

Comparative Study on Credit Monitoring Practices in Selected Banks of Nepal

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Abstract

Credit monitoring is performed by the banks as post approval activities for existing credit clients to identify the early warning signal of credit risk. So that, the study was accomplished to observe the credit monitoring practice in Nepalese commercial banks. The study was based on a sample of 10 commercial banks, comprising 5 private sector banks and 5 joint venture banks. This paper attempts to determine the awareness of Nepalese bankers about the significance of credit monitoring as risk identification tools. The result of the study indicates that the periodic review of the security documents, credit processing procedure, compliance of covenants setup during credit approval, technique to control default, risk reporting, review of loan account and regular follow-up were differently used as credit monitoring practice in private sector and joint venture banks in Nepal. These factors also found significant predictor for credit monitoring. Moreover, there was a positive relationship between credit monitoring practice and its factors instead of technique to control default.

Keywords: Monitoring, Compliance, Default, Approval, Procedure.

1. Introduction

Credit monitoring management is a fundamental process of the every banks and financial institutions, which replicates in the quality of the credit portfolio. The banks need to constantly do an assessment and make updates where there is a need so as to be sure to handle any unexpected risks at the right time before it happens. This is because any neglected or minimized risk can have very long term big and negative consequences since the banking activities are so interrelated with monitoring. Credit risk cannot be avoided or eliminated. So, the only alternative is to control it. For this rationale, Banks, establish the credit. Banks have challenges to maintain the credit in pass categories. Diwan & Rodick (1992), suggested that high NPLs increase the uncertainty regarding the capital position of the banks and therefore tend to limit their access to additional financing in regular banking business. The shortfall of the lending fund contributes to lower credit growth. In certain banks, governments have large amounts of non-performing loans and some commercial banks tend to finance government fiscal deficits and sustain some unprofitable government projects with large borrowings from banks. These actions increase the prospects of generating NPLs in the banks. So, non-performing loans are one of the main reasons that cause insolvency of the financial institutions and ultimately destroy the whole economy (Hou,

2007). By considering these facts, it is necessary to control non-performing loans for the financial soundness of banks; otherwise the capital can be jammed in unprofitable projects and sectors which not only damage the financial health of banks but also the economic stability of the country.

In order to control the non-performing loans, it is necessary to know their root causes in the particular financial sector (Rajaraman & Vasistha, 2002). Kassim (2002) suggests that some causes of non-performing loans (NPLs) include: Poor management, Lack of sound credit policy, Inadequate credit analysis, Errors in documentations, Undue emphasis on profitability at the expense of loan quality, Fraudulent practices (Diwan & Rodick, 1992; Diwan & Rodick, 1992), Political instability, Economic depression, Abnormal competition, Policy and regulatory inconsistencies, Weak real sector, Political and social influence on bank operators etc. Non-performing loans (NPLs) have gained world's attention in the last three to four decades as these increasing non-performing loans are causing banking crisis which are turning into banking failures (Siems & Barr, 1994).

According to K.K & Pillai (2012, p. 3), some of the important reasons for non performing asset, that should be closely monitored by the banks. These mentioned reasons are summarized below:

- Willful defaults, exhaust off of funds, fraud, disputes, management disputes, mismanagement, misappropriation of funds etc.,
- Lack of proper pre-appraisal of credit proposal and follow up.
- Improper selection of borrowers/activities.
- Inadequate working capital leading to operational issues. Under financing/untimely financing.
- Delay in completing the project.
- Non-compliance of sanction terms and conditions.
- Poor debt management by the borrower, leading to financial crisis.
- Excess capacities created on non-economic costs.
- In-ability of the corporate to raise capital through the issue of equity or other debt instrument from capital markets.
- Business failures.
- Failures to make out problems in advance.
- Diversion of funds for expansion/modernization/setting up new projects/ serving or endorsing sister concerns.
- Lack on the part of the banks viz. in credit appraisal, monitoring and follow-ups, delay in settlement of payments / subsidiaries by government bodies etc.,
- Time involved in the legal process and realization of securities.
- The management of non-performing loans is often associated with high operational costs leading to declining capital growths in the affected banks. Non-Performing Loans reduces the liquidity of banks, deform credit expansion, and slows down the growth of the real sector with direct consequences for the performance of banks. So, that credit monitoring is a useful tool to identify the earning warning signal of the borrowers. The regular monthly helps to diagnosis of the real cause of NPL and assist to improve the credit quality.
- The risk is being assessed in terms of the sternness of the impact, likelihood of occurring and controllability (Gray & Larson, 2008, p. 215). So that credit monitoring and review renewal of the existing credit limit for the client are the post sanction activities of the banks. Credit monitoring is performed by prioritizing the risk either by using off site or onsite for risk evaluation. (Williams, et al., 2006, p. 70). This monitoring is based on the likelihood and consequences. Likelihood depends on the probability that the risk will occur

