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Drivers of Commercial Banks' Profitability in Sri Lanka

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Keywords: profitability, bank size, adequacy of capital, liquidity, credit risk and operational efficiency.

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DRIVERS OF COMMERCIAL BANKS PROFITABILITY IN SRI LANKA

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Abstract- Profitability of the banking sector is central as the wellbeing of the industry is closely associated with the wellness of the whole economy in general. Thus a proficient and productivity banking sector is able and better placed to endure negative economic stocks. This study investigated drivers of Commercial banks' profitability in Sri Lanka.The study explored the effects of bank size, adequacy of capital, liquidity, credit risk and operational efficiency on commercial banks' profitability. The study adopted a descriptive design helped to establish the factors, which influence the Sri Lankan commercial banks' profitability. The study used secondary data from11 commercial banks from the years 2012 to 2016. The study employedmultiple regression analysis and Pearson correlation test so as to arrive at the findings. Capital plays a key role in driving commercial banks' profitability and higher levels of capital adequacy increases profitability of commercial banks, findings reveal. The study also concluded that an increase in nonperforming loans increase credit risk which adversely affects profitability. The study finally concluded that high levels of liquidity provides adequate funds to lend which in turn increase interest income hence banks' profitability and that poor operational efficiency through poor management of expenses reduces the profitability of commercial banks. The study recommended that managers of commercial banks in Sri Lanka to develop concrete polices to ensure minimum amount of nonperforming loans being kept and that banks should effectively manage their operational expenses and costs to ensure that they are efficient to maximize profit. The study also recommended that regulatory authorities like the Central Bank of Sri Lanka should develop effective policies on capital adequacy, liquidity and credit risk management to ensure that banks are in a position where they can enhance their profitability.

Keywords: profitability, bank size, adequacy of capital, liquidity, credit risk and operational efficiency.

I. Introduction

The banking sector all around the world has some profound changes, as innovations in technology and the inevitable forces driving globalization which create both opportunities for growth and challenges for banking industry to remain profitable in the increasingly competitive environment during the last years. These major transformation in environment resulting in significant impacts on bank performance, growth of investment, industrial expansion and economic development. Tektas et al.(2005) said that the profitability and overall financial performance of commercial banks are very vital for the smooth operation of the financial system of the country. Further, Jrancis (2007) found that the financial sector has been regulated as all of other countries financial sector and it contributes to a big share for the healthiness of the country's financial system. Therefore the profitability is necessary for a bank to maintain ongoing activities and for its shareholders to obtain fair returns. The external and internal factors have been affecting the profitability at Commercial banks over time. Therefore the determinants of bank profitability have attracted the interest of academic research.

Ranjan and Zingales (1998) stated that given the relation between the well-being of the banking sector and the growth of the economy.Further Levine (1998)found that knowledge of the underlying factors that influence the financial sector's financial performance. Therefore essential not only for the managers of the banks, but also for numerous stakeholders such as the central banks, bankers' associations, governments and other financial authorities. Knowledge of the factors would be careful in helping the regulatory authorities and bank managers formulate future policies aimed at improving the profitability of Sri Lankan commercial banks. The importance of bank financial performance can be appraised at micro and macro levels of the economy. At the micro level, profit is the essential prerequisite of a competitive bankers' institution and the cheapest source of funds. It is not mainly a result but also a necessity for successful banking in a period of growing competition in the financial markets. Hence the basic aim of every bank management is to maximize profit, as an essential requirement for conducting business. At the macro level, a sound and profitable banking sector is better able to withstand negative shocks and contributes to the stability of the financial system. Flemini et al(2009) identified that banks' profit provide an important source of equity especially if re-invested into business. This should lead to safe bankers and such as high profit could promote financial stability.

Globally, banking as an industry has been very competitive and innovative. As a result, the banking industry underwent tremendous technological advancement. Sri Lankan banking industry has been in the forefront among their South Asian country parts in adopting these innovations. Performance of the banking industry got more prominent to face the growing level of competition.

