THE EFFECT OF NON-PERFORMING LOANS ON THE PROFITABILITY OF COMMERCIAL BANKS IN SRI LANKA

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ABSTRACT

Sri Lanka commercial banks have remained with persistent challenges in managing non-performing loans that are considered to have effects on banks' profitability and the government has developed different ways of reducing non-performing loans. The purpose of this study was to find out the effects of nonperforming loans on the profitability of commercial banks in Sri Lanka. The study used commercial banks registered and operational in Sri Lanka at Central Bank Sri Lanka in the year 2018. Profitability calculated by the return on assets is used as a dependent variable and as an independent variable, non-performing loans measured by non-performing loans ratio are used. Capital adequacy, operational efficiency, and liquidity are used as control variables to enhance the validity and accuracy of the tests. The control variables used are part of the CAMEL factors that also influence commercial banks' profitability. The study selected 11 commercial banks covering the period of 2014 to 2018. To analyze and draw conclusions and recommendations, the analysis also used secondary data. Descriptive Statistics, Multiple Linear Regression, and Pearson Correlation were used for data analysis and Stata has been used as statistical software to analyze the collected data. Findings indicated that there is a negative effect of the nonperforming loans ratio on return on assets, confirming that non-performing loans negatively affect the profitability of commercial banks in Sri Lanka. There is a positive and significant relationship between Return on Assets and Capital Adequacy. When considering the relationship between Return on Assets and Liquidity there is a positive insignificant relationship and there is a negative relationship between Return on Assets and Operational Cost Efficiency. This study concluded that the managers of Commercial banks in Sri Lanka have to work hard to enhance the profitability of commercial banks and reduce occurrences of nonperforming loans. This paper, therefore, provides insight to commercial banks, the central bank, and other stakeholders on the effect of nonperforming loans on the profitability of commercial banks in Sri Lanka and provides a basis for further research.

Keywords: Non-Performing Loans, profitability, Sri Lanka, Commercial banks.

1. INTRODUCTION

The total assets of all commercial banks stood at 10.3 trillion by December 2018 (Central Bank of Sri Lanka Annual Report 2018). There are 26 licensed commercial banks in Sri Lanka that provide banking and financial services to customers. Commercial banks in Sri Lanka play an important role in the economy of Sri Lanka by providing loans to various businessmen and investors. Like other businesses, bank

evaluates their profitability based on the return on assets and the quality of the assets. Loans are the core of the banking industry, and loans are the dominant assets as they generate the largest share of operating income. However, loans can expose the bank to greater risk, which can lead to lower profitability. credit risk can be mitigated through credit risk management and the provision of doubtful loans. However, when the Non-performing loans are too high, the provision does not cover the risk. Although some previous studies have confirmed the effects of non-performing loans on profitability, some studies have failed to confirm the existence of the effects of non-performing loans on profitability. Therefore, this study examines the effect of non-performing loans on the profitability of commercial banks in Sri Lanka (Zaini et al, 2010).

The non-performing loan has been an immense issue among banking organizations because it can affect the profitability of commercial banks. Non-performing loan ratio indicates how banks manage their credit risk because it defines the proportion of loan loss amount concerning the total loan amount. In many jurisdictions and for many firms a non-performing loan is defined as a sum of borrowed money upon which the debtor has not made his or her scheduled payment for at least 90 days (Bholat, et. el,2016). The immediate consequence of large non-performing loans in the banking system is bank failure and economic slowdown. Usually, the reason for non-performing loans is the lack of effective lender resources, weakness of legal infrastructure, and lack of effective debt recovery strategies (Adhikari 2007).

According to Kroszner (2002), non-performing loans are closely connected to financial crises. The NPL creates a vicious impact on banking survival and growth and contributes to bank failures not properly handled. If banks' disposal amounts of non-performing loans exceed their profit, this will decrease the net worth of banks and decrease their risk-taking ability, making it difficult to invest funds in risky projects. There are two common measurements for non-performing loans such as non-performing loans ratio and non-performing loans coverage ratio. Non-performing coverage ratio refers to the ratio of allowance for probable losses on non-performing loans to total non-performing loans and its measured as follows; provisions for losses on NPL over non-performing loans. NPL ratio refers to the ratio of non-performing loans to total loans. It is measured as non-performing loans over total loans and advances. In this study, the non-performing loans ratio measured by non-performing loans over total loans and advances has been used.

