PROBLEMS AND OBSTACLES IN CREDIT RISK MANAGEMENT IN INDIAN PUBLIC SECTOR BANKS

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ABSTRACT: *This paper evaluates the credit risk management (CRM) practices of Indian public sector banks in grant of commercial loans to find the grey areas which need review and restructuring to improve banks' asset quality. Based on literature review, a conceptual model of credit risk management systems for commercial loans, of Indian public sector banks, has been developed. This model has been used to underline the problems areas and obstacles in credit risk management through comparison of large and small banks. The empirical comparison of CRM practices of Indian public sector banks has resulted into emergence of various grey areas, like insufficient training, data management, inappropriate IT support, system disintegration, inconsistent rating approaches, which need immediate attention and if tackled properly, can reduce their non-performing assets.*

KEY WORDS: *Credit Appraisal, Obstacles in Risk Management, CRM Practices.*

JEL CLASSIFICATION: *G02, G12, G21, G32.*

1. INTRODUCTION

Credit risk is a critical risk area in banking business. If not effectively managed, it causes non-performing loans or bad assets, reduces a bank's profit margins, erodes capital and in extreme cases, may lead to bank failure. Credit risk management thus, has to be a vital banking practice, involving identification, measurement, aggregation, control and continuous monitoring of credit risk (Greuning & Bratanovic, 2009). The banking sector in India is predominantly public in nature, and its twenty-six public sector banks (PSBs) account for more than two-third of total assets of all scheduled commercial banks (RBI, 2011-12). One more PSB, Bhartiya Mahila Bank has also started functioning (November, 2013), but not made part of the study for want of audited annual reports. For the last five years, Indian Banking

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Industry has been facing a sharp rise in non-performing loans to business and industry, and the public or state-owned banks have been worst affected. Though, economic slow-down, sluggish business environment, high debt-equity ratios, project delays, slow government approvals, may be the reasons of poor debt servicing by the businesses, PSBs on their part, have been repeatedly warned by the Reserve Bank of India (RBI) to tighten their credit delivery and recovery systems to control the rising non-performing loans.

The main issues for this paper are to investigate into the efficiency of internal credit risk management systems of Indian public sector banks, their loan appraisal and review mechanisms, staff efficiency in managing business loans in highly competitive environment. These issues may be studied at a bank level or at category-wise, large and small banks. Size of the bank has been found to be a significant variable in many research studies on Indian PSBs (Das & Ghosh, 2007; Malhotra & Singh, 2010; Thiagarajan, et al, 2011; Ghosh, 2011). There is also observed homogeneity within, and heterogeneity between large and small sized bank categories. This paper shall, therefore, probe the CRM problems of Indian public sector banks (PSBs) category-wise, by comparing the CRM practices of large and small PSBs.

2. REVIEW OF LITERATURE

Risk management is the cornerstone of prudent banking. Banks exist not for eliminating or lowering risk, but managing risk (Ferguson, 2003). Commercial banks are mainly faced with credit risk, and loans are the largest and the most obvious source of credit risk (Al-Tamimi & Al-Mazrooei, 2007). Credit asset quality problem is one of the obstacles limiting the further development of commercial banks (Jin, 2011). RBI reports (2011-13) had maintained that though the Indian banks remained well-capitalized, concerns about the growing non-performing assets loomed large, particularly on the public sector banks (RBI, 2013). RBI further observed that economic slow-down is not the sole reason for deteriorating asset quality but also the inadequate appraisal and monitoring of credit proposals by banks.

Thus, an immediate and manageable challenge before Indian public sector banks is to improve their internal CRM systems and procedures in credit risk assessment, mitigation and control, to track and reduce credit delinquencies, and build quality asset portfolio. Many theoretical and empirical studies have verified that internal organizational management and strategies are the determinants of a business's profitability (Wei-Shong & Kuo-Chung, 2006), and the banks shall have a 'differential treatment, differential control' loan policy to reduce credit risk (Jin, 2011). Banks should also consider qualitative variables when setting internal systems and procedures to manage credit risk (Gama and Gerald, 2012) (Lehmann, 2003). Credit departments of the banks need to be highly informed of business environment, accounting tactics of their customers, and Basel requirements (Oesterreichische, 2004). The chief goal of an effective CRM policy must be to maximize a bank's risk-adjusted rate of return by maintaining credit exposures within acceptable limits (Lepus, 2004). Proper risk monitoring will help the bank management to discover mistakes early (Al-Tamimi & Al-Mazrooei, 2007). Oesterreichische (2004) suggested an optimal design of credit

approval process which shall minimize substantive and procedural errors by incorporating all possible risk mitigation measures.