and how frequently it will take place. While, consequences on the other hand can be calculated by looking at the effects on results or on the enablers of results (Williams, et al., 2006, p. 70). For this purpose, banks adopt the various monitoring and follow up tools to know the actual position of the credit clients. Hence, credit monitoring is then carried out when an appropriate risk appraisal tools has been assumed. An assessment is done against an appropriate risk-acceptance criterion to give a risk level of the credit (Williams, et al., 2006, p. 70). Therefore, monitoring and control is equally important for credit risk management practice in banking sectors. During the post credit appraisal, banks try to find out risk level from the basic sources of credit risk.

1.1 Objective of the Research

The major objective of the study is to compare the credit monitoring practices between private sector banks and joint venture banks in Nepal. The key objective of this research is to establish relationship credit monitoring practices and its explanatory variables.

1.2 Hypothesis of the Research

To fulfill the above define objectives of this study, the following hypotheses were developed and tested by using statistical tools.

H₁: There are significant differences among private sector and joint venture banks in credit monitoring practice.

H₂: There is positive relationship between credit monitoring practice and its explanatory variables.

1.3 Model Specification

To test the above hypothesis, following model has been developed by the researcher.

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon_i \text{-----(I)}$$

Dependent variable, y= credit monitoring practice (CMP)

Independent variables are explained as given.

X₁= periodically review the security document

X₂= periodically review credit processing procedures

X₃= Review the compliance of covenants to find out the early warning signal of the loan account in time

X₄= Review is a technique to control the default of loan.

X₅= Risk reporting system may support to revise the existing policy and procedures

X₆= Review of loan account find the utilization of limit.

X₇= Regular follow up the loan account to know the business activities.

2. Literature Review

Das & Das (2007) evaluated the credit risk management practices in Bangladesh. The study identified the importance of credit risk management of commercial banks and then tried to find out the existing procedures for credit risk management that were followed by the different commercial banks in Bangladesh. The researchers suggested that some prudential guidelines to be required for commercial banks to sustain in the volatile banking market.

Bodla & Verma (2009) examined the credit risk management framework of Indian commercial banks. The results show that there is the right for approval of Credit Risk with 'Board of Directors' in case of 94.4% and 62.5% of the public sector and private sector banks, respectively. The study has brought out that credit risk management framework in India is on the right track and it is fully based on the RBI's guidelines issued in this regard.

Jordon (2009) conducted the study on risk management lessons from the credit crisis. The paper shows that the perfect carrying out of risk management does not assure the huge losses. Probability of loss always exists even if all the precautionary measures are taken. There are certain factors involved in huge losses usually, business decisions and weak monitoring mechanism. The credit crisis emphasized the importance of risk management.

Pu & Zhao (2010) examined the correlation in credit risk using credit default swap (CDS) data. Secondary data for the period of January 2001 to December 2006 was taken for analysis. The finding of the research suggested that infectivity is not only statistically but also economically significant in causing correlation in credit risk.

Norden & Weber (2010) investigated the link between account activity and information production on borrower risk. For this purpose, they examined whether credit line usage and cash flows in a borrower's checking account were helpful for monitoring, and how banks used this information. Measures of account activity substantially improved default predictions and were especially helpful for monitoring small businesses and individuals. Furthermore, early warning indications resulted in higher loan spreads, and in a higher likelihood of limit reductions and complete write-offs. The result of the study shows that account activity provides a real-time window into the borrower's cash flows. It may be helpful to take a credit decision for certain types of debt financing. The finding of the research suggests that lenders can benefit most from regular monitoring and source of information.

Alam & Masukujjaman (2011) examined the risk management practices of commercial banks in Bangladesh based on five commercial banks operating in Bangladesh. The research reveals that credit, market and operational risk are the major risks in commercial banks which are managed through three layers of management structure. The Board of Directors performs the responsibility of the main risk oversight; the Executive Committee observes risk and the Audit Committee supervises all the activities of banking operations. In the circumstance of views regarding the use of risk management techniques, it is found that internal rating system and risk adjusted rate of return on capital are comparatively significant techniques used by commercial banks in Bangladesh.