The profitability of the banking sector is a subject that has received much attention in recent years, and now there is a broad literature that has examined the role of resource management in evaluating bank profitability. various measures are used to measure profitability, including return on assets, return on equity, and net interest margin. However, there are divergent views among scholars as a good measure of profitability regarding the superiority of one indicator over the others. For example, Goudreau and Whitehead (1989), and Uchendu (1995) believed that the three indicators are all good namely ROA, ROE, and NIM. Hancock (1989) used only ROE to measure profitability in her study.

Non-performing loans are one of the main factors which increase the expenditure of a commercial bank, and the management should take special emphasis on that issue. Many countries in the world have researched the effect of non-performing loans on the profitability of commercial banks. But third-world countries like Sri Lanka have little literature in this regard. This study, therefore, seeks to answer the question; *Do non-performing loans have effects on the profitability of a commercial bank in Sri Lanka?*

For the purpose of this study, the research questions were developed and the research questions are as follows,

- What is the impact of non-performing loans on the profitability of commercial banks in Sri Lanka?
- What is the impact of control variables on the profitability of commercial banks in Sri Lanka?

The main objective of this study is to determine the effect of nonperforming loans the on the profitability of commercial banks in Sri Lanka, while the secondary objectives of this study are as follows,

- To study and analyze the common causes for loans to become nonperforming in banks.
- To identify and analyze the current situation of profitability of the commercial banks.

After analysis of data study confirmed that non -performing loans negatively affect the profitability of commercial banks in Sri Lanka.

2. REVIEW OF LITERATURE

Akerlof (1970) first presented the Asymmetry Information theory in the essay –" The Market for Lemons". It is the single most important study in the literature on the economics of information. The asymmetric information theory tells us that it can be difficult to discriminate between good and poor borrowers, which can lead to adverse selection problems and moral hazards. The theory explains that the party with more information on a particular item to be transacted on the market (in this case the borrower) can obtain better terms for the transaction than the other party (in this case the lender) (Auronen, 2003). Mirrlees (1996) studied the asymmetry of information related to the access of information among participants in the process of marking economic decisions. Pagaon and Jappelli (1993) show that information sharing decreases adverse selection by enhancing credit applicant information for banks. The party that knows less about the same specific item to be transacted is therefore in a position of making either a right or wrong decision concerning the transaction. Adverse selection and moral hazards have resulted in a large accumulation in banks of non-performing loans (Bofondi and Gobbi, 2003). Managers of commercial banks may know more about the impact of non-performing loans on commercial bank profitability than other stakeholders. In this case, they could fail to disclose non-

performing loans and/or use provisions for losses on non-performing loans for profit smoothening.

Ross (1973) and Mitnick (1973), independently and roughly concurrently, were the first scholars to explicitly propose that an agency theory be created, and to begin its creation. Ross (1973) is responsible for the origin of the institutional theory of agency, and Mitnick (1973) for the institutional theory of agency, though the basic concepts underlying these approaches are similar. Indeed, the approaches can be seen as complementary in their uses of similar concepts under different assumptions.

There are two types of profitability determinants for commercial banks: internal and external drivers or profitability factors. Internal bank performance drivers of profitability can be described as factors that are influenced by the management decisions of a bank. These management effects will affect the banks' operating performance. External Factors include; capital adequacy, liquidity risk, credit risk, and efficiency of management. External determinants of bank profitability are factors beyond a bank management's control. They represent happenings outside of the bank's influence. The management, however, can anticipate changes in the external environment and attempt to position the institution to benefit from anticipated developments. Macroeconomic factors and financial structural factors are the two major components of the external determinants (Krakah and Ameyaw, 2010).

Elyor (2009) and Uzhegova (2010) used CAMEL to examine successfully factors that affect bank profitability. CAMEL stands for capital, quality of assets, management, the performance of earnings, and liquidity. The US Federal Deposit Insurance Corporation (FDIC) developed the system for "early identification of problems in bank operations" (Uzhegova, 2010). Although some alternative performance assessment models have been proposed, the CAMEL framework is the most widely used model and is recommended by the Basle Committee on Bank Supervision and IMF (Baral, 2005). The main determinants of commercial bank profitability are as follows,

Capital adequacy refers to the sufficiency of the amount of equity to absorb any shocks that the bank may experience (Kosmidou, 2008). Banks ' capital requirement is regulated highly by governments. This is because capital adequacy plays a key role in minimizing bank depositors' defaults and losses when a bank fails. After all, highly leveraged firms are likely to take excessive risks to increase shareholder value at the expense of financial providers (Kamau, 2009). Asset quality is one of CAMEL's determining factors for commercial bank profitability. The quality of assets held by a bank depends on exposure to specific risks, trends in nonperforming loans, and the health and profitability of bank borrowers (Baral, 2005). Aburime (2008) claims that a bank's profitability depends on its ability to predict, avoid and monitor risks, possibly to cover losses caused by risks arising. Asset quality measures a commercial bank's ability to manage credit risk.