Njanike (2009) highlighted obstacles in credit risk management systems by banks – lack of resources, disintegration of systems across departments, inconsistencies in risk-rating approaches, data management, and stringent regulatory requirements.

Previous research on different aspects of the Indian banking systems, have reported size of the bank as one of the critical variables. Malhotra and Singh (2010) observed that large banks were sometimes thought to be more capable as they may have higher quality or more technically able people on their staff, they may be freer from financial constraints. Ghosh (2011) stated that to the extent bank size acted as a proxy for diversification, it seemed likely that bigger banks could exhibit higher stability. However, his statistical results indicated negative impact of bank-size on banking stability index or larger banks had higher credit risk. Das and Ghosh (2007) studied the problem loans of the Indian state-owned banks for the period from 1994-2005, and concluded that large banks appear to have higher problem loans than the smaller ones. Although bigger banks allow for greater diversification opportunities, it could be outweighed by higher problem loans on overall quantum of credit extended (Das & Ghosh, 2007). They suggested that the potential risk-reducing benefit of diversification may have been traded-off against the paucity of adequate skills in credit evaluation in big banks. In contrast, Thiagarajan et al. (2011) found a negative correlation between bank size and the non-performing assets as banks with more assets had more resources for developing protocols and training of credit officers.

Most of these studies were, however, based only on secondary data about Indian PSBs and there is a research gap on strengths and weaknesses of CRM systems of these banks, and the CRM problems or obstacles faced by them.

3. RESEARCH METHODOLOGY

The research question for this paper is to find the problems or obstacles in managing credit risk in business loans in Indian PSBs and how they can improve upon their CRM systems and procedures. Based on review of literature, industry visits, and discussions with senior credit officers in public sector banks, the authors have designed a conceptual model of CRM systems of Indian PSBs for commercial loans. This model (Figure 1) has been the basis of an empirical investigation in CRM practices of large and small PSBs, through comparison of six large and six small PSBs to find the areas which need improvement. Despite the banks' comprehensive credit risk management systems, problems and errors erupt in their CRM processes which are being investigated by this paper.

