

RESEARCH ARTICLE

Influence of Credit Risk Management on Loan Performance: Special Reference from Commercial Banks of Ampara District in Sri Lanka

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Abstract

Credit risk management is an emerging activity that lies within financial institutions. This study focused on credit risk management and its impact on loan performance in commercial banks of Ampara district in Sri Lanka. The target population in this study was managers and credit officers in commercial banks in region. Census study design was used because all branch managers and credit officers were directly targeted in this study. Data were collected in 2015 using questionnaires and analyses were done using correlation analysis and multiple regression techniques. The findings revealed that loan appraisal, financial viability, technical feasibility, credit rating, risk transfer, risk diversification and risk retention has no significant relationship with loan performance. Thus this study concluded that impacts of credit risk management significantly not influenced on loan performance of Commercial Banks in Ampara District. Therefore, it can be recommended that adoption of a more stringent policy on credit risk management in commercial banks so as to improve their loan performance.

Keywords: *Credit Risk Management, Loan Performance, Commercial Banks, Diversification.*

Introduction

Banking industry is the backbone of a financial system. The importance of the stability in banking sector in a financial system was emphasized by various scholars during the recent financial crisis stated Tafri, et al, [1]. The concept of credit risk management can be treated as the heart of any commercial banks. It plays the vital role in the performance of a financial institution as it analyzes credit worth ability of borrowers. If there is any gap in credit risk assessment, then recovery of the provided loans is challenged greatly. As a whole, profitability falls in a great uncertainty. Seyfried, [2] said that in order to assess the credit risk, it is necessary to take a close look at the borrowers' economic and financial situation as well as the relevant environment (industry, economic growth.)

Said and Tumin, [3] found that the banks, as the critical part of financial system, play a vital role in a country's economic development. Due to the US sub-prime

mortgage crisis, the banking sectors of many countries faced huge losses, especially in the US and the EU. Further, Poor performance of the banking industry has slowed down the US economy and also the growth of global economy. One of the root causes is the poor lending policies of US banks. In Asia, although the losses in banking sectors are not as serious as in the US, it is also hurting the economy.

Morduch, [4] mentioned, in 1990s loans extended to customers failed to perform well thus necessitating the need for intervention. Moreover, mechanisms to evaluate for the evaluation of customer's capability to repay the loan were considered, but this didn't work well as loan defaults continued unabated. According to Rufai, [5] stated that managing credit risk in financial institutions is critical for the survival and growth of the financial institutions.

Literature Review

Payle, [6] in his study on credit risk management held that financial institutions needed to meet forthcoming regulatory requirements for risk measurement and capital. Managers need reliable risk measures to direct capital to activities with the best risk or reward ratios. They need the estimate of the size of potential losses to stay within limits imposed by readily available liquidity, by creditors, customers and regulators.

An assessment of the technical viability of a project, appropriateness of production technology and availability of equipment are necessary component in credit risk management that determines production capacity of any given firm. According to Faria, et al [7], technologies produce impact on the production process. In fact, being first to adopt a new and more efficient technique means being able to enjoy productivity gains before rivals. Therefore, it is certainly useful both, financial institutions and policy makers to understand the rate of adoption of new technologies in order to evaluate the potential impact of technical change on productivity which has an implication on the efficiency in loan servicing.

Galil, [8] examined the quality of corporate credit ratings in relation to their default prediction power. The results reveal that ratings could be improved by using publicly-available information such as size, leverage and availability of collateral. Therefore, combining such public information, industry classification with ratings could produce a better assessment of default risk. This result is consistent with the findings of Kliger and Sarig, [9] and may confirm that CRA activity adds value, even though ex-post ratings are not found to be entirely consistent across industries and the narrowness of rating categories is found to be not particularly informative.

According to the Rule, [10] who examined credit risk transfer between banks and non-bank financial sectors, including the insurance sector argued that banks are shifting credit risks from their balance sheets to insurance companies, amongst others, and insurance companies are issuing catastrophe bonds that are being sold to

institutional investors such as investment funds and other end-investors. Further, to Andersen, [11] stated although risk transfer markets have the potential to improve financial stability by diffusing exposures, there are concerns that they may equally lead to more concentrated and non-transparent risks. This was supported by Hausler, [12] who stated how the blurring of boundaries between insurance and other financial institutions implies heightened importance of insurers for financial stability. Risk retention analysis will help you decide how much risk you are able to retain which could be accomplished through risk rating models stated Amato, et al [13].

Moreover, the empirical findings by Al-Tamimi and Al-Mazrooei, [14] highlighted that UAE banks are somewhat efficient in analyzing and assessing risk and there is a significant different between UAE national and foreign banks in the practice of risk analysis and assessment. Additionally, the findings show that risk analysis and assessment are influencing risk management practices. It is also mentioned by Drzik, [15] that the BAI risk management survey showed that large bank in the US had made a substantial progress in their development and implementation of risk measures.

