IMPACT OF LIQUIDITY ON PROFITABILITY OF LICENSED COMMERCIAL BANKS IN SRI LANKA

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ABSTRACT

The banking sector has a significant impact on economic movements in all countries since banks play a pivotal role in improving overall economic activities, which are crucial for any country's economic development. A profitable banking sector can endure negative shocks and contribute to the financial system's stability. Whether Bank Liquidity has a significant impact on Bank Profitability is still open for debate. Previous studies have found mixed results on this relationship. Some researchers found in their study that liquidity has a positive impact on profitability, whereas others found that it has no impact or negative impact. Regarding this problem, many studies have been conducted in both developed and developing countries. But in Sri Lanka, limited attention is given to this problem. Given this background, the present study investigates the impact of bank liquidity on bank profitability in Sri Lanka, using all 24 Licensed Commercial Banks from 2016 to 2020. Secondary data used for this study are from various sources, such as the annual reports of the banks and the Central Bank website. For data analysis, descriptive statistics, correlation analysis, and panel data regression models were employed. Return on Assets (ROA) and Return on Equity (ROE) are proxies for bank profitability, while Liquidity Ratio (LR) and Current Ratio (CR) are the proxies for bank liquidity. Further, Leverage (LEV) and Bank Size (BSIZE) are used as control variables. Using balanced panel data, employing the Generalized Method of Moment (GMM), the impact of bank liquidity on bank profitability is tested. The findings of this study revealed that the liquidity ratio has a significant and negative impact on the bank's profitability, while the current ratio has an insignificant impact on the bank's profitability. Further, Leverage and Bank Size also have an insignificant impact on profitability. In line with the above findings, it can be concluded that banks should focus on liquidity management and implement effective liquidity management techniques in order to maintain adequate liquidity levels to maximize their profitability.

Keywords: Bank liquidity, Bank profitability, Licensed Commercial Banks, ROA, ROE

1. INTRODUCTION

Background of the study

The banking sector has a significant impact on economic movements in all countries since banks play a pivotal role in improving overall economic activities, which are crucial for any country's economic development (Monnin and Jokipii, 2010). Batagoda, Ediriweera, and Deshika (2019) also mentioned that an efficient financial

sector is a key determinant of a country's economic growth and development. The importance of the banking sector emphasizes the need for stability in the sector vulnerable to financial distortions. The economy of any country depends heavily on the performance of its banking sector. During the last two decades, the banking sector in the world has experienced some profound changes as improvements in technology and the inevitable forces driving globalization, which creates both opportunities for development and challenges for the banking industry to remain profitable in this increasingly competitive environment (Morawakage and Madhuwanthi, 2019). A profitable banking sector can endure negative shocks and contribute to the financial system's stability. Therefore, banks play an increasingly pivotal role in both economic development and the growth of any country.

In the existing literature, bank liquidity has been considered a fundamental variable in explaining bank profitability by various researchers. Whether Bank Liquidity has a significant impact on Bank Profitability is still open for debate. Suganya and Kengatharan (2018) have stated that managing liquidity becomes the most important decision because inadequate liquidity may be injurious to the smooth operations of the firm as well as excess liquidity can be disturbed to achieve greater profits. Therefore, banks should focus on liquidity management and implement effective liquidity management techniques in order to maintain adequate liquidity levels for maximizing their profitability.

The banking sector in Sri Lanka

In Sri Lanka, the banking sector comprises two main components: Licensed Commercial Banks (LCB_S) and Licensed Specialized Banks (LSB_S). These two sectors dominate the financial system and account for the highest share of total assets in the financial system (Central Bank of Sri Lanka, 2020). Accordingly, there were 30 banks in the banking sector with 06 LSBs and 24 LCBs, including 11 branches of foreign banks as of 2020. In 2019, there were 26 LCBs listed on the Central Bank, but the banking licenses awarded to ICICI Bank Limited and Axis Bank Limited to operate in Sri Lanka were terminated in 2020 due to decisions made by their Head Offices (Central Bank of Sri Lanka, 2020).