Aman & Zaman (2011) examined credit risk performances of the state-owned, private and foreign banks over the period from 1990 -2005 by using the simple Error Correction Model (ECM). Credit feature is statistically significant for PBs with expected sign. In the light of empirical analysis of data, the research finds that private sector banks concentrate more on credit to attract credit customers' findings because it is imperative for private sector banks to concentrate more on credit to attract customers. In the same manners private sector banks maintain credit risk efficiently and effectively during the analysis period.

Ariffin & Kassim (2011), analyzed the relationship between risk management practices and financial performance in the Islamic banks in Malaysia. Overall, the findings on risk management practices shows that the importance of board of directors to endorse the overall policies and to guarantee that the management requires actions to manage the risks.

Hassan (2011) examined the degree to which Islamic and conventional banks used risk management practices and techniques in dealing with different types of risks in the Middle East region. There was no significant difference between Islamic Banks and Conventional Banks concerning risk identification. However, there were significant differences between Islamic Banks and Conventional Banks regarding the understanding risk, risk assessment and analysis, risk monitoring, and credit risk analysis of the entire sample banks.

Thiagarajan, Ayyappan, & Ramachandran (2011) empirically carried out a study to predict the determinants of the credit risk of the commercial banking sector in India by using an econometric model. The results showed that the insulated non-performing assets had a strong and statistically significant positive influence on the

current non-performing assets. It is a significant inverse relationship between the GDP and the credit risk for both public and private sector banks. The study reveals that both macroeconomic and bank specific factors play crucial role in determining the credit risk of the banking sector.

Nazir, Daniel, & Nawaz (2012) examined and compared the risk management practices of Conventional and Islamic banks in Pakistan. The result found that those Pakistani banks were efficient in credit risk analysis, risk monitoring and understanding the risk in the most significant factors of risk management. Furthermore, there was a significant difference in risk management practices of the Islamic and conventional banks of Pakistan.

Abdullah, Khan, & Nazir (2012) evaluated the Credit risk management of domestic and foreign banks in Pakistan. Based on the result of the research, researchers recommended that credit risk might be reduced if (i) the size of the banks keeps with specifies limits and (ii) liquidity of the banks is increased.

Rani (2012) evaluated the risk management practices in scheduled commercial banks of India. The finding reveals that the difference between the various levels of staff positions have been statistically significant, but no significant difference in the awareness level of officers of public sector, private sector and foreign sector banks regarding credit, market and operational risk. The result indicated that awareness about risk management was the optimum level of the officials of the private sector and foreign sector banks as compared to public sector banks.

Wood & Kellman (2013) examined the risk management practices by Barbadian Banks with the primary objective to evaluate the various types of risk faced by banks operating in Barbados. The main findings of the study are: risk managers perceive risk management as critical factors to banks' performance; the types of risks causing the extreme exposures are credit risk, operational risk, country or sovereign risk, interest rate risk and market risk; there is a high level of success with current risk management practices and these practices have evolved over time in line with the changing economic environment and regulatory updates.

Bilal, Talib, & Khan (2013) examined the risk management in the banking sector with the evidence from the sub-continent and gulf country. Based on statistical analysis and personal surveys, research findings concluded that banking sector of the study countries had deep concerns with potential risk challenges and they were in a continuous process to improve the risk measurement framework in accordance with the latest regulatory obligations. All three types of banks had a clear understanding of RM practices and strong relationship was observed between predictors and endogenous variables.

Arora & Kumar (2014), evaluated the credit risk management framework of public and private sector banks in India. The findings revealed that the strength of the overall CRM framework did not vary significantly between public and private sector banks as on the whole there was very little difference in the scores of the public and private sector banks.

Imbierowicz & Rauch (2014) investigated the relationship between the two major sources of bank default risk: liquidity risk and credit risk. The result of the research showed that both risk categories did not have an economically meaningful reciprocal contemporary or time-lagged relationship. These results provided new insights into the understanding of bank risk, as developed by the body of literature on bank stability risk in general and credit and liquidity risk in particular.

Luqman (2014) studied the effect of credit risk on commercial bank performance in Nigeria. Secondary data were explored in presenting the facts of the situation. The result showed that the ratio of loan and advances to total deposit negatively related to profitability, though insignificant, and that the ratio of non-performing loan to loan & advances negatively related to profitability. This study showed a significant relationship between bank performance and credit risk management. Overall credit and NPLs were major variables in determining asset quality of commercial bank.

3. Research Method and Materials

In order to fulfill the research objective, questionnaires were design to collect the primary data. The researcher has chosen the survey as the appropriate research design for the study, and as such, questionnaires were used as research instruments. The study was based on a sample of 10 commercial banks, comprising 5 private sector banks and 5 joint venture banks, which were randomly chosen. Descriptive statistics, ANOVA and regression used to analyze the data.

