

IMPACT OF CREDIT RISK MANAGEMENT ON PROFITABILITY OF COMMERCIAL BANKS IN SRI LANKA

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INTRODUCTION

Credit risk management in commercial banks has become increasingly important not only because of the global financial crisis that was experiencing but also as a critical concept that regulates a bank's survival, growth, and profitability. The risks most applicable to banks, credit risk, interest rate risk, market risk, liquidity risk, solvency risk, and foreign exchange risk, are always considered in risk management. The satisfactory management of credit risk in financial institutions is critical for the survival and growth of financial institutions (Afriyie & Akotey, 2012). Thus, the ability and level of comprehensive risk management have become essential for commercial banks' steady operation and sustainable development.

Hull (2012) explains that one of the basic formations of every association, most notably a banker, is to understand the portfolio of risk it faces currently and the risk it plans to take in the future. Credit risk is the possibility of losses arising from the shrinking in the credit quality of the borrowers or counterparties. In a bank, the loss could arise from default by customers or counterpart parties' inability or willingness to meet commitments relating to lending, trading, or other financial transactions. It could arise from the banking and trading books or balance sheets. Credit risk is the current and potential hazards of earnings or capital arising from an obligator's failure to meet the terms of any contract with the bank or otherwise to perform as agreed (Kargi, 2011).

Among the different types of risks faced by the banks, the management of credit risk would be a dynamic factor because loan losses directly affect the bank's performance. Credit risk is the likelihood that the actual return on an investment or extended loan will deviate from what was expected. The poor financial performance will lead to long-term failure of the commercial banks, which may negatively affect economic growth and the country. Credit risk management leads to maximizing a bank's performance by upholding the credit risk exposure within an acceptable limit. The research aims to recognize the relationship between credit risk management and the profitability of licensed commercial banks in Sri Lanka from 2013-2022. Credit risk management identifies, measures, monitors, and controls risks arising from the possibility of default in loan repayments (Graham & Coyle, 2000). Credit extended to borrowers may be at the risk of default, whereas banks extend credit on the understanding that borrowers will repay their loans. Credit risk management in banks has become more significant because of the financial emergency the industry is experiencing and the critical concept determining bank survival, growth, and profitability. This research is also crucial from a customer's perspective because they can learn about bank stability and the capability of their business operation activities that will help the minds of individual banks identify the shortcomings and the strengths of their credit risk management practices. The leading cause of serious banking problems continues to be directly related to low credit standards for borrowers and counterparties, poor portfolio and management, deficiency of attention to changes in the economy, or other circumstances. The study further highlighted that the reason for doing the research in Sri Lanka is that the threat of credit risk is more in the emerging

economy banks rather than in developed economies (Ahamed & Ariff,2007), and few studies are conducted in developing countries (Charles *et al.*,2013).

METHODOLOGY

The study investigates the effect of credit risk management on bank's profitability in Sri Lanka. To achieve the research objectives, secondary data analyses using regression analysis, correlation coefficients analysis, and descriptive statistical techniques have been used to investigate the relationship between credit risk management and profitability. The research is entirely based on secondary data. It comprised the annual reports of sample licensed commercial banks in Sri Lanka, as this study focused on licensed commercial banks. Initially, all 24 licensed commercial banks in the banking sector were selected as of 31st December 2022. Then, after screening the banks, only 18 were qualified as the sample due to the incompleteness of data of some banks. Accordingly, 180 firm years were available for the panel data analysis. This constitutes 75% of the entire population.

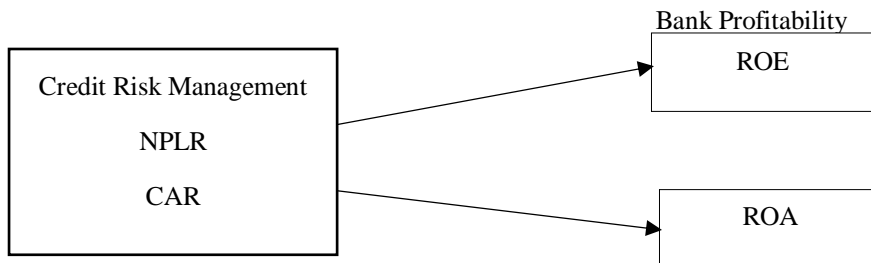
Hypotheses

*H*₁: There is a correlation between credit risk management (as measured by CAR and NPLR) and profitability (as measured by ROE) of commercial banks.

*H*₂: There is a correlation between credit risk management (as measured by CAR and NPLR) and profitability (as measured by ROA) of commercial banks.