Cooper, et al, [16] concluded that changes in credit risks may reflect changes in the health of a bank's loan portfolio which may in turns affect the bank's performance. Miller and Nouis, (1997) found that there is a negative relationship between the credit risk and bank profitability. This implies that the more the banks were exposed to high-risks loans, the higher the accumulation of unpaid loans.

Ahamed, et al, [17] in their study found that loan loss provision has a significant positive influence on non-performing loans. Therefore, an increase in loan loss provision indicates an increase in credit risk and deterioration in the quality of loans consequently affecting bank performance adversely. Moreover, Ahmad and Ariff, [18] examined the key determinants of credit risk of commercial banks on emerging economy banking systems compared with the developed economies. The study found that

regulation is important for banking systems that offer multi-products and services; management quality is critical in the cases of loan-dominant banks in emerging economies. An increase in loan loss provision is also considered to be a significant determinant of potential credit risk. The study further highlighted that credit risk in emerging economy banks is higher than that in developed economies.

Margrabe [19] mentioned since the 1980s, companies have successfully applied modern portfolio theory to market risk and many companies are now using value at risk models to manage their interest rate and market risk exposures.

Unfortunately, however, even though credit risk remains the largest risk facing most companies, the practice of applying modern portfolio theory to credit risk has lagged. Derban, et al, [20] recommended that borrowers should be screened especially by banking institutions in form of credit assessment. Collection of reliable information from prospective borrowers

becomes critical in accomplishing effective screening as indicated by symmetric information theory.

Rufai, [5] said that adequately managing credit risk in financial institutions is critical for the survival and growth of the financial institutions. The CBSL has found some banks to be distressed in poor credit risk management which explains a high level of non-performing loans in Sri Lanka commercial banks.

The pervasive incidence of non-performing loan is one of the prime causes of failure in the banking system. And also, absence of empirical studies on client appraisal and risk management techniques such on the role of credit risk management on the loan performance of commercial banks in Sri Lanka was the principal motivation behind this study which sought to find out the impact of credit risk management on loan performance in commercial banks in Sri Lanka.

Methodology

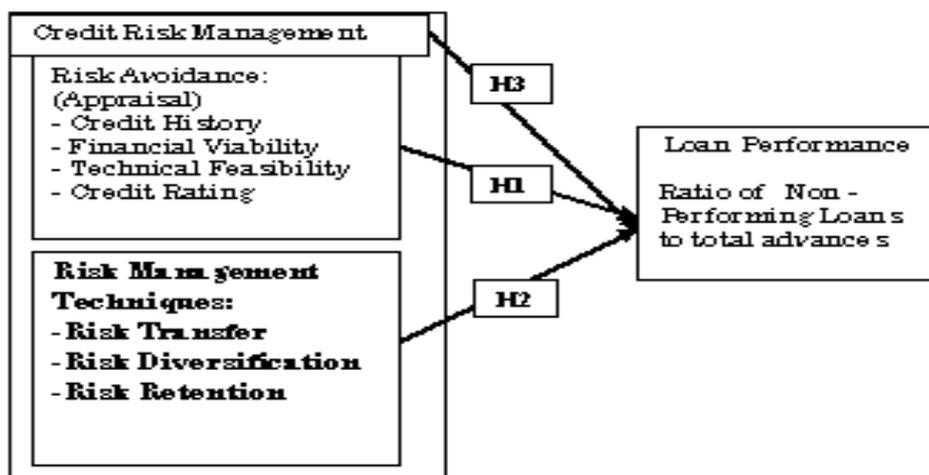


Figure 1: Conceptual framework

The study was carried out in commercial banks of Sri Lanka. According to the Central Bank of Sri Lanka (CBSL), as at end of 2014 there are 25 licensed commercial banks operate in Sri Lanka with 9 licensed specialized banks play its role to provide their services to all customers and among these all commercial banks, merely some of commercial banks are selected, according to its market capitalization. Further, these

area was chosen based on the data obtain for its research and reliability of data for the research. Moreover, the research design used in this study was descriptive research design. Data was collected from 42 credit officers including managers of each bank from licensed commercial banks and 08 from licensed specialized banks with a credit related function through questionnaire.

Results and Discussion of Findings

Table 1 shows the descriptive analysis of respondents to the issued questionnaire. The mean value of gender, age, educational qualification, worked in credit department and experience are 1.12, 1.54, 1.72, 1.16 and 2.66 respectively. Standard deviation of

gender is 0.328, age is 0.706 and education is 0.640. Moreover, worked in credit department and experience have standard deviation 0.370 and 0.872 respectively. The minimum value is 1 to all descriptive data whereas maximum value is different according to the data.

