

The Factors Effecting on Bank Profitability

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Abstract- This study examines the effect of bank specific factors of profitability in Sri Lankan domestic commercial banks. This study conducted with a complete panel data and utilized the sample frame annual reports of the domestic commercial banks in Sri Lanka. A regression analysis is built on a strongly balanced panel data set including 60 observations of 12 Sri Lankan domestic commercial banks over the period 2011-2015. Bank size, Capital, Deposits, and Liquidity have been identified as independent variables and Profitability as the dependent variable. This research used Return on assets to identify the profitability, logarithm of total assets - size, equity ratio- capital, deposit ratio- deposit, liquidity ratio- liquidity. Regression model were analyzed by using STATA Statistical Software Package. Regression findings reveal that size (0.001), capital ratio (0.000) and deposit ratio (0.027) are significant bank specific determinants of bank profitability in Sri Lanka. There is a positive relationship between those factors and bank profitability. Liquidity (0.188) is an insignificant determinant and it has a negative relationship. In view of these findings, some recommendations may be functional for bank regulatory authorities to sustain strength and stability of the banking sector. The results provide the effect of bank specific factors on Sri Lankan domestic commercial banks. This paper intends to fill a gap in the existing literature by improving an understanding of bank profitability in Sri Lanka.

Index Terms- Bank Profitability, Capital, Deposits, Liquidity, Profitability, Size

I. INTRODUCTION

The Banking sector is one of the major sectors in Sri Lanka and it plays a central role in the operation of the economy. The concept of profitability is more important for financial institutions and banks are the part of them. Competition, concentration, efficiency, productivity, and profitability are the various terms of expressed by the performance of banks. Firms with better performance help to continue the stability of the financial system. (Athanasoglou, et al., 2008). In the financial environment, the profitability of the banking system is one of the hot issues. The banking sector fulfills an important economic function in providing financial intermediation by converting deposits into productive investments. Banks are the providers of funds needed for investment. Stability is of most important to the financial system. Therefore profitability of the banking sector is most important the economy of the country. High profits in banking sector always leads to financial stability.

There are many factors affect to the profitability of the banking sector. Generally, these factors are categorized as bank specific factors, industry specific factors and macroeconomic factors. Bank specific factors such as bank size, capital ratio, deposits ratio, Liquidity ratio and Overhead expense management. These are internal determinants of bank profitability. Macroeconomic factors such as inflation, GDP and Market Capitalization. Many researchers in different countries have investigated determinants of bank profitability. They have found different factors affecting bank profitability. But they don't give a clear picture.

In Sri Lanka, commercial banks play the important role of the operation on the economy. Therefore study the determinants of bank profitability is more important to the economy. Bank specific determinants are more important to among these factors. This research examines the effects of bank-specific determinants to the profitability of domestic commercial banks in Sri Lanka during the period from 2011-2015.

II. LITERATURE REVIEW

Bank Size

Bank Size is important bank specific determinant of bank profitability. In this investigation bank size is measured by the logarithm of total assets. Bank size is generally found to relate positively to bank profitability. (Kosmidou, 2008). In the literature, one of the important question is whether bank size maximizes bank profitability. In the literature most of the relationships investigated to bank size and bank profitability. Most of the previous studies have many evidences of which bank size is one of the main determinants of bank profitability.

Capital Ratio

Capital Ratio examines the relationship between bank profitability and bank capitalization. One of the basic measure of capital strength by Equity to total assets ratio (Capital ratio). Generally assumed well-capitalized banks have high profitability and lower probable cost of financial distress. According to Bourke (1989), Demirguc-Kunt & Huizinga (1999), Pasiouras & Kosmidou, (2007), Ben & Goaid (2008), Kosmidou (2008), banks with higher capital are more protected from insolvency. This means higher