To ensure accuracy, internal consistency and completeness, reliability of the instrument was established using Cronbach’s alpha coefficient test (Cronbach, 1946). The choice of this indicator was influenced by the simplicity and its prominence in banking risk literature. The higher generated score is more reliable. Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient to measure the reliability but lower thresholds are sometimes used in the literature. In this case, the alpha (α) coefficients were 0.84, which is acceptable level.

4. Result and Discussion

This section presents the findings obtained from the data analysis. This result is presented in two sub sections: descriptive statistical analysis and regression analysis.

4.1 Descriptive Statistical Analysis

As shown in the given table, there was found difference of mean value of the credit monitoring practice such as periodically review of the security documents, credit processing procedure, compliance of covenants setup during credit approval, technique to control default, risk reporting, review of loan account and regular follow-up in private sector and joint venture banks in Nepal. The result indicates that credit monitoring practices were different in the Nepalese commercial banks.

Table 1 Descriptive statistics of factors of monitoring practice

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
X ₁	PSB	57	1.6	0.495	0.066	1.47	1.73	1	2
	JVB	72	1.19	0.399	0.047	1.1	1.29	1	2
	Total	129	1.37	0.485	0.043	1.29	1.46	1	2
X ₂	PSB	57	1.77	0.423	0.056	1.66	1.88	1	2
	JVB	72	1.1	0.298	0.035	1.03	1.17	1	2
	Total	129	1.4	0.491	0.043	1.31	1.48	1	2
X ₃	PSB	57	1.77	0.423	0.056	1.66	1.88	1	2
	JVB	72	1.06	0.231	0.027	1	1.11	1	2
	Total	129	1.37	0.485	0.043	1.29	1.46	1	2
X ₄	PSB	57	1.81	0.398	0.053	1.7	1.91	1	2
	JVB	72	1.08	0.278	0.033	1.02	1.15	1	2
	Total	129	1.4	0.492	0.043	1.32	1.49	1	2
X ₅	PSB	57	1.98	0.132	0.018	1.95	2.02	1	2
	JVB	72	1	0	0	1	1	1	1
	Total	129	1.43	0.498	0.044	1.35	1.52	1	2
X ₆	PSB	57	1.81	0.398	0.053	1.7	1.91	1	2
	JVB	72	1.11	0.316	0.037	1.04	1.19	1	2
	Total	129	1.42	0.495	0.044	1.33	1.5	1	2
X ₇	PSB	57	1.79	0.411	0.054	1.68	1.9	1	2
	JVB	72	1.06	0.231	0.027	1	1.11	1	2
	Total	129	1.38	0.487	0.043	1.29	1.46	1	2

Source: Survey data 2015,

PSB = Public Sector Banks, JVB= joint Venture Banks

The one way ANOVA has been used to see the any differences between private sector and joint venture banks in the analysis of the periodically review of the security documents taken by the bank. It demonstrated the model was significant ($p < 0.05$) with F value 26.127 at one degree of freedom. Similarly, there was significant differences ($p < 0.05$) in the analysis of the review of credit processing procedure between private sector and joint venture banks with F value 112.464 at one degree of freedom.

The analysis of variance (ANOVA) of review the compliance of covenants for borrower shows that F value is 150.113 at significant level ($p < 0.05$) suggesting that there was a significant differences between two group of banks. Similarly, ANOVA of review the technique to control the default demonstrated that there was significant ($p < 0.05$) differences with F value 147.179 at one degree of freedom.

Table 2 Analysis of variance

		Sum of Squares	df	Mean Square	F	Sig.
X ₁	Between Groups	5.142	1	5.142	26.127	0
	Within Groups	24.997	127	0.197		
	Total	30.14	128			
X ₂	Between Groups	14.483	1	14.483	112.464	0
	Within Groups	16.355	127	0.129		
	Total	30.837	128			
X ₃	Between Groups	16.327	1	16.327	150.113	0
	Within Groups	13.813	127	0.109		
	Total	30.14	128			
X ₄	Between Groups	16.662	1	16.662	147.179	0
	Within Groups	14.377	127	0.113		
	Total	31.039	128			
X ₅	Between Groups	30.707	1	30.707	396.488	0
	Within Groups	0.982	127	0.008		
	Total	31.69	128			
X ₆	Between Groups	15.407	1	15.407	122.383	0
	Within Groups	15.988	127	0.126		
	Total	31.395	128			
X ₇	Between Groups	17.136	1	17.136	164.23	0
	Within Groups	13.251	127	0.104		
	Total	30.388	128			

The analysis of variance (ANOVA) of risk reporting of borrower shows that F value is 396.488 at significant level ($p < 0.05$) symptomatic of significant differences between two group of banks. Similarly, ANOVA of review of loan account demonstrated that there was significant ($p < 0.05$) differences with F value 122.383 at one degree of freedom. The analysis of variance (ANOVA) of the regular follow-up of the client demonstrated that the model was significant ($p < 0.05$) with F value 164.23 at one degree of freedom respectively.