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In the light of increased global trend of disintermediation, and its influence on banking industry in Sri Lanka, profitability has attracted the interest of academics, management of bank and regulatory bodies. Regulator's role has also earned more prominence both locally and globally in light of negative shocks experienced by commercial banks. The regulatory framework itself has introduced the Integrated Risk Approach assisting the sustainability of profitability of commercial banks. The directions given by the regulator will ensure to keep the pace of economy of the country at a sound level by making commercial banks are more strengthened. This study is leveled at the investigation of drivers of commercial banks'profitability in Sri Lanka.

a) Research Problem

According to Mahil (2009), result of the simultaneous unstable financial markets and changes in interest rates make assets and liabilities essential in prudent portfolio management. Thepreceding development therefore but operates in the industry under considerable pressured to improve up on their profit margin by finding effective strategies for managing their asset and liability. Portfolio which if not done will lead to a sharp reduction in profit. The rewards from such process improvements in the sector would spread across firm, industry and economic levels.Commercial banks are the most dominant financial institutions in Sri Lanka. One of the major goals of these Commercial banks is profitability. It will influence the banks' stability as well as goodwill. At present, financial sector in Sri Lanka became highly developed and the competition is fierce. Therefore itleads to understanding of the drivers of Commercial Banks profitability. Process would have a positive impact not only leads to Sri Lankan commercial banks performance but also for the economic development of the country.

The commercial banks in Sri Lanka have to earn profit. If continuously banks earn losses or low net profit ratio it will lead banks towards pitfall. Therefore, identifying the divers of profitability is more important. This leaves a wide knowledge gap that this study seeks to fill in. This study builds upon their initial literature and studies by explicitly examining the divers which are influencing the profitability of commercial banks in Sri Lanka.

b) Research Question

What are the drivers of profitability ofthe Commercial Banks in Sri Lanka?

c) Objective of the Study

This research is sought to find out the divers of the Commercial Banks'profitability in Sri Lanka.

d) Significance of the Study

This research study is significant because it deals with issues of Sri Lankan commercial banks. In the present scenario, thedrivers of profitability are important for the banking industry due to increased importance of decisive factors of commercial banks' profitability in Sri Lanka. It will help to assess the risks and manage the risks by taking appropriate actions. So, to understand the appropriate and correct diversdriving the profitability are helpful for the commercial banks in Sri Lanka to manage risks. This research study might contribute and form the basis for further researches into the application of innovative profitabilitydriving factors, strategies to minimize risks by similar industry players. This can go a long way in coming up with even better more efficient strategies that are specific to different bank sizes markets in which they operate and balancing of the different divers appetites that maybe present within the different banks. Further mainly the study contributes to identify the divers that positively and negatively affect the profitability of commercial banks in Sri Lanka. And this study is complement and addition to the existing pool of literature that examined the drivers affecting profitability.

II. Literature Review

a) Theoretical Underpinnings

i. *Portfolio Theory*

Nzonangang and Atemnkeng (2006) said that the portfolio theory approach is most relevant and plays an important role in bank profitability determinants studies. According to portfolio balance model of assets,densification the optimum holding of each asset in a wealth holder's portfolio is a function of policy decisions determined by a number of factors such as the vector rates of return on all assets held in the portfolio, vector of risks associated with the ownership of each financial assets and the size of the portfolio. It implies portfolio diversification and the desired portfolio composition of commercial banks are results of decisions taken by the bank management. Further, the ability to obtain maximum profit depends on the feasible set of assets and liability determined by the management and the unit costs incurred by the bank for producing each component of assets.(Nzongang and Atemnkeng,2006)

ii. *Signaling Theory*

The Signaling Theory emanated from Arrow (1972) and Spence (1973). Signaling Theory presupposes that best performing or profitable firms supply the market with positive and better information (Bini et al., 2011). In addition, the Signaling Theory is one of the theories, which have a clarification for the association between profitability and capital structure (Alkhazaleh and Almsafir, 2014). This theory presupposes that a superior capital structure is an optimistic signal to market worth of the organization (Adeusi et al., 2014). The Signaling Theory further postulates that majority of the profitable firms signal their competitive power through communicating new and important information to the market. Thus, information is disclosed by means of specific indicators or ratios which, very often, measure specific conditions on which to enter into or renew the agency contract (Bini et al., 2011).