Table 1: Result of descriptive analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	50	1	2	1.12	0.328
Age	50	1	4	1.54	0.706
Education Qualification	50	1	3	1.72	0.640
Worked in Credit Department	50	1	2	1.16	0.370
Experience	50	1	4	2.66	0.872

Source: SPSS output

According to the results in the table 2 above, the greatest numbers of respondents were from licensed commercial banks representing 84% among the total number of respondents. On the other hand, about 16% of the respondents were from licensed

specialized banks Pearson' correlation analysis was applied to test the relationship between credit risk management and loan performance (LP) in commercial banks of Sri Lanka in Ampara district.

Table 2: Results of correlations analysis

		NPL	RA	CRM	RMT
NPL	Pearson Correlation	1	.099	.218	.187
	Sig. (2-tailed)		.736	.453	.521
	N	14	14	14	14
RA	Pearson Correlation	.099	1	.637**	.338*
	Sig. (2-tailed)	.736		.000	.016
	N	14	50	50	50
CRM	Pearson Correlation	.218	.637**	1	.447**
	Sig. (2-tailed)	.453	.000		.001
	N	14	50	50	50
RMT	Pearson Correlation	.187	.338*	.447**	1
	Sig. (2-tailed)	.521	.016	.001	
	N	14	50	50	50

** . Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS output

Results presented in table 2 shows that there is no statistically significant correlation but weak positive correlation exist between risk appraisal (RA) and the relationship between ratio of non - performing loans to total advances (NPL) ($r = 0.99$, $P \text{ value} = 0.736 > 0.05$). Yet, this research shows that there is not statistically significant correlation but a positive weak relationship exist between risk management techniques (RMT) and ratio of non -

performing loans to total advances ($r = 0.187$, $P \text{ value} = 0.521 > 0.05$). Moreover, it shows that there is not a statistically significant correlation but weak positive correlation exist between credit risk management (CRM) and the ratio of non-performing loans to total advances ($r = 0.218$, $P \text{ value} = 0.453 > 0.05$).

This section presents results on the multiple regression analysis which is used to test the relationship between credit risk

management and loan performance in Lanka.
commercial banks in Ampara District Sri

Table 3: Model Summary of multiple regression analysis between NPL and CRM, RMT, RA

Model	Dependent	Independent	R	R Square	Adjusted R Square	F-Value	Sig.value
01	NPL	CRM RMT RA	0.812	0.659	0.538	0.168	0.016

Source: SPSS output

R is the multiple correlation coefficients which show the relationship between the study variables. *R* can be considered to be one measure of the quality of the prediction of the dependent variable. From the findings shown in table 3, there was a weak positive relationship between study variables as shown by $R = 0.812$.

R square (R^2) is the coefficient of determination which tells us the variation in the dependent variable due to the changes in the independent variables. R^2 is the proportion of variance in the dependent variable that can be explained by the independent variables. From the findings as shown in table 4 the value R square was of 0.659, an indication that there was variation of 65.9% on NPL of commercial banks located in Ampara district due to the changes in credit risk management, risk management techniques and risk appraisal. The remaining 34.1% was not explained, because the remaining part of the variance in loan performance is related to other factors which are not depicted in the model.

From the data in above table the established multiple regression equation was:

$$\text{NPL} = 6.89 + 0.197(\text{CRM}) + 0.025 (\text{RMT}) + 0.003 (\text{RA})$$

As shown in the multiple regression equation above holding credit risk management, risk management techniques and risk appraisal, loan performance in commercial banks would be 6.89. It was found out that a unit increase in credit risk management in commercial banks would cause an increase in loan performance by 0.197. A unit increase in risk management techniques in commercial banks would cause an increase in loan performance by 0.025 and also a unit increase in credit risk management in commercial banks would cause an increase in loan performance by 0.197. This shows that there is a positive relationship between loan performance of commercial banks and credit risk management, risk management techniques and risk appraisal by commercial banks in Sri Lanka [21-22].

Table 4: Coefficients of multiple regression analysis between NPL and RA, RMT, CRM

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.890	1.848		3.729	.004
	CRM	.021	.058	.197	.362	.025
	ORM	.001	.019	.025	.046	.045
	RA	.000	.016	.003	.008	.044

a. Dependent Variable: NPL

Source: SPSS output

In the above table the Coefficients having p-values less than alpha are statistically significant. Thus none of the P values for CRM, RMT and RA is less than 0.05. Therefore none of these is statistically significant.

Conclusion

The objective of this study is to focus on credit risk management and its impact on loan performance in commercial banks in Sri Lanka. Data were collected using questionnaires in 2015 and analyses were done using correlation analysis and multiple regression techniques. This research finding can be concluded from its hypothesis such as

there is no significant relationship exists between risk appraisal, risk management techniques and credit risk management with loan performance in commercial bank in Ampara district. From the multiple regression analysis it is apparent that none of the independent variable is statistically significant. On the other hand, there is only around 20 percent of the credit risk management variation in the changes in the loan performance is explained by the model.