From the above statistical explanation, we conclude that there are significant differences between private sector and joint venture banks in the credit monitoring. Hence H_1 is accepted.

4.2 Regression Analysis

The dependent variable considered for this model is cumulative score of different indicators of the credit risk monitoring and control. There are more than 7 variables, all measured in Likert Scale converting them to a numeric score.

It shows that dependent variable is explained by joint correlation coefficient of 0.913 that according to Dancy and Reidy (2004) categorization is a high correlation. Similarly around 83.3% of the variability explained by the independent factors has been included in the model.

Table 3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.913 ^a	0.833	0.823	5.94	0.672

a. Predictors: (Constant), X₁-X₇

Similarly from the ANOVA table, it is shown that the model is highly significant (p<.05) reflecting that the improvement in the model is found than in the initial model. The F value is 86.079 at 7 degree of freedom. Hence, H₂ is accepted.

Table 4 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21262.191	7	3037.456	86.079	.000 ^b
	Residual	4269.685	121	35.287		
	Total	25531.876	128			

a. Dependent Variable: credit monitoring practice

b. Predictors: (Constant), X₁-X₇

After finding the model significance, we have gone through each and every independent variable. The prime motive is to identify the insignificant ones and remove them from the analysis. Then after, the significant contributions to the dependent variables have been explained in detail as given in table no. 5.

Periodically review of the security documents, credit processing procedure, and compliance of covenants setup during credit approval, risk reporting, review of loan account and regular follow-up were found significant variables during the analysis.

Risk reporting is variable that makes the significant contribution to explaining the monitoring practice when other remaining variables are controlled for with Beta coefficient of 0.0511. Risk reporting plays the important roles to collect the information. Similarly, significant contribution also found to make by regular follow-up with the beta coefficient of 0.461, and periodically review the security documents with the beta value of 0.298, while keeping all other variables constant.

Table 5 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-22.768	1.957		-11.634	0

X ₁	8.669	1.356	0.298	6.392	0
X ₂	8.284	4.008	0.288	2.067	0.041
X ₃	-21.762	7.546	-0.748	-2.884	0.005
X ₄	-0.431	2.137	-0.015	-0.202	0.84
X ₅	14.506	1.74	0.511	8.335	0
X ₆	8.113	2.94	0.284	2.759	0.007
X ₇	13.359	6.098	0.461	2.191	0.03

a. Dependent Variable: monitoring practice

More important, compliance of covenants was the variable with beta coefficient (0.-0.748), and the review of loan account with beta coefficient (0.284) was found significant predictor for monitoring practice credit risk measurement.

5. Conclusion

Lending is a key business activity in the bank. The loan portfolio is one of the largest assets and a chief source of revenue for bank, but is also a great source of risk to a bank's safety and soundness. In the view of emerging concern from the deceleration in credit growth to different portfolio, there is need for strong and effective structured mechanism to put in the place in every level. Since credit monitoring is a basic preventive tool to disclose the regulatory and functional weakness during the credit management. Monitoring is an integral part of our credit risk management practices. It is the responsibility of each credit officer to undertake ongoing credit monitoring for their allocated portfolio of the clients. Bank has specific procedures in place intended to identify at an early stage credit exposures for which there may be an increased risk of loss. The objective this early warning system is to address potential problems while adequate options for action. This early risk detection is an ideology of the credit culture and is intended to ensure that greater attention is paid to such exposures. So that monitoring parameters should be established to diagnosis the weakness.

Monitoring is an ongoing process in the banking business. Hence, most common procedures should be implimentation in regular basis. The periodically review of the security documents, credit processing procedure, compliance of covenants setup during credit approval, technique to control default, risk reporting, review of loan account and regular follow-up are the common practices for credit monitoring, that support to reduce the credit risk.

In this research, the limited source of the credit risk is considered as a primary data. The statistical result obtained through primary data analysis is not correlated using the secondary data. This may be the prospective area for future researcher in banking sector.

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