According to the Signaling Theory, the management of bank signals good future expectation by increasing capital. This indicates that less debt ratio necessarily mean those banks perform better than their identical (AlkhazalehandAlmsafir, 2014). In addition, the theory argues that managers who strongly believe that bank can outperform other banks in the industry will want to relay such information to various stakeholders in order to attract additional investments. Thus, the Signaling Theory affirms that when a bank's performance is excellent, directors will signal the banks' performance to its stakeholders and market by making various disclosures which poor performing firms cannot make. By enhancing more disclosure most managers will wish to receive high benefits and a good reputation which may increase the value of the firm and eventually profitability (Muzahem, 2011).

b) Empirical Studies

Abnell and Mondes (2004) found that well capitalized banks have low bankruptcy costs and higher interest margin on assets. Regarding bank specific variables, the net internal margin reacts positively to operating costs and the loan toasset ratio has a positive impact on interest margin and profitability.

Naceur (2003) discussed that high net interest margin and profitability are likely to be associated with banks with high amount of capital and large overheads. Further he noticed that other determinants such as loans have positive and banks'size has negative impact on profitability.

Athanasoglou et al. (2006) identified that determinants of bank profitability in the South Eastern European region considering the credit institutions for the period 1998-2002 suggested some implementation of the findings. They found that all bank specific determinants have significant effect on banks' profitability.

Kasmidou et al. (2006) studied the impact of bank- specific characteristics, macroeconomic conditions and financial market structure on the profit of UK owned commercial bank during the period 1995-2002. The results showed that the strength of capital of these banks have a positive impact on profitability; and other important factors being the efficient management of expenditures and size of the bank. These bank specific determinants are robust to the inclusion of additional macroeconomics and financial market measures of banks' performance, which adds little to the explanatory power but it seemshowever that had positive impact on profitability.

A study by Maigua and Mouni (2016) examined the effect of interest rate determinants on banks' performance. A sample size of 26 banks was used in the study and multiple regression analysis to analyze data. The study results found that inflation rates, discount rates and exchange rates positively affected the banks' performance whereas reserve requirement ratio negatively influenced the banks' performance. It was concluded that exchange rates, inflation rates and high discount rate lead to banks' higher performance.Further, high levels of reserve requirement lowered the banks' performance.

Alemu (2015) examined determinants of commercial banks profitability of eight banks in Ethiopia from 2002 to 2013. The study used multiple linear regressions and the fixed effect regression model to analyze data. The study established that size of banks' capital adequacy and gross domestic product have a positive and statistically significant relationship with profitability of banks. The findings of the study also indicated that liquidity risk, operational efficiency, funding cost and banking sector development have a negative and statistically significant relation with profitability. Finally, the study identified that the relationship between efficiency of management, efficiency of employees, inflation and foreign exchange rate were statistically insignificant.

Abebe (2014) assessed the internal and external determinants of financial performance of Ethiopia's banks using panel data for a period from 2002 to 2013. The study used the fixed effect regression model. The regression results established that capital structure, income diversification, operating cost had a significant negative relationship with performance while bank size had positive significantassociation with performance.

Nahamg and Araghi (2013) studied the internal factors affecting the profitability of city banks during the years 2009-2012. Internal factors affecting the profitability of banks including, deposit amounts the payment facilities, credit risk management, cost management and the amount of liquidity. They identified that there is a direct relationship between profitability of the banks with credit risk management and cost management and the amount of deposits, loan payments and the amount of liquidity are negatively and significantly related.

Velnampy and Nimalathasan (2007) found that sales is positively associated with profitability ratios except Return on Equity (ROE), and number of depositors are negatively correlated the profitability ratiosexcept ROE. Similarly, number of advances is also negatively correlated to the Return on Investment(ROI) and Return on Asset (ROA).

Nishanthani and Nimalathasan (2013) examined the determinants of profitability of listed manufacturing companies in Sri Lanka for the period 2006-2010. The results revealed that the profitability of manufacturing companies is less satisfactory on the basis of result and analysis of selected manufacturing companies have different ranking based on each profitability indicators such as Gross Profit Ratio, Operating Profit Ratio, Net Profit Ratio, Return on Investment and Return on Capital Employed.

