | N | 0 | 0 | 8 | 17 | 20 | 45 | 4.27 | 5 | 0.75 | | |
| | | % | 0.0 | 0.0 | 17.8 | 37.8 | 44.4 | 100.0 | | | | | |
| | PNB | N | 0 | 1 | 11 | 20 | 10 | 42 | 3.93 | 8 | 0.78 | | |
| | | % | 0.0 | 2.4 | 26.2 | 47.6 | 23.8 | 100.0 | | | | | |
| | UNION | N | 0 | 3 | 9 | 15 | 20 | 47 | 4.11 | 7 | 0.94 | | |
| | | % | 0.0 | 6.4 | 19.1 | 31.9 | 42.6 | 100.0 | | | | | |
| | BARODA | N | 0 | 0 | 5 | 14 | 25 | 44 | 4.45 | 3 | 0.70 | | |
| | | % | 0.0 | 0.0 | 11.4 | 31.8 | 56.8 | 100.0 | | | | | |
| SYNDI | N | 0 | 0 | 1 | 23 | 24 | 48 | 4.48 | 2 | 0.55 | | | |
| | % | 0.0 | 0.0 | 2.1 | 47.9 | 50.0 | 100.0 | | | | | | |
| Total | N | | 0 | 8 | 46 | 138 | 168 | 360 | 4.29 | | 0.77 | | |
| | % | | 0.0 | 2.2 | 12.8 | 38.3 | 46.7 | 100.0 | | | | | |
| Private Sector Banks | HDFC | N | 0 | 0 | 17 | 18 | 13 | 48 | 3.92 | 3 | 0.79 | 0.039 (df = 02, 139) | |
| | | % | 0.0 | 0.0 | 35.4 | 37.5 | 27.1 | 100.0 | | | | | |
| | AXIS | N | 0 | 0 | 6 | 20 | 21 | 47 | 4.32 | 1 | 0.69 | | |
| | | % | 0.0 | 0.0 | 12.8 | 42.6 | 44.7 | 100.0 | | | | | |
| | ICICI | N | 0 | 0 | 12 | 18 | 17 | 47 | 4.11 | 2 | 0.79 | | |
| | | % | 0.0 | 0.0 | 25.5 | 38.3 | 36.2 | 100.0 | | | | | |
| Total | N | | 0 | 0 | 35 | 56 | 51 | 142 | 4.11 | | 0.77 | | |
| | % | | 0.0 | 0.0 | 24.6 | 39.4 | 35.9 | 100.0 | | | | | |

N= Number of Respondents, % = Percent, SD = Standard Deviation

Source: Survey (Processed and analyzed through IBM SPSS 19.0 version).