EFFECTS OF INSTITUTIONAL FACTORS ON NON-PERFORMING LOANS IN STATE BANKS OF SRI LANKA

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Abstract

Non-Performing Loans (NPL) is a significant phenomenon especially in the State Banks of Sri Lanka. This is a typical feature in the majority of the banks in Asian countries. NPL arise based on several reasons. Among them, this study examines the significance of the institutional factors on Non-Performing loans. The population comprised of loan borrowers from State banks in Sri Lanka. Sample comprised 102 loan borrowers selected through random sampling from selected state banks in Western Province that borrowed loans during 2013-2018.. Data was collected through a questionnaire based on 08 variables identified through literature review and analyzed using independent sample t tests. Results show except management efficiency all other variables influenced on NPL. Policies should formulate to mitigate the effects of influential variables.

Keywords*:* Non-Performing Loans, State Banks, Institutional Factors,

Introduction

The financial system of a country has diverse and important roles to perform in terms of its development. Perhaps the most vital is to transfer funds from surpluses to the deficit of economic units (Pilbeam, 2005). People deposit their excess money on banks to be safe since that will not make their resource sterile. Since it is very difficult for the surplus and deficit units to meet each other due to asymmetric information, there is a need to have an intermediary institution such as a Bank (Pilbeam, 2005). Therefore, banks perform an intermediary service by transferring funds and act as the backbone of financial system of a country.

Similar to any other business enterprise, the efficiency of a bank is evaluated based on the profitability and quality of the asset it possesses (Siraj, 2014). The importance of a bank's stability in a developing economy is noteworthy as any distress affects the development plans (Rajaraman & Vasishtha, 2002) thereby the economic progress (Thiagarajan, et al., 2011). Lending represents the heart of the banking industry and loans are the dominant assets as they generate the largest share of operating income. Loans, however, expose the banks to the greatest level of risk. Prudent credit risk assessment and the creation of adequate provisions for bad and doubtful debt can cushion the bank's risk. Credit risk or the risk of default is dependent on the quality of assets and is reflected through the volume of non-performing loans (NPLs)

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(Ekanayake, 2018). However, when the level of non-performing loans is very high, the provisions may not be adequate cover (Kirui, 2014).

Over the years, there have been an increased number of significant bank problems in both, matured as well as emerging economies (Brownbridge and Harvey, 1998; Basel, 1999, 2004 as cited in Richard 2011). Studies in other countries show that most of the bank failures have been caused by non-performing loans (Brownbridge, 1998). Ahmad (2002), after analyzing the Malaysian financial system, reported a significant relationship between credit risk and financial crises. Li (2003) and Fofack (2005) also found this relationship to be significant. The level of non -performing loans in the US started to increase substantially in early 2006 in all sectors before the collapse of the sub-prime mortgage market in August 2007 (Greenidge and Grosvenor, 2010). According to the International Monetary Fund (IMF, 2009), a non-performing loan is any loan in which interest and principal payments are more than 90 days overdue; or more than 90 days' worth of interest has been refinanced. On the other hand, the Basel Committee (2001) defined non-performing loans as loans left unpaid for more than 90 days.

The increasing rate of Non-Performing Loans (NPL) is a threat to the stability of any bank since it exposes banks to many associated risks such as credit risk, default risk and liquidity risk. A rising NPL ratio would require immediate attention by the management since it risks the future income of the bank and the funds provided. In consideration of the financials published by the Central Bank of Sri Lanka the amount of Non-Performing Loans (NPL) has been increasing recently in the Sri Lankan banks which are consistent with the phenomena of the majority of Asian countries.The immense competition of the Sri Lankan financial market has been created due to an increased number of financial institutes. The new entrants into the market especially the smaller financial institutions are offering various products and services to customers while gaining few profit margins. This is mainly to attract businesses and customers. This results to the high growth of the Non-Performing ratio. State banks, being more service oriented are largely affected by rising NPLs indicating the need for further investigation into the reasons.