The Central Bank of Sri Lanka (CBSL) is the apex institution in the financial sector in Sri Lanka. It was established in 1950 under the Monetary Law Act No 58 of 1949 (MLA) as a semi-autonomous body and is governed by a five-member Monetary Board (Annual Report of Central Bank, 2019). By considering the Central Bank published data, LCBs can be identified as the single most important category of financial institutions within the banking sector when considering the terms of asset base and the magnitude of services provided. As of the end of 2020, the banking sector dominated the financial system with a market share of 72.5 per cent of total assets. The developments in the banking sector have led to an increase in resource productivity, an increasing level of deposits, credits and profitability and a decrease in non-performing assets (Weerasinghe and Perera, 2013). Further, Batagoda, Ediriweera, and Deshika (2019) have stated that an efficient, stable and disciplined financial system in a country causes rapid growth in every part of the economy. So,

the health of the financial system of Sri Lanka depends to a large extent on the soundness of the financial institutions, particularly the LCBs (Weerasinghe and Perera, 2013).

Table 1: Banking Sector in Sri Lanka

Type of Banks	No. of Institutions		Total Assets (Rs. Bn)		Market Share (%)	
	2019(a)	2020(b)	2019(a)	2020(b)	2019(a)	2020(b)
Banking Sector	32	30	14442.1	17087.9	72.0	72.5
Licensed Commercial Banks (LCBs)	26	24	10944.0	12828.8	54.5	54.4
Domestic Banks	13	13				
Foreign Banks	13	11				
Licensed Specialized Banks (LSBs)	6	6	1578.7	1837.5	7.9	7.8
National Level Savings Banks	1	1				
Housing Finance Institutions	2	2				
Other LSBs	3	3				
Central Bank	-	-	1919.4	2421.6	9.6	10.3

(a) Revised
(b) Provisional

Source: Annual Report of Central Bank (2020)

2. LITERATURE REVIEW

Theoretical Review

This study is based on some theories which have been presented to provide awareness of the association between liquidity and profitability. According to the trade-off theory, greater liquidity is usually expensive for banks, suggesting greater liquidity decreases profitability. The modern portfolio theory approach is most relevant and plays an important role in bank profitability determinants studies. Thevaruban (2017) said that the modern portfolio theory approach is the most relevant and plays an important role in bank profitability determinants studies. Also, it implies that portfolio diversification and the expected portfolio composition of commercial banks are the outcomes of the management decisions of the bank. Further, the ability to obtain maximum profits depends on the feasible set of assets and liabilities determined by the management and the unit costs incurred by the bank for producing each component of assets (Nazongang and Atemnkeng, 2006).

Empirical Review

There is extensive literature on the relationship between bank liquidity and its profitability concerning many countries but not sufficient studies have been done on the Sri Lankan context (Jeevarajasingam, 2014; Suganya and Kengatharan, 2018; Batagoda, Ediriweera, and Deshika, 2019). The present study will attempt to fill the vacuum. De Silva, Azam, and Chinna (2019) stated that many factors could impact

the bank's profitability, but exploring all of these factors in this study is impossible. Therefore, only the impact of bank liquidity on bank profitability is a concern in this study. Previous studies have yielded mixed results on this relationship. Some researchers found in their study that liquidity has a positive impact on profitability, whereas another found that it has no impact or negative impact.

A study carried out by Batagoda, Ediriweera, and Deshika (2019) revealed that liquidity does not directly impact the profitability of LCBs in Sri Lanka. The study uses liquidity ratio as the determinant of profitability and ROA as the dimension of profitability. Correlation and regression analysis were done by Jeevarajasingam (2014) in his study, and the results showed that the liquidity ratio has a strong positive correlation with return on assets, but there is no relationship between bank liquidity and its profitability by taking samples from all commercial banks in Sri Lanka. Weerasinghe and Perera (2013) have observed that large banks have recorded more profits due to economies of scale than the banks, which are well-sound with a higher regulatory capital ratio. Further, the results from the panel regression suggest that the liquidity was negatively related to the commercial banks' profitability in Sri Lanka. According to Dabiri, Yusof, and Wahab (2017), liquidity negatively and significantly affects the profitability of Islamic banks in the UK both in the short and long run. Ajanthan (2013), Khan and Ali (2016), Ibrahim (2017) and Thevaruban (2017) have found that there is a positive relationship between bank liquidity and bank profitability. Other than the above studies, Adebayo, David, and Samuel (2011) and Priya and Nimalathasan (2013) have found a negative relationship between bank liquidity and profitability. Abdullah and Jahan (2014) and Suganya and Kengatharan (2018) have found no relationship between bank liquidity and profitability.