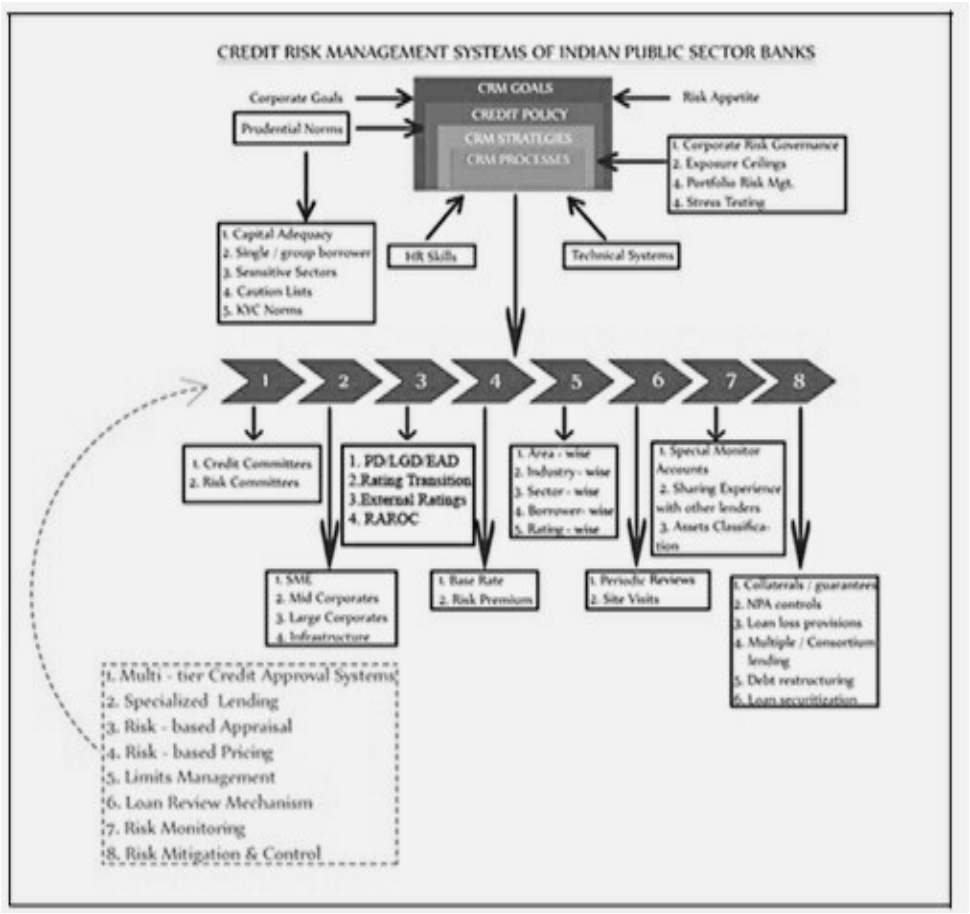

Figure 1. Modelling CRM Practices of Indian Public Sector Banks.

3.1. Research Objective

The study has the following research objective: to find the areas of problems and obstacles in credit risk management of business loans in Indian public sector banks.

4. SAMPLING AND DATA COLLECTION

The present study is based on exploratory research and examines the credit risk management practices of six large and six small Indian public sector banks out of total 26 banks. Banks in large and small categories have been divided on the basis of share of a bank in total banking assets of public sector banks with a cut-off of 2.5 per cent. The banks in each category have been selected on judgment sampling method. The study has been based on primary data collected through a structured

questionnaire from 337 credit managers in credit and risk departments of sample PSBs, in and around Delhi and have been selected through non-probability convenience sampling. Out of 337 respondents, 172 are from large PSBs and 165 from small PSBs. Large banks' respondents are from the State Bank of India (30), Punjab National Bank (28), Bank of Baroda (30), Oriental Bank of Commerce (26), IDBI Bank (28), the Syndicate Bank (30), and the small banks' respondents are from the Vijaya Bank (28), Dena Bank (26), United Bank of India (26), Punjab and Sind Bank (29), Andhra Bank (26), and the State Bank of Bikaner and Jaipur (30).

As the research has a quantitative base, a structured questionnaire has been constructed to collect data with 11 questions and 32 variables. Questions one to nine (detailed in Table 1) are researching various CRM practices of banks. Questions two and three have been adapted from Al-Tamimi and Al-Mazrooei (2007). Question 10 (detailed in Table 2) is regarding various risk mitigation measures. Question 11 (detailed in Table 3) is on various obstacles perceived by respondents in implementation of credit risk management systems in their banks. Many of the obstacles have been derived from Nijanike (2009).

5. DATA ANALYSIS AND SURVEY RESULTS

The data had been analyzed, using SPSS, by calculating descriptive statistics like percentages, mean score, standard deviation in large and small banks. One-way analysis of variance (ANOVA) was conducted to examine the significance of differences between perceptions of credit managers in large and small banks for each survey item and F and p values obtained at 0.05 level of significance.

The results show that on 15 out of 32 variables tested, the differences between the means of large and small banks are highly significant (significance is less than or equal to 0.05) or the responses of credit managers on various CRM problems and obstacles are statistically different.

That means there is a significant difference in perception of credit managers towards CRM practices/problems of large and small public sector banks in the following areas:

1. The bank has a well-designed credit risk policy and strategy (Q 1): The mean score for large banks is 4.60(S.D 0.568), and for small banks 4.47(S.D 0.579). F value 4.875 (df 1, 335) at p= 0.028 (Table 1) As such, credit managers in small banks do not perceive credit policy of their banks as well-designed as in large banks.
2. The post-sanction loan monitoring in the bank is as strong as the loan approval process (Q 7): The mean score for large banks, 4.05 (S.D 0.975) is higher than for small banks (3.67 with S.D 1.191). F value 10.617 (df 1,335) at p=0.001 (Table 1). Large banks' risk managers are more satisfied with their banks' two fundamental CRM processes, loan approval and loan monitoring.