Poor expense management is the main contributor to poor profitability (Sufian and Chong 2008). According to Ongore (2011), the concept of ownership can be defined along two lines of thought: ownership concentration and ownership mix. Several

empirical studies on non-performing loans and the profitability of commercial banks have been conducted, suggesting that adverse economic changes lead to nonperforming loans and adversely affect the performance of banks. Hou and Dickinson (2007), examined the non-performing loan in microeconomics, specifically at the bank level to empirically evaluate how non-performing loans (NPLS) affect the lending behavior of commercial banks.
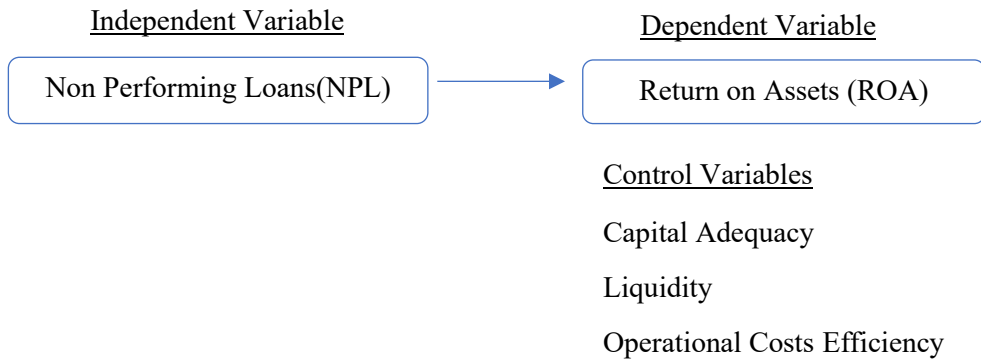
Specifically, it discusses some economic consequences of non-performing loans (NPLS). They used empirical methodology to test the effect of Non-performing Loans (NPLS) that the data taken from the balance sheet of individual banks will negatively affect the lending behavior of banks. Kolapo et al. (2012) also analyzed the effect of credit risk on five banks ' performance in Nigeria by taking data from 2000-2010. Shingjergji (2013) analyzed the impact of various bank-specific factors on Albanian banks' non-performing loans via quarterly 2002-2012 data.

Mugwe (2013) investigates the relationship between firm-specific factors and the financial performance of commercial banks in Kenya. It is evident from the above studies that theoretical concepts and empirical studies exist that concern the impact of non-performing loans on commercial bank profitability. Asymmetry Information Theory and Agency Theory as important theories that need further studies and applications. Some empirical studies confirm that a truly nonperforming loan affects commercial banks in terms of profitability.

3. METHODOLOGY

The research is of descriptive survey design nature and has been used to investigate the effect of non-performing loans on commercial bank profitability in Sri Lanka. The study covered the period between 2014 to 2018. Return on assets (ROA) is the dependent variable used in this study, which expresses the risk-taking behavior of bank management in obtaining a satisfactory level of profit per unit of total resources.

It is taken as the fraction of Total Assets and Net Income and nonperforming loans measured by the non-performing loan ratio of non-performing loans over total loans and advances were taken as an independent variable. CAMEL factors affecting profitability namely: Capital adequacy, Operation cost efficiency, and Liquidity have been considered in the analysis as control variables. After reviewing the existing literature relating to the effect of non-performing loans on the profitability of commercial banks in Sri Lanka, the conceptual framework and operationalization for the research (figure 1 and table 1) were developed by the researchers identifying dependent, independent, and control variables as follows.