Figure 1

Conceptual Framework



RESULTS AND DISCUSSIONS

Table 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	SD
ROE	180	0.70	44.69	16.990	8.385
ROA	180	0.10	12.27	1.604	1.211
NPLR	180	1.30	21.36	4.482	2.751
CAR	180	0.90	41.70	12.617	5.450

Return on Assets (ROA) has the lowest mean value of 1.604, with the standard deviation from the mean value of 1.211. It is a maximum of 12.27 and a minimum of 0.10. The mean Return on Equity (ROE) value is 16.990, with a deviation from the mean value of 8.385. The maximum value of Return on Equity is 44.69, and the minimum value is 0.70. Non-Performing Loan Ratio (NPLR) has a mean value of 4.482 with a deviation from the mean value of by 2.751. The maximum NPLR is 21.36, while the minimum value is 1.30. The Capital Adequacy

Ratio (CAR) has a mean value of 12.618 with a deviation from the mean value of 5.450. The maximum of CAR is 41.70. It has the lowest minimum value of 0.90 than other variables.

Pearson Correlation Analysis.

Table 2
Correlations

	NPLR	CAR	ROE	ROA
NPLR	1			
CAR	0.260**	1		
ROE	-0.320**	-0.401**	1	
ROA	-0.063	0.128	0.549**	1

** $P < 0.01$

Table 2 reports the Pearson correlation coefficients among all variables. NPLR shows a negative and highly significant correlation with profitability measured by ROA and ROE. The parameters show that an increase in non-performing loans decreases the profitability. The study shows a direct but inverse relationship between profitability and the ratio of non-performing loans to loans and advances.

CAR exhibits a negative and significant correlation with ROE and a positive insignificant relationship with ROA. ($r = -0.401$ and $r = 0.128$ respectively).

Hypothesis I

The first regression analysis used ROE as the dependent variable and NPLR as the independent variable.

H_1 : There is a correlation between credit risk management (as measured by CAR and NPLR) and profitability (as measured by ROE) of commercial banks.

Table 3
Regression results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	β	Std. Error	β			
	(Constant)	26.765	1.970		13.586	0.005
1	CAR	-0.525	0.137	-0.341	-3.832	0.451
	NPLR	-0.704	0.271	-0.231	-2.596	0.011

$R^2 = 0.211$

According to the R square value, independent variables can explain 21.1 % (0.211) of variations in independent variables. However, it still leaves 78.9 % unexplained in this study. The regression analysis indicates that the P-value for NPLR is 0.011. Under the condition that the level of significance is 5 percent, a P-value less than 5 percent should be required to reject the null hypothesis. As a result, the first part of null hypothesis 1, that "there is no correlation between NPLR and ROE," should be rejected. Therefore, the results for regression analysis 1 demonstrate that the relationship between NPLR and ROE is significant.

The regression analysis indicates that the P-value for CAR is 0.451. As a result, the second part of null hypothesis 1, that there is no correlation between CAR and ROE, should not be rejected. Therefore, the results for regression analysis 1 demonstrate that the relationship

between CAR and ROE is insignificant. As this is a negative value, it is further concluded that an increase in CAR increases the profitability of commercial banks in Sri Lanka. This finding is similar to the conclusion of Bitar et al., (2018) that CAR works towards improving the bank's profitability. However, it contradicts Li and Zou's (2014) findings; there is a negative relationship between CAR and ROE and between CAR and ROA.

Hypothesis II

The second regression analysis was done by using ROA as the dependent variable.

*H*₂: There is a correlation between credit risk management (as measured by CAR and NPLR) and profitability (as measured by ROA) of commercial banks.

Table 4
Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	β	Std. Error	β			
	(Constant)	1.375	0.316		4.350	0.000
1	CAR	0.034	0.022	0.155	1.564	0.012
	NPLR	-0.045	0.044	-0.103	-1.045	0.298
$R^2 = 0.026$						

According to the second regression, independent variables can explain 2.6 % (0.026) of variations in dependent variable. However, it still leaves 97.4% unexplained in this study. The regression analysis indicates that the P-value for NPLR is 0.298. Under the condition that the level of significance is 5%, a P-value less than 5% should be required to reject the null hypothesis. As a result, the first part of the null hypothesis, that —there is no correlation between NPLR and ROE, should not be rejected. Therefore, the results demonstrate that the relationship between NPLR and ROA is insignificant.

The regression analysis indicates that the P-value for CAR is 0.012. As a result, the second part of null hypothesis, that "there is no correlation between CAR and ROE," should be rejected. Therefore, the results demonstrate a significant relationship between CAR and ROA. This study's conclusion about the credit risk management and profitability of licensed commercial banks in Sri Lanka are as follows. The type of loan strongly determines the Sri Lankan banking sector's profitability because loans are the main asset in the banking sector. Consequently, the study recommends that every bank decide about valuable borrowers. Domestic banks should follow suitable credit risk management to optimize profitability and protect the customers, and theoretically, there is a negative relationship between credit risk management and profitability. This study further implied a negative relationship between credit risk management and profitability.

Keywords: Capital adequacy ratio, commercial banks in Sri Lanka, non-performing loan ratio, return on assets, return on equity.

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