III. Methodology

This research is sought to examine the determinants of commercial banks' profitability. The study employed a descriptive also ensures absolute explanation of the state of affairs and make sure that there is no bias in data collection and enables data collection from a significant target population at a cost effective manner. Therefore a descriptive design helped to establish the drivers that influence the commercial banks profitability in Sri Lanka. The population of the study is all commercial banks in Sri Lanka. From this population researcher has considered 11 Commercial Banks in Sri Lanka. Secondary data was collected from annual published financial statements of 11 licensed commercial banks (See Appendix I) for the period of 5 years from 2012 to 2016. Data from the financial statements are prepared based on standardized Sri Lankan accounting standards. The data collected was edited and sorted for completeness and then analyzed using multiple regression analysis and Pearson Correlation by using SPSS.

Drivers of profitability as the independent variable with the proxies of size of the bank as measured by natural log of total assets, Capital Adequacy, Loan to assets Ratio, Credit Risk and operating efficiency. Profitability as the dependent variable with proxy of Return on Assets.

The regression model used in the study is as follows:

$ROA= \beta_0+\beta_1 (BS) + \beta_2 (EA) + \beta_3 (LAR) + \beta_4 (CR) + \beta_5 (OE) + \varepsilon$

Where:

ROA = Return on Assets

BS = Size of the bank as measured by natural log of total assets

EA= Capital Adequacy

LAR = Loan to Assets Ratio

CR = Credit Risk

OE = Operating Efficiency

$\beta0$ = Constant

$\beta1 – \beta5$ = Coefficient of the regression equation

ε = Probable error

IV. Data Analysis

a) *Measures of Central Tendency*

Table 01: Descriptive Statistics

Variables	Minimum	Maximum	Mean	Standard Deviation
ROA	-0.0342	0.1168	0.021871	0.0194654
Size (Natural log)	12.0259	22.7838	17.118738	2.0861805
EA	.0011	0.6430	0.069095	.0797539
LAR	.002	.7655	.543061	.1098630
CR	.0000	.3974	.061035	.0695568
OE	.0013	.8459	.056699	.0873597
Number of observations	55			

As it can be seen from the table 01, the mean value of ROA of the commercial banks in Sri Lanka is discovered to be 0.022.The averages of the prognosticators named SIZE, EA, LAR, CR and OE are found to be 17.119, 0.069, 0.543, 0.061 and 0.057 respectively. The minimum value of credit risk of the commercial banks is found to be 0.00. It is an indication that some commercial banks completely write off the value of their non-performing loans. The average OE is revealed to be 0.0567 and it signalsthe good operational efficiency among the commercial banks in Sri Lanka.

b) *The association between Predictors and the Outcome Variable*

Table 02: Correlation Matrix

	ROA	Size	EA	LAR	CR	OE
ROA	1					
Size	-.009	1				
EA	-.089	-.345**	1			
LAR	.041	-.095	.125	1		
CR	-.225**	-.242**	.114	-.001	1	
OE	.034	-.210**	.417**	.179*	.164*	1

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

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

The findings on table 02 indicate a negative correlation between the predictors named size of the bank, capital adequacy (EA), credit risk (CR) and the outcome variable of ROA (Return on Assets). Results also indicate a positive insignificant correlation between the prognosticators of loan to asset ratio (LAR), operational efficiency (OE) and the outcome variable as measured by ROA. This finding shows a weak negative correlation between bank size and ROA, capital adequacy (EA) and ROA,and credit risk (CR) and ROA. Further, weak positive correlation is discovered between loan to asset ratio (LAR) and ROA and operating efficiency (OE) and banks' profitability as measured by ROA.

c) Regression Analysis

Regression Analysis consists of the model summary, the ANOVA and the results of the regression coefficients.

i. *Regression Model Summary*

Table 03: Model Summary

Model	R	R square	Adjusted R Square	Std. Error of the Estimate
1	.469[a]	.220	.199	.0174208

a. Predictors: (Constant), OE, Size, EA, CR, LAR

Table 3 shows that the R-square value is 0.220, which indicates that, independent variables explain 22% of the variation in the dependent variable. Hence, 78% of the variation is explained by the variables not considered by the regression model.

ii. *Anova*

Table 04 shows the Analysis of variance (ANOVA) results.