Independent Variable   Dependent Variable

| Non Performing Loans(NPL) | → | Return on Assets (ROA) |

Control Variables

Capital Adequacy

Liquidity

Operational Costs Efficiency

Figure 1: Conceptual Framework

Table 1: Operationalization

Concept	Variable	Measures
Dependent Variable	Return on Assets	ROA = Net Income/ Total Assets
Independent Variable	Non-Performing Loans	Non-performing loans ratio= Total non-performing Loans / Total Loans and Advances
Control Variables	Capital Adequacy	Core Capital ratio= Core Capital / Total Risk Weighted Assets
	Operational Costs Efficiency	Cost income ratio= Total expenses/Total Revenue
	Liquidity	The Ratio of Liquid Assets to Total Liabilities = Quick Assets/ Total liabilities

Source: Developed based on Literature

The study's target population includes all commercial banks that are Central Bank registered and operating in Sri Lanka. 26 commercial banks were operating in the country, according to the Central Bank of Sri Lanka and the study collected data from 11 commercial banks. The Simple Random sampling method has been used to select the banks for study. The selected commercial banks fairly represent the study population.10 listed commercial banks and one state bank were included in the sample. A sample of 11 out of a population of 26 banks was selected based on the availability of financial data and was categorized based on asset size, liabilities positions, and earnings. The selected banks represent approximately 73 percent of all banks" asset size, liabilities positions, and earnings, therefore making this sample sufficiently representative of the population.

The data used in the study represent secondary data. It included Return on Assets (ROA), the Non-performing Loans ratio calculated from commercial banks' financial statements for the 2014 to 2018 period. In addition, the computing ratios; capital adequacy, operating cost efficiency, and liquidity were calculated from commercial

banks ' financial statements for the period under study and used as control variables. The data were collected from, The central bank of Sri Lanka reports and financial statements of commercial banks. Descriptive Statistics and panel regression were used as data Analysis Techniques. Hausman Test, multicollinearity, and normality were used. The multi-linear regression model is similar to that used by Kaaya and Pastory (2013) to analyze the impact of credit risk on bank performance in Tanzania by controlling the impact of deposits and the size of the bank used. Profitability measured by return on assets was taken as the dependent variable, non-performing loans measured by non-performing loans over total loans and advances were taken as an independent variable and capital adequacy, operational cost efficiency, and liquidity were taken multi-linear regression control variables as follows,

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(1)$$

Where:

Y= Profitability measured by Return on Assets

α = Constant

β_i = Beta Coefficient of variable i which measures the responsiveness X to unit change of in i

X1= Non -performing Loans: measured by Non-performing loans ratio. Calculated as total Non-performing Loans over Total Loans and advances (Total non-performing Loans / Total loans and advances).

X2-X4= Control Variables: The Controlling variables were added to take into consideration the factors of CAMEL which also affect profitability in the analysis.

Where:

X2= Capital Adequacy: Measured as a ratio of Core Capital over Total Risk-Weighted Assets and Calculated as (Core Capital / Total Risk-Weighted Assets)

X3= Operational Cost Efficiency: Measured as Cost income ratio and calculated as; (total expenses/Total Revenue)

X4= Liquidity: Measured as the Ratio of Liquid Assets to Total Liabilities and calculated as (Quick

Assets/ Total liabilities)

e= error term

4. FINDINGS AND DISCUSSION

Saunders et al. (2009) expressed, descriptive statistics allows us to term and compare variables numerically. As per the methodology, the research consists of the sample

selection of commercial banks in Sri Lanka with the inclusion of 05 periods from 2014 to 2018. The results produced from descriptive Statistics are shown in table 2. The mean values of Return on Assets, Non- Performing Loans, Capital Adequacy, liquidity, and Operational Cost Efficiency are 1.2782, 3.1053, 13.9373, 23.6227and 0.5238 respectively. Maximum values of Return on Assets, Non -Performing Loans, Capital Adequacy, liquidity, and Operational Cost Efficiency are 2.29, 5.72, 16.85, 29.17, and 0.82 respectively while the minimum values of Return on Assets, Non - Performing Loans, Capital Adequacy, liquidity, and Operational Cost Efficiency are 0.10, 1.43, 10.45, 21.13 and 0.36 respectively. When considering the Return on Assets and Capital Adequacy are negatively skewed. When considering the Non- Performing loans positively skewed. When considering the Operational Cost efficiency and Liquidity it is highly skewed, as it is more than one.