Table 1. Statistical analysis of credit risk management practices (Q.1 to 9)

CRM Practices	ANOVA	Mean		S.D.	
	F stat.(sig)	Large	Small	Large	Small
Q.1 The Bank has a well-designed credit risk policy and strategy.	4.875(.028)	4.60	4.47	.568	.579
Q.2 Responsibility for CRM is clearly set-out through-out the bank.	1.420(.234)	4.34	4.25	.752	.702
Q.3 Bank is aware of strength and weaknesses of other banks' CRM systems.	0.436(.509)	4.34	4.30	.576	.700
Q.4 Experience & judgment of risk manager is more important than to apply the sophisticated CRM techniques.	0.635(.426)	4.34	4.28	.625	.714
Q.5 CRM systems of the bank need review and change to increase effectiveness.	0.032(.859)	3.73	3.75	.956	.979
Q.6 The human resource needs better skill, training and motivation.	0.049(.826)	4.06	4.08	.863	.855
Q.7 The post-sanction loan monitoring is as strong as loan approval process.	10.617(.001)	4.05	3.67	.975	1.191
Q.8 Inadequate appraisal of borrower's credit-worthiness is causing higher NPAs.	0.011(.918)	3.73	3.72	1.055	.999
Q.9 There are internal controls to avoid postponement of identification of NPAs.	0.156(.693)	3.83	3.87	.926	.985

(Scale: Strongly Agree 5, Agree 4, Cannot Say 3, Disagree 2, Strongly Disagree 1)

3. There is a significant difference in mean scores given by risk managers to following risk mitigation measures (Table 2) in large and small banks:
   - Reduction in processing effort per loan application. F value 6.119 (df 1, 335) at p=0.014.
   - Regular rating reviews. F value 8.839 (df 1,335) at p=0.003.
   - Reduction in subjectivity in credit ratings. F value 3.994 (df 1,335) at p=0.046.
   - Internal audits. F value 4.093 (df 336) at p=0.044.
   - Independence of loan review mechanism. F value 9.857 (df 1,335) at p=0.002.

n all the above five areas, mean scores for small PSBs are less than the large banks. In other words, the small banks' risk managers are feeling the need for improvement in these areas, which are generally the source of various substantive and procedural errors in design and execution of CRM systems and procedures (Oesterreichische, 2004). It may be concluded that there are many critical CRM practices where there are significant differences in large and small Indian public sector banks which require the attention of banks' top management, especially of small banks, to mitigate credit risk.

Table 2. Statistical analysis of credit risk mitigation measures (Q. 10)

Effectiveness of risk mitigation	ANOVA	Mean		S.D.	
	F stat.(sig)	Large	Small	Large	Small
1. Regular discussions & feedback.	1.550(.214)	3.90	4.01	.845	.785
2. Restriction on responsibility for credit approval and reviews.	1.560(.213)	3.81	3.70	.845	.783
3. Independence of risk assessment from loan sanction.	3.227(.073)	3.91	3.72	.969	.928
4. Reduction in loan processing effort.	6.119(.014)	3.66	3.42	.833	.938
5. Regular rating reviews.	8.839(.003)	4.12	3.86	.694	.910
6. Reduction of subjectivity in credit ratings.	3.994(.046)	3.66	3.47	.874	.873
7. Internal audits.	4.093(.044)	4.08	3.92	.679	.773
8. Risk-based appraisal and sanctions.	1.822(.178)	4.11	4.00	.729	.773
9. Independent loan reviews.	9.857(.002)	4.09	3.80	.771	.905
10. Implementation of KYC norms.	0.235(.628)	4.28	4.33	.769	.835
11. Multi-tier credit approval processes.	0.799(.372)	4.03	4.12	.841	.927
12. Focus on weak/problem loans.	2.644(.105)	3.94	3.97	.877	.861

(Scale: Very Good- 5, Good-4, Average- 3, Below Average-2, Bad-1)

4. Eleven variables as obstacles were tested through ANOVA /F statistic and in eight such cases, credit officers in small public sector banks are perceiving more obstacles in implementation of credit risk management systems in their banks (Table 3). The major obstacles felt by them are lack of resources, lack of risk awareness, insufficient training, inconsistencies in risk-rating approaches, data management, inappropriate IT support, lack of comprehension of Basel guidelines, and lack of standardization of risk-rating and review processes.