Managing loans in a proper way not only has a positive effect on banks but also on borrowers, firms and a country as a whole. Therefore, State Banks should identify their own factors first together with an evaluation of its recovery actions to measure the contribution made by recovery procedures to reduce its NPL. When considering the past literature, there is a lack of consensus in previous studies regarding remedial mechanisms that can be implemented to effectively address the issue of non-performing loans (Richard, 2013). It is therefore imperative to identify the various factors which significantly affect the loan repayment performance from both borrowers and the lenders' sides.

The key findings of such a study would pave the way for banks to understand and improve the recovery procedures to minimize its NPLs in the future and also be useful reference document to policymakers.

The Objective of the Study

This study aims to identify the significant Institutional factors which lead to increase Non-Performing Loans of State Banks in Western Province of Sri Lanka duringa selected period. .

Literature Review

Many researchers have studied on institutional factors that influence on rate of increase of NPLs. Boudriga, Taktak and Jellouli (2009) examined the factors that determine the NPL rate using the aggregate banking, financial, corporate, and legal environmental data of 59 countries for the period 2002–2006. Their empirical results show that the NPL is mainly influenced by bank-specific factors such as capital adequacy, provisioning, and bank ownership. Credit exposure decreases in countries where legal and institutional conditions improve.

Kwan and Eisenbeis (1997), identified a U-shaped correlation between bad credit and credit growth. Debt growth at a slower pace could hurt bad credit numbers. Further credit growth adds to the increase in bad loans, as the rate of credit growth exceeds a certain threshold. Godlewski (2004) uses asset return (ROA) as a proxy for performance, showing that banks' profitability is adversely affected by the level of NPLs.

Podpiera and Weill (2008) two key determinants of bank failure are reduced cost efficiency and increased NPLs. In examining the cause between the two criteria, they confirm that the reduced cost efficiencies usually precede the onset of increased NPLs. However, they have not found strong evidence that the increase in NPLs has less impact on cost efficiency.

A thread in the literature has examined the relationship between bank-specific factors and non-performing loans. Berger and De Young (1997) investigate the causal relationship between credit quality, cost-effectiveness and bank capital using a sample of US commercial banks for the period 1985-1994. Four of the assumptions about the causal flow between these variables are encoded and tested. They are the unfortunate hypothesis, the bad management hypothesis, the deduction hypothesis, the moral hazard hypothesis. They support the "bad management" hypothesis of bilateral causality and the 'unfortunate' hypothesis of cost-effectiveness and negative associations. Likewise, they found evidence for the moral hazard hypothesis.

Karim, Chan and Hassan (2010) examined the relationship between non-performing loans and banking efficiency in Malaysia and Singapore. Cost efficiency was estimated using the cost-cost boundary approach, assuming the generalized gamma efficiency distribution model proposed by Green. The cost-effectiveness score was used in Phase II. Tobit simultaneous Regression of Equations used to determine the Impact of Non-Performing Loans on Bank Performance. According to the results, there is no significant difference in cost efficiency between banks in Singapore and Malaysia but banks in Singapore show higher average cost efficiency scores. Tobit's simultaneous regression results show that higher non-performing loans reduce cost-efficiency.

Jimenez and Saurina (2005) used logit model for analyzing the determinants of the probability of default of bank loans in terms of variables such as collateral, size of the loan, the size of the borrower and the maturity structure used to determine the likelihood of a bank default, in terms of variables such as collateral, lender type, and bank borrower relationship. Debt and cash composition. Their empirical results suggest that collateral is more likely to default, that lending by savings banks is risky and that a close bank-lending relationship has a positive effect on willingness to take more risks. At the same time, the size of the bank's debt will suffer and the maturity period of the loan.

Tracey and Leon (2011) assessed the impact of NPLs on credit growth. When making lending decisions, it is assumed that banks will react differently to NPL rates, either above or below the NPL rate. This continues to be the case for regulatory standards or for banks to meet their internal

capital ratios. He assessed the threshold of the credit-NPL relationship using regression analysis for two Caribbean countries. The results suggest a threshold for non-performing loans to determine the differential credit behavior of banks. This implies that bank lending behavior can inhibit economic activity, especially in times of high levels of NPLs.

Brownbridge (1998) and Richard (2011) conclude that many bad debts in banks have led to moral hazards; Internal lending at high-interest rates to borrowers in risky segments of the credit market, particularly the adverse incentives for bank owners to adopt transparent lending strategies. On the borrower's side, they also tend to divert funds once the loans are made to risky investments.