Table 2: Descriptive Statistics of all the Variables

Stats	Return on Assets (ROA)	Non-Performing Loans (NPL)	Capital Adequacy (CA)	Liquidity (L)	Operational Cost Efficiency (OCE)
Range	2.19	4.29	6.4	8.04	0.46
Mean	1.278182	3.105273	13.93727	23.62273	0.5238182
Minimum	0.1	1.43	10.45	21.13	0.36
Maximum	2.29	5.72	16.85	29.17	0.82
Std. Dev	0.524906	1.138259	1.455168	2.317251	0.1235207
Variance	0.2755263	1.295633	2.117513	5.369654	0.0152574
Skewness	-0.4864254	0.6858223	-0.3359085	1.069775	1.140396
Kurtosis	2.641952	2.515372	2.819791	3.052394	3.62726
Observation	55	55	55	55	55

Source: Survey data -2020

In this research, Non-Performing Loans, Capital Adequacy, and Liquidity have a high standard deviation, which emphasizes that data is spread far from the mean as well as Return on Assets and Operational Cost Efficiency have a low standard deviation, which emphasizes that the data set is closed around the mean. Based on the research methodology, the normality test, multicollinearity test, and serial correlation test were used as a part of the overall fitness of the data set. The "Jarque-Bera" statistical technique (Table 3) is used by researchers to measure normality. It indicates, as per the Stata output above, that the Jarque-Bera statistics are 3.14. The corresponding probability is 0.2083, which emphasizes that it is greater than 5% and the researcher rejects the normal distribution alternative hypothesis. It demonstrates that all variables are normally distributed.

Table 3: Jarque-Bera statistics- Skewness/Kurtosis Tests for normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	Adj chi2(2)	Prob>chi2
residual	55	0.0921	0.7060	3.14	0.2083

Source: Survey Data Analysis-2020

Table 4 shows the VIF values for the variables using the multicollinearity test. When considering the VIF value of all the independent variables has the lowest VIF value with a mean value of 1.18. The VIF of Non- Performing Loan, Capital Adequacy, Liquidity, and Operational Cost Efficiency are 1.17, 1.24, 1.12, and 1.19 respectively. Adopting the VIF rule, no variables have a VIF value greater than 10, making this model free from the violation of multicollinearity.

Table 4: VIF values

Variables	VIF	1/VIF
CA	1.24	0.804010
OCE	1.19	0.842652
NPL	1.17	0.852056
L	1.12	0.888946
Mean VIF	1.18	

Since the analysis does not use time series data, it may also increase the plausibility of the data for the study by completing the application of autocorrelation, since it will prevent any spatial correlation in the model. However, the test is limited only to the use of the Durbin-Watson statistic and Run's Test. In this study, the researcher uses the Durbin- Watson Statistic for testing autocorrelation (5,55)=1.575974. As can be seen, this model's Durbin-Watson statistic is 1 not closer to 2. Therefore, this model has a positive autocorrelation. To measure the relationship among variables of the study correlation analysis was used (Table 5).

Table 5: Correlation Matrix

	ROA	NPL	CA	L	OCE
ROA	1.0000				
NPL	-0.3865*	1.0000			
	0.0036				
CA	0.5449*	-0.3271*	1.0000		
	0.0000	0.0148			
L	0.2126	0.1802	0.0662	1.0000	
	0.1191	0.1880	0.6311		
OCE	-0.7803*	0.0500	-0.3106*	-0.2667*	1.0000
	0.0000	0.7170	0.0210	0.0490	

Source: Survey data analysis, (2020)

When considering a statistical result there is a negative relationship that can be seen between Return on Assets and Non-Performing loan since the correlation of Return on Assets and Non-performing Loan is -0.3865 but this relationship is significant because the p-value is 0.0036 is a very close value to the level of significance. Also, there is a positive and significant relationship between Return on Assets and Capital Adequacy as its correlation value because the p-value of 0.0000 is lower than the 0.05 level of confidence. When considering the relationship between Return on Assets and Liquidity there is a positive insignificant relationship as it presents a 0.2126 value and p-value above the significance level (0.1191) and this relationship is insignificant. There is a negative relationship between Return on Assets and Operational Cost Efficiency since it provides a -0.7803 value as a correlation between them. However, this relationship is significant because the p-value of both these two variables is a lower level of significance (0.000).