For other variables, though the differences in responses in large and small PSBs are not statistically significant, respondent credit officers in both these bank categories agree/strongly agree that:

- Experience and judgment of risk managers is more important than to apply the sophisticated techniques of credit risk management. (93 per cent).
- Credit risk systems and procedures of bank need review and change to increase effectiveness of credit risk management. (71 per cent).
- For effective credit risk systems and procedures, the human resource needs better skill, training and motivation. (82.79 per cent).
- Most effective risk mitigation methods are KYC norms (89 per cent), risk-based appraisal (84 per cent), internal audits (82 per cent), and multi-tier credit approval processes (80 per cent).
- 70 per cent strongly agree/ agree that inadequate appraisal of borrower's credit-worthiness is causing higher NPAs. Credit officers of large PSBs (mean score 3.73, SD 1.055) are feeling more strongly than of small PSBs (mean 3.72, SD .999) that weak loan appraisals are the cause of non-performing business loans.

Table 3. Statistical analysis of obstacles in credit risk management (Q.11)

Obstacles in CRM	ANOVA	Mean		S.D.	
	F stat.(sig)	Large	Small	Large	Small
(a) Lack of resources.	9.143(.003)	2.84	3.28	1.391	1.247
(b) Lack of risk awareness.	8.863(.003)	2.97	3.38	1.324	1.247
(c) Insufficient training.	7.903(.005)	3.24	3.61	1.202	1.198
(d) Disintegration of systems in departments.	3.112(.079)	2.86	3.10	1.186	1.275
(e) Inconsistencies in risk-rating approaches.	8.498(.004)	2.62	3.01	1.281	1.129
(f) Data management.	13.601(.000)	2.68	3.18	1.217	1.249
(g) Inappropriate IT support.	9.662(.002)	2.52	2.96	1.268	1.331
(h) Lack of comprehension of Basel guidelines.	4.253(.040)	2.55	2.84	1.290	1.236
(i) Lack of standardization of risk-rating and review processes.	4.618(.032)	2.48	2.78	1.273	1.283
(j) Overload.	1.883(.171)	3.09	3.29	1.294	1.353
(k) Stringent regulatory requirements.	3.118(.078)	2.74	2.98	1.193	1.337

(Scale: Very Much-5, Somewhat- 4, Cannot Say- 3, A Little Bit- 2, Not At All- 1)

6. CONCLUSIONS

The study has provided empirical evidence that the small Indian public sector banks are facing many problems and obstacles in managing credit risk and require better risk inputs and restructuring of various credit appraisal and loan review processes. For better credit risk management, their immediate concern shall be:

1. HR skill up-gradation in credit risk measurement and control by providing training to credit managers through in-bank and specialized credit analysts, to understand the financial data of borrowers, and adopt new and innovative risk strategies.
2. Revamping performance appraisal system in credit departments, where credit managers' rewards are not linked with business or loans secured for the bank, but on quality of risk assessment, mitigation and control. Establishing a staff accountability framework shall also be needed to ensure due diligence and compliance with policy and procedures.
3. Internal audit systems should be thoroughly reviewed. All cases pending compliance to audit should be seriously reviewed. There shall be continuous audit of large loans even when they are standard and performing.
4. Risk audit or external audit of banks' risk management systems and procedures can provide them with good feedback for reduction in processing effort, subjectivity in ratings or on restructuring of risk departments etc.
5. Banks shall update their data management and IT capabilities. Improved IT systems will increase efficiency of operative procedures and prediction of both counterparty and portfolio credit risk.

6. Post sanction, loan disbursement has been observed to be the weakest link in CRM processes. The credit managers shall be adequately trained to detect diversion of funds by borrowers at this stage for expansion, diversification or promotion of their sister or associate concerns outside the terms of loan agreement which is the main cause of wilful defaults.
7. The credit policy shall be regularly updated with industry studies, and market intelligence, and as Lepus (2004) suggested, there should be constant liaison within the banking industry.

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