Table 04: Anova

Model	Sum square	df	Mean Square	F	Sig.
Regression	.016	5	.003	10.642	.000[b]
Residual	.057	189	.000		
Total	.074	194			

a. Dependent Variable: ROA
b. Predictors: (Constant), OE, Size, EA, CR,LAR

Table 04 shows that the regression model is significant in explaining the determinants of banks' profitability since F- value is significant at 0.01 level.

iii. *Regression Coefficients*

Table 05: Regression Coefficients

Model	Un standardized Coefficients	Standardized Coefficients	t	Sig.
Constant	0.41		3.727	.000
Size	-.001	-.128	-1.855	.065
EA	-.051	-.269	-3.643	.000
LAR	.021	.787	4.289	.000
CR	-.075	-.603	-5.357	.000
OE	-.034	-.155	-.791	.425

a. Dependent Variable: ROA

Results on table 05 generates the following equation:

$$Y = 0.41 - 0.001_{Size} - 0.051_{EA} + 0.021_{LAR} - 0.075_{CR} - 0.034_{OE} + \varepsilon$$

Table 05 indicates results of regression coefficients. Results indicate an existence of a negative but insignificant relation between size of the bank, operational efficiency (OE) and banks' profitability as shown by the beta values of -0.001 and -0.034 respectively. The results on the table 5 also indicate an existence of a significant negative relation between predictors named capital adequacy (EA), credit risk (CR) and banks' profitability as indicated by beta values -0.051 and-0.075 respectively. The results also show an existence of a positive significant relation between liquidity (LAR) and commercial banks' profitability as indicated by beta value of 0.021at $P<0.01$.

V. Discussion of the Findings

The study found that bank size negatively influences the profitability though the effect is insignificant. This indicates that there is a negative link between bank size and the banks' profitability. Similarly, Lipunga (2014) also established that size of the bank, management efficiency and liquidity had an impact on ROA. According to Alkhazaleh and Almsafir (2014),large banks are assumed to have more advantages as compared to their smaller rivals and have a stronger bargaining capability and making it easier for them to get benefits from specialization and from economies of scale. Even though the findings are not in line with that of Alkhazaleh and Almsafir (2014).

The study found that management efficiency negatively influences the profitability though the effect is insignificant. Chinoda (2014) in his study found that management of expenses had a negative association with Zimbabwean banks' profitability. Addition, low operating costs leads to greater profitability of commercial banks. Other costs like the provisions made towards bad debts and doubtful debts influence performance and are likely to lead to probable annual loss on assets (Chinoda, 2014).

The study also found that credit risk significantly influences banks' profitability. This means that any increase in credit risk level will lead to a decrease in commercial banksprofitability. Tariq et al. (2014) also supports that raise in credit risk increases the marginal cost of loans, obligations, and equity leading to the enlargement of the cost of finance for the bank. According to Roman and Tomuleasa (2013), a higher ratio of NPLs to total loans and an absolute deterioration of credit portfolio quality negatively affect commercial banks' profitability in Sri Lanka.

The study also found that capital adequacy significantly influences on Commercial banks' profitability in Sri Lanka. This finding indicates that a decrease in capital adequacy ratio increases banks'profitability. According to Roman and Tomuleasa (2013) capital adequacy aims at determining the ability of the banking sector to absorb any losses generated by risks and occurrence of uncertain macroeconomic events. According to Bizuayehu (2015), the capital adequacy ratio is utilized in protecting the bank's fund depositors as well as promoting efficiency and stability of financial systems. Kyalo (2013) established that capital invested has a significant influence on profitability.