There is a negative relationship between Non-Performing Loans and Capital Adequacy since it provides   (-)0.3271 value as a correlation between them. However, this relationship is significant because the p-value is at a lower level of significance (0.0148). Also, there is a positive relationship between Non-Performing Loans and Liquidity as it provides a 0.1802 value as a correlation. Even though it produced a positive correlation, that's not mean it has a significant value since the p-value is higher than the significance level(0.1880). Therefore, Non-Performing Loan is not affecting significantly the Liquidity. However, there is a positive relationship between Non-Performing Loans and Operational Cost Efficiency since it provides 0.0500 correlation values as well as a higher p-value (0.7170) than the level of significance. Therefore, this is not significant.

Capital Adequacy and Liquidity have a positive relationship as it takes 0.0662 for the correlation coefficient also this positive relationship is insignificant because the p-value (0.6311) is higher than the level of significance. Capital Adequacy and Operational Cost Efficiency have a negative correlation but the relationship is significant as the p-value is lower than the level of significance (0.0210). Also, Liquidity and Operational Cost Efficiency have a negative relationship and the relationship is significant due to the p-value being below the level of significance (0.0490).

The following table shows the results for Return on Assets (ROA) and Non-Performing Loans (NPL) before incorporating control variables.

Table 6: Findings before Control variables are incorporated

	Coefficient	R squared	Adj R-squared	F value	Prob.
NPL	-0.1782	0.1494	0.1333	9.31	0.0036

Source: Survey data analysis, (2020)

The F test of 9.31 and significance tests of 0.0036 indicate that the test is appropriate and significant. The adjusted R square of 0.1333 indicates that the non-performing

Loans ratio explains 13.33% of the variation between the non-performing Loans ratio and the profitability of commercial banks. The result also indicates a correlation coefficient R of negative (-)0.1782. This indicates that there is a negative relationship between profitability measured by Return on Assets (ROA) and Non-performing Loans measured by Non-Performing Loans Ratio (NPL) and the test is statistically significant.

Regression is a statistical measure used to examine the strength of the relationship between two or more variables. The Hausman test was conducted to identify the type of data used for the analysis of whether the data has a random effect or the fixed effect. By considering the results of the Hausman test, it was decided to employ the 'random-effect model' instead of the 'fixed-effect model'. Table 7 sets out the results of linear regression evaluating the effect of non -performing loans on the profitability of commercial banks in Sri Lanka.

Table 7: Findings when effects of control variables are incorporated

variable	Non-Performing loan (NPL)	Capital Adequacy (CA)	Liquidity (L)	Operational Cost Efficiency (OCE)
Coefficients	-0.1162553	0.1062231	0.0121078	-1.037514
P value	0.003	0.000	0.212	0.001
R Squared	0.7074			
Adjusted R Squared	0.6683			
P value	0.0000			

Source: Survey data analysis, (2020)

The observation concerning the independent variable Non-Performing Loan (NPL) indicates that Return on Assets (ROA) gives a negative (-) 0.1162553 correlation with Non- performing Loans ratio (NPL) after incorporating control variables Capital Adequacy, Liquidity, and Operational Cost Efficiency. This indicates that the non-performing loan ratio can explain the relationship between non-performing loans and the profitability of commercial banks even when control variables are incorporated. According to the above Table Capital Adequacy and Return on Asset have a positive significant relationship because the p-value is lower than the level of significance. When considering Liquidity and Return on Assets, it has a positive but insignificant relationship as above two occasions. Operational Cost Efficiency and Return on Assets have a negative and significant relationship because the p-value is lower than the level of significance (0.001). Saunders et al. (2009) stated that the coefficient of multiple determinations is the degree of the goodness of fit for the estimated multiple regression equation. Further coefficient of determination measures the proportion of variation independent variable that can be explained through the multiple regression equation. Moreover, (Field, 2009) explained that R square explains the variation in

the dependent variable through the model taken from the sample. Accordingly, the above table shows the R Squared and Adjusted R Squared of regression analysis. The value of the explanatory power (R^2) shows the degree to which extent the variance of the dependent variable is explained by independent variables. According to the above table overall model which was used to demonstrate the dependent variable (ROA) has an Adjusted R Square value of 66.83% and therefore, the overall model is predictable for analyzing the dependent variable. P-value explains whether the overall model is significantly good and depicts the dependent variable. If the output significance value is less than 0.05 at a 95% of confidence level, the model is significant (Field, 2009). According to the above result, the overall model is highly significant as the significant value of the model gets 0.0000.