These results cause a better understanding of the effect of bank liquidity on bank profitability and also an increase in interest in this subject. Regarding this problem, many studies have been conducted in both developed and developing countries. But in Sri Lanka, limited attention is given to this problem (Suganya and Kengatharan, 2018). Given this background, the present study investigates the impact of liquidity on profitability in Sri Lanka, using all Licensed Commercial Banks over the period from 2016 to 2020.

3. METHODOLOGY

This study employed Liquidity as the independent variable and is measured using Liquidity Ratio (LR) and Current Ratio (CR). Profitability is the dependent variable of the study and is measured by using Return on Assets (ROA) and Return on Equity (ROE). Although the primary objective of the study is to identify the impact of liquidity on the profitability of all Licensed Commercial Banks in Sri Lanka, Bank Size (BSIZE) and Leverage (LEV) have been taken as control variables. Bank Size is measured by using the logarithm of total assets.

This study adopted Positivism as the research philosophy because this study is highly objective, structured and focuses on causality relationships. And also study used the Deductive approach because researchers aim at testing existing theories using empirical data. Here, as the target population, all Licensed Commercial Banks were

selected because they are the single most important category of financial institutions within the Sri Lankan banking sector (Batagoda, Ediriweera, and Deshika, 2019). As of the end of 2020, there were 24 Licensed Commercial Banks in Sri Lanka. For this study, all those banks were considered as the sample. For the study purpose, secondary data was gathered from multiple sources such as annual reports, Colombo Stock Exchange website, and the Central Bank website for the 05 years period from 2016-2020. Collected data were analyzed using Eviews 10 statistical software and using balanced panel data, employing the Generalized Method of Moment (GMM) and the following four regression models were developed based on the variables in the study.

The empirical models used in this study for panel data are given as,

Model 1: $ROA_{it} = \beta_0 + \beta_1 LR_{it} + \beta_2 LEV_{it} + \beta_3 BSIZE_{it} + \mu_{it} + \varepsilon_{it}$ ..... (1)

Model 2: $ROA_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 LEV_{it} + \beta_3 BSIZE_{it} + \mu_{it} + \varepsilon_{it}$ ..... (2)

Model 3: $ROE_{it} = \beta_0 + \beta_1 LR_{it} + \beta_2 LEV_{it} + \beta_3 BSIZE_{it} + \mu_{it} + \varepsilon_{it}$ ..... (3)

Model 4: $ROE_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 LEV_{it} + \beta_3 BSIZE_{it} + \mu_{it} + \varepsilon_{it}$ ..... (4)

μi *is an individual specific characteristic*

Where; ROE: Return on Equity, ROA: Return on Assets, LR: Liquidity Ratio, CR: Current Ratio, BSIZE: Bank Size, LEV: Leverage, β: Coefficients of the variables, ε: Random error term

4. FINDINGS AND DISCUSSIONS

Descriptive statistics, Correlation, and Panel Regression Model specification tests have been tested to generate the results.

Table 2: Correlation Analysis Results

	ROE	ROA	LR	LEV	CR	BSIZE
ROE	1.000					
ROA	0.894	1.000				
LR	-0.209	-0.205	1.000			
LEV	0.058	-0.079	-0.027	1.000		
CR	-0.123	-0.075	0.413	-0.095	1.000	
BSIZE	-0.046	-0.074	-0.135	0.399	-0.128	1.000

The statistical tool of correlation analysis describes the degree to which one variable is linearly related to another. It describes the tendency of two variables to vary together. That means it describes the tendency of high or low values of one variable to be regularly associated with either high or low values of the other variable. The absolute size of the coefficient (from 0-1) indicates the strength of that tendency to co-vary. A positive correlation indicates the extent to which those variables increase or decrease in parallel; a negative correlation indicates the extent to which one variable increases as the other decreases. Correlation measures the co-movements

between securities using an easily interpreted range of -1 to +1, with endpoints indicating more similar co-movements.

The correlation analysis (Table 2) shows a weak relationship of LR with both ROA and ROE. Similarly, LEV, CR and BSIZE also have a weak relationship with ROA and ROE.

The four models given were analyzed using the Generalized Method of Moment (GMM) to investigate whether there is an impact of bank liquidity on bank profitability.