Based on the findings, study also recommend that since there is no significant relationship shows between risk appraisal, risk management techniques and loan performance, there is need for commercial banks in Sri Lanka in Ampara District to enhance their risk appraisal techniques and risk management techniques so as to improve their loan performance. Through them, the banks will be able to know credit

worthiness of clients and thus reduce non-performing loans. Moreover, there is also need for commercial banks to enhance their credit risk control as well as should increase use of insurance firms in a bid to transfer or share risk in case of default. This may help in decreasing loan default levels and improving their financial performance.

This research study is expected to benefit many parties. The financial institutions and the microfinance sectors may also benefit from the study because it may focus the problems financial institutions face due to non-performing loans. Further, this study shall contribute to existing knowledge on how to implement a credit risk management process to strengthen loan performance. And contribute to the formulation of a risk management policy for several financial institutions.

References

- 1 Tafri FH, Rashidah AR, Normah O (2011) Empirical evidence on the risk management tools practiced in Islamic and conventional banks. *Qualitative Research in Financial Markets*, 3(2):86-104.
- 2 Seyfried B (2001) Managing risk with credit default swaps, *Corporate Finance*, 201:37-38.
- 3 Said RM, Tumin MH (2011) Performance and Financial Ratios of Commercial Banks in Malaysia and China, *International Review of Business Research Papers*, 7(2):157-169.
- 4 Morduch J (1999) The Microfinance Promise, *Journal of Economic Literature*, pp. 1569-1614.
- 5 Rufai AS (2013) Efficacy of Credit Risk Management on the Performance of Banks in Nigeria A Study of Union Bank PLC (2006-2010), *Global Journal of Management and Business Research Administration and Management*, Vol 13.
- 6 Payle DH (1997) Bank Risk Management, University of California., Berkeley Research Program in Finance Working Papers. No: RPF-272.
- 7 Faria A, Fenn P, Bruce A (2002) Determinants of the Adoption of Flexible Production Technologies (FPTs): Evidence from Portuguese manufacturing industry, *Nottingham university business school*, 11(6):569-580.
- 8 Galil K, (2002) The Quality of Corporate Credit Rating: An Empirical Investigation, mimeo, Tel-Aviv University, Tel-Aviv., pp. 27.
- 9 Kliger D, Sarig O (2000) The Information Value of Bond Ratings, *Journal of Finance*, 2879-2902.
- 10 Rule David (2001) The Credit Derivatives Market: It's Development and Possible Implications for Financial Stability, *Financial Stability Review* (London: Bank of England, June), 117-40.
- 11 Andersen Jens Verner (2001) Risk Transfer Mechanisms: Converging Insurance, Credit and Capital Markets, pp. 2.
- 12 Hausler Gerd (2004) The Insurance Industry, Systemic Financial Stability, and Fair Value Accounting, *The Geneva Papers on Risk and Insurance*, 29(1):63-70.
- 13 Amato Jeffrey D, Craig H Furfine (2004) Are Credit Ratings Procyclical? *Journal of Banking & Finance*, (28):2641-2677.
- 14 Al-Tamimi H, Al-Mazrooei M (2007) Banks' Risk Management: A Comparison Study of UAE National and Foreign Banks, *The Journal of Risk Finance*, 8(4):394-409.
- 15 Drzik J (1995) CFO Survey: Moving towards Comprehensive Risk Management, *Bank Management*, 71:40.
- 16 Cooper MJ, Jackson WE, Patterson GA (2003) Evidence of Predictability in the Cross-section of Bank Stock Returns, *Journal of Banking and Finance*, 27(5):817-850.
- 17 Ahmed AS, Takeda C, Shawn T (1998) Bank loan loss provision: A Reexamination of Capital Management and Signaling Effects, Working Paper, Department of Accounting, Syracuse University, p. 1-37.
- 18 Ahmad, NH, Ariff M (2007) Multi-country studies of bank credit risk determinants, *International Journal of Banking and Finance*, 5(1):135-152.
- 19 Margrabe K (2007) The incidence of secured debt: evidence from the small business community, *Journal of Financial and Quantitative Analysis*, 24379-94.
- 20 Derban WK, Binner JM, Mullineux A (2005) Loan repayment performance in community development finance institutions in the UK, *Small Business Economics*, 25:319-32.
- 21 Meyers RL (2005) Track Record of Financial Institutions in Assisting the Poor in Asia ADB Institute Research Paper, No 49.
- 22 Miller S, Noulas A (1997) Portfolio mix and large-bank profitability in the USA, *Applied Economics*, 29 (1):505-512.