The result of tests without taking into account the effects of Control Variables indicates that Return on Assets (ROA) and Non-Performing Loans Ratio (NPL) have a correlation coefficient of negative (-)0.1782 and a significance test of 0.0036. The results also give the adjusted R square of 0.1333 which indicates that non-performing Loans explain 13.33% of the variation between non-performing Loans and the profitability of commercial banks. The test of correlation of coefficients to establish the effects of incorporating control variables into the relationship between a dependent variable and independent variables shows that the non-performing loans ratio negatively affects the profitability of commercial banks. The coefficient of Non-Performing Loans is (-) 0.1327 (13.27%). It is evident from the findings that non-performing loans negatively affect the profitability of commercial banks in Sri Lanka. This can be illustrated by the results of the test of nonperforming loans measured by the non-performing loans ratio and profitability measured by return on Assets. The findings also suggest that certain control variables such as; Capital adequacy and operational cost efficiency are significant in assessing and explaining profitability variances, while other control variables such as liquidity are inappropriate and insignificant in explaining profitability and non-performing loan variances.

5. CONCLUSION AND RECOMMENDATIONS

The study is on the effect of nonperforming loans on the profitability of commercial banks in Sri Lanka. The key concepts in the study are non-performing loans and profitability in the context of commercial banks in Sri Lanka. Profitability is measured by Return on Assets (ROA) and non-performing Loans are measured by the non-performing Loans ratio. As control variables, other CAMEL factors influencing profitability were considered. The control variables considered are; Capital Adequacy, Operational cost Efficiency, and Liquidity. This research was carried out with the use of a descriptive design. The Population of the study comprised the entire 26 Commercial Banks that have been licensed by the Central Bank of Sri Lanka and the sample size is 11 commercial banks in Sri Lanka. The secondary data in this analysis covered a period of 05 years from 2014 to 2018.

A multilinear regression model was used to analyze the data. The findings established that non-performing loans negatively affect the profitability of commercial banks. It also indicates that the non-performing loans ratio measured by non-performing loans

over total loans and advances is a good measure of non-performing loans as the findings indicate that it is appropriate and statistically significant in explaining variance with return on assets. The study also indicates that Capital Adequacy and Operational cost efficiency affect the profitability of commercial banks in Sri Lanka. In essence, the study reports that it may be misleading to merely report increases in profits and increases in non-performing loans and that financial ratios are important to improve the understandability of financial performance. In particular, non-performing loans ratio and return on assets ratio analysis can inform better on the effects of nonperforming loans on the profitability of commercial banks than a mere comparison of quantum figures.

This study looks at the impact of non-performing loans on the profitability of commercial banks in Sri Lanka. The regression results indicate that non-performing loans negatively affect the profitability of commercial banks in Sri Lanka. The study found that the non-performing loans ratio measured by non-performing loans over total loans and advances is appropriate and significant in explaining the effect of non-performing loans on the profitability of commercial banks. The findings also indicated that the Multilinear regression model is appropriate for testing the effects of nonperforming loans on profitability using the non-performing loans ratio as an independent variable and return on assets as dependent variables respectively. This study, therefore, confirmed that non-performing loans negatively affect the profitability of commercial banks in Sri Lanka. The findings are supported by Berger et al (1997), Batra (2003), and Michael et al (2006).

Based on the foregoing analysis, discussion, and observations in the study it would be appropriate to make the following recommendations; Central bank of Sri Lanka being the regulator of the banking sector should consider reporting on ratios rather than mere changes in trends of specific items, especially non-performing loans, and profitability. The reporting of mere increases in nonperforming loans and profits by commercial could be misleading as ratios such as return on assets, Non-performing Loans ratio, and Non-performing Loans coverage ratio can enhance the understandability of relationships between changes in profitability and non-performing Loans gross volumes. Central banks and commercial bank shareholders should be aware of the possible use of loss provisions on non-performing loans by profit-smoothing managers and the creation of financial reporting models that can help avoid the occurrence of a hazard. The shareholders specifically should be ready to meet agency costs to reduce the manager's information asymmetry by hiring competent internal and external auditors.

Management of commercial banks should mitigate against Moral hazards and adverse selection risks when advancing loans to minimize occurrences of nonperforming loans. This can be achieved by good credit appraisal procedures, effective internal control systems, and diversification along with efforts to improve asset quality in the balance sheets. Maintaining profitability is a challenge too for commercial banks in Sri Lanka and commercial banks should remain innovative, especially in cost-cutting

techniques which include leveraging technology and minimizing occurrences of nonperforming loans.

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