In Sri Lanka, Karthikasan (2016) survey of bank employees of 10 commercial banks in Sri Lanka was conducted using descriptive statistics to analyze data on bank-specific factors and NPLs. The consequences were bank ownership, high-interest rates, risk appetite and aggressive lending, poor credit follow-up, poor collateral, light credit conditions, lack of knowledge of credit terms, poorly negotiated loan terms leading to credit default Non-performing loans of commercial banks in Sri Lanka.

Methods

The target population was the loan borrowers from all registered State Banks of Sri Lanka. Using the convenience sampling method, 102 numbers of loan borrowers were selected from 04 State Banks located in Western Province Sri Lanka.

Primary data were collected using a five point Likert scale questionnaire and the questionnaire was distributed among the selected loan borrowers. Questions were focused on the whole process from the beginning of the loan process and service after disbursement and whether the borrower met the desired approach.

The variables which are causing the Non-Performing Loan concept and associated indicators of variables were found in literature. Accordingly, 8 numerical variables were found named high-interest rate, rapid loan growth, credit assessment, credit monitoring, collateral security, credit terms, risk assessment and Relationship with inefficiency. The study uses these independent variables to measure the dependent variable; Non-Performing Loans in state banks. Descriptive statistics were employed to analyze data and the results were tested with non-parametric tests of significance. Besides, measures of central tendency (mean, standard deviation) were used to analyze the data. The results confirmed using independent sample t-test.

Internal consistency was measured with Cronbach's alpha (α). The Cronbach's Alpha values were greater than 0.7 which indicate that all variables are reliable. Further, Content validity ensures that the measure includes an adequate and representative set of items that cover the concept. All questions in the developed questionnaire were adopted from previous studies. All questions were theoretically examined and reviewed by in time to time to prove the fitness of each question, the correctness of semantic expressions, and the appropriateness of phrasing. By doing so, content validity was thus ensured.

The indicators to measure variables that are loaded to a relevant variable were done by using Initial Eigenvalues. Components for which the eigenvalue is less than 1.00 should be omitted from consideration because these components account for less variance than a single variable that contributes to the total variance. If the Eigenvalue is greater than 1.00 then the data support the assumption of unidimensional (McGill, 2009). If Initial Eigenvalue is greater than 1 is better

since high Initial Eigenvalue implies that those indicators all together explain the relevant variable. The Eigenvalue for all the eight variables adopted in the study were found greater than one and so is better.

Convergent validity test by using Kaiser–Meyer–Olkin (KMO) measure, Bartlett's test of sphericity composite reliability (CR) and Average Variance Extracted (AVE). The KMO is a measure of how much the research data are suitable for Factor Analysis. The sampling adequacy is measured by KMO for each variable in the research model. The sampling adequacy statistically indicates the proportion of variance in the study variables that might be caused by underlying factors. Thus, the researcher is given information on how the survey items are grouped by this sampling adequacy and also these grouped items better explain the construct under investigation. In the study, KMO value of all variables is greater than 0.5, Bartlett's test is the significance (P-value < 0.05), AVE values are above 0.5 and Composite reliability (CR) greater than 0.7. The convergent validity of the variables is satisfactory.

Results and Discussion

Able 01 presents the descriptive statistics of the eight independent variables. These were measured by using 5 point Likert scale questions. Accordingly, credit assessment has the lowest mean value while credit monitoring shows the highest mean value. Mean values of interest rate, rapid loan growth, collateral security, credit terms, risk assessment and Relationship with management inefficiency are at moderate level. The mean value of credit monitoring is greater than 3.8 which illustrates that there is higher-level credit monitoring.

Table 1: Descriptive Statistics of the Institutional Factors Affecting Non-Performing Loans in State Banks of Sri Lanka

Variable	Minimum	Maximum	Mean	Std. Deviation
High Interest Rate	2.00	4.40	3.7118	.52015
Rapid Loan Growth	2.17	4.33	3.7262	.47013
Credit Assessment	1.92	4.23	3.2192	.69584
Credit Monitoring	1.40	4.60	3.8216	.84145
Collateral Security	2.00	4.60	3.7098	.64155
Credit Terms	2.00	4.60	3.7216	.67261
Risk Assessment	2.20	4.20	3.5255	.57878
Management inefficiency	2.00	5.00	3.6374	.61226

Source: Analysis Data, (2020).

Hypotheses testing the impact of independent variables on loan performance was identified using independent sample t-test and chi-squared test (Table 02). To check whether numerical independent variables affect on loan performance, it was used mean value comparisons. Dependent variables measured by loan performed or not performed.

The results (Table 03) emphasized that the mean value of perceiving interest rate and rapid loan growth of non-performing loans were greater than the mean value of perceiving interest rate and rapid loan growth of performing loans. This indicates that high interest rates and rapid loan growth lead to non-performing loans. Further, the mean value of credit assessment, credit monitoring, collateral security, perception of credit terms and risk assessment of non-performing loans were less than the mean value of credit assessment, credit monitoring, collateral security,

perception of credit terms and risk assessment of performing loans. This illustrates that lower level of credit assessment, credit monitoring, collateral security, perception of credit terms and risk assessment leads to non-performing loans.

Table 2: Summery of Independent Sample t-test of Independent Variables

Variable	t-value	P-value	Hypothesis Rejected or not	Effect on NPL
High Interest Rate	7.787	0.000	Rejected	Leads to NPL
Rapid Loan Growth	2.732	0.007	Rejected	Leads to NPL
Lower level of Credit Assessment	-6.330	0.000	Rejected	Leads to NPL
Lower level of credit monitoring	-3.016	0.004	Rejected	Leads to NPL
Lower level of collateral security offered	-3.744	0.000	Rejected	Leads to NPL
Lower level of perception on credit terms	-5.815	0.000	Rejected	Leads to NPL
Lower level of Risk Assessment	-6.490	0.000	Rejected	Leads to NPL
Management Inefficiency	-1.738	0.087	Not rejected	No effect on NPL

Source: Analysis Data, (2020).

Table No 02 shows that all the variables, except Management inefficiency are significant hence the null hypotheses are rejected.

Table 3: Summery of Mean Value Analysis of Performing and Non-Performing Loans

	Performing		Non-Performing	
Variable	**Mean**	**Std. Deviation**	**Mean**	**Std. Deviation**
High Interest Rate	3.4517	.53188	4.0545	.22147
Rapid Loan Growth	3.6188	.54691	3.8677	.37254
Credit Assessment	3.5495	.51887	2.7839	.66284
Credit Monitoring	4.0448	.61106	3.5273	1.00611
Collateral security offered	3.9103	.53531	3.4455	.67907
Perception on credit terms	4.0345	.35568	3.3091	.76730
Risk Assessment	3.8034	.44405	3.1591	.53279

Source: Analysis Data, (2020).

Conclusion

As per the descriptive statistics of the variables, the existing level of credit monitoring shows a high level of mean value indicating that there is a higher level of credit monitoring in state banks. However, credit assessment of state banks found at a lower level whereas interest rate, rapid loan

growth, collateral security, credit terms, risk assessment and Relationship with management inefficiency are at moderate level

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The study has found several relationships between different institutional factors and the trend of NPL. The results shows that the null hypothesis of higher interest rate, rapid loan growth, lower level of credit assessment, lower level of credit monitoring, lower level of collateral security offered, lower level of perception on credit terms and lower level of risk assessment is rejected emphasizing that these factors are significant and leads to NPL in state banks. Further, Cost of high-interest rate and rapid loan growth are significant factors that leads to NPL. Credit assessment is the heart of a loan process. Lower level of credit assessment, risk assessment, credit monitoring and credit terms leads to non-performing loans. The interrelationship between departments (Management efficiency) of a bank from the inception of loan up to the collection of the last installment is crucial for any bank. However, there was inadequate evidence to say that relationships with inter departments (Management efficiency) affect loan performance. Therefore, it is no need much weight to put on this factor.

Accordingly, high interest rates and rapid loan growth should be maintained while increasing the level of credit assessment, credit monitoring, collateral security, perception of credit terms and risk assessment in state banks to control loans becoming Non-Performing.

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