The study found that liquidity significantly and positively influences Commercial banks' profitability in Sri Lanka.This means that high level of liquidity in the banking sector directly influence banks' profits. In agreement with this finding, Alemu (2015) established that liquidity risk had a statistically significant relationship with banks' profitability. According to Chinoda (2014), the availability of liquidity influences profitability since it enhances the capacity of the bank to acquire cash, in order to fulfill present and essential needs. Therefore, for commercial banks to gain public assurance, they should have sufficient liquidity to meet the demands of loan holders' and depositors' needs.

This study is aimed at establishing thedrivers of banks' profitability. Independent variables included bank size, capital adequacy, liquidity, credit risk and efficiency in the banks' operations and dependent variable was profitability measure using return on assets. The study reviewed the Portfolio and signaling theories to explore profitability.

The descriptive statistics results established that mean profitability proxies by ROA of the commercial banks in Sri Lanka was 0.0218 and the average size of commercial banks was 17.12. The study also revealed that the average capital adequacy (EA) for the commercial banks was 0.069 and the average loan to asset ratio (LAR) was 0.543. The average credit risk (CR) for the commercial banks was 0.06956 and the average operating efficiency (OE) ratiowas 0.0567. It is an indication of good operational efficiency among the commercial banks in Sri Lanka. Correlation results established show a weak negative correlation between bank size, capital adequacy and credit risk (CR)and profitability and a weak positive correlation between loan to asset ratio operating efficiency and profitability among commercial banks in Sri Lanka.

The regression model results established that the independent variables explained 22% of variation in dependent variable. The findings found that regression model was significant since the F-value is significant at 99% confidence level. The study further revealed a negative but insignificant relation between size of the bank, operational efficiency and profitability and a significant negative relation between credit risk, capital adequacy and profitability. Finally, the study established a significant positive relation between liquidity and banks' profitability in Sri Lanka.

VI. Conclusion

The study found that capital adequacy negatively and significantly affects the commercial banks' profitability in Sri Lanka. This means that high capital adequacy shows willingness and ability to tolerate with abnormal and operational losses. Based on this finding, the study concludes that capital plays a key role in determining commercial banks profitability and higher levels of capital adequacy decreases profitability of commercial banks in Sri Lanka.

The study found that credit risk negatively and significantly affects commercial banks'profitability. This indicates that a higher ratio of non-performing loans lead to the deterioration of credit portfolio quality which negatively affects commercial banks in Sri Lanka. Based on this observation, the study concludes that an increase in nonperforming loans increase credit risk which adversely affects profitability.

The findings of the study established that liquidity significantly influences profitability of commercial banks in Sri Lanka. This indicates that an increase in commercial banks liquidity provides adequate funds for lending which in turn increases interest income and profitability. The study thus concludes that high levels of liquidity provides adequate funds to lend which in turn increase interest income hence banks' profitability.

The findings of the study revealed that size of the bank and operational efficiency negatively influences banks' profitability. Though, the relationship is statistically insignificant. The study also concludes that failed operational efficiency through poor management of' expenses reduces the profitability of commercial banks in Sri Lanka.

VII. Recommendations

The study concluded that an increase in nonperforming loans increase credit risk which adversely affects the profitability of commercial banks in Sri Lanka. Based on the conclusion, this study recommends that managers of commercial banks in Sri Lanka to develop concrete policies to ensure minimum level of nonperforming loans being kept. Such policies would help to control and mitigate credit risks hence increase the banks' profitability.

The study also concluded that capital adequacy and credit risk significantly affect the profitability of commercial banks in Sri Lanka. Therefore, the study recommends that regulatory authorities like the Central Bank of Sri Lanka should develop effective policies on capital adequacy, liquidity and credit risk management to ensure that banks are in a position where they can enhance their profitability as well as to handle negative shocks.

The study also concluded that failed operational efficiency through poor management of expenses reduces the profitability of commercial banks. Therefore, the study recommends that banks should effectively manage their operational expenses and costs to ensure that they are efficient enough.

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Appendix I

Bank of Ceylon
Peoples' Bank
Commercial bank of Ceylon PLC
DFCC Vardhana Bank
Hatton National Bank
National Development Bank
Nation trust Bank
Pan Asia BankingCorporation
Sampath Bank
Union Bank of Colombo