Table 3: Model Results

	(1) ROA	(2) ROA	(3) ROE	(4) ROE
Constant	3.385	2.529	20.088	11.129
	(0.022)	(0.084)	(0.276)	(0.542)
LR	-0.681		-8.743	
	(0.018)**		(0.016)**	
CR		-0.094		-1.703
		(0.341)		(0.170)
LEV	-0.008	-0.009	0.189	0.163
	(0.595)	(0.525)	(0.316)	(0.396)
BSIZE	-0.034	-0.025	-0.601	-0.500
	(0.406)	(0.553)	(0.244)	(0.338)

*Note: Probability value is given in parenthesis, and ** indicates significance at 5%.*

Model I: $ROA_{it} = 3.385 – 0.681LR_{it} – 0.007LEV_{it} - 0.034BSIZE_{it}$

According to panel data analysis using the GMM method, Model I showed that LR has a negative impact on ROA, and it is statistically significant as well, which is confirmed by the negative coefficient of -0.6814 and the probability value of 0.0181. Further, LEV and BSIZE have no impact on ROA. The final result of the model concludes that the LR has a significant impact on ROA.

Model II: $ROA_{it} = 2.529 – 0.094CR_{it} – 0.009LEV_{it} – 0.024BSIZE_{it}$

According to panel data analysis using the GMM method, Model II showed that the CR, LEV and BSIZE have no impact on ROA.

Model III: $ROE_{it} = 20.087 – 8.743LR_{it} + 0.188LEV_{it} – 0.600BSIZE_{it}$

According to panel data analysis using the GMM method, Model III showed that LR has a negative impact on ROE, and it is statistically significant as well, which is confirmed by the negative coefficient of -8.7432 and the probability value of 0.0158. Further, LEV and BSIZE have no impact on ROE. The final result of the model concludes that the LR has a significant impact on ROE.

Model IV: $ROE_{it} = 11.129 – 1.702CR_{it} + 0.162LEV_{it} – 0.500BSIZE_{it}$

According to panel data analysis using the GMM method, Model IV showed that the CR, LEV and BSIZE have no impact on ROE.

In line with the previous studies and considering bank liquidity, a negative impact between bank liquidity in terms of liquidity ratio and bank profitability in terms of

ROA was found. This result is in line with the previous study carried out by Wijethunga and Wijekoon (2018) for the determinants of internal and external factors of bank profitability of LCBs in Sri Lanka using secondary data over the period of 2009 to 2007 by carrying a multiple panel regression. Nishanthini and Meerajancy (2015), who focused on liquidity and profitability trade-off with the samples of State Banks and Private Banks in Sri Lanka over the period of 2008-2012, concluded that there was a statistically significant negative impact between bank liquidity and its profitability. Furthermore, studies carried out by Weerasinghe and Perera (2013), and Dabiri, Yusof, and Wahab (2017) also found a negative impact between bank liquidity and profitability.

5. CONCLUSION

Based on the findings, this study can conclude that the Liquidity Ratio has a significant negative impact on profitability, while there is no impact of the Current Ratio on profitability in all Licensed Commercial Banks in Sri Lanka. That means when banks are maintaining liquidity at a higher level, their capacity to invest will decline, and it will directly impact profitability in a negative way. Further, Leverage and Bank Size have no impact on profitability. Therefore, a company needs to maintain an adequate level of liquidity because liquidity is greatly affected by the close relationship among them (Madushanka and Jathurika, 2018).

During the study, several factors caused the efficiency of the research work. The annual reports and the financial statements of some commercial banks were unavailable on the relevant bank websites because only 11 banks were listed on the Colombo Stock Exchange. Collecting the required secondary data from foreign banks was difficult. Additionally, the information provided in the financial statements of the annual reports was not in a standard format, and additional time was required to organize the information in a standardized presentable format for consistency of the information. Also, it could be fruitful to integrate the other internal and external factors such as capital adequacy, inflation rate, GDP growth, and operational efficiency, which affect the bank's profitability instead of taking only the bank's liquidity. Thus, research on the impact of bank liquidity on bank profitability is important in various aspects, such as profit maximizing, policy implications, and economic development. Regulators and policymakers can consider the findings of the study in formulating policy decisions in order to enhance the profitability of the banks since the profitable banks directly relate to the growth of the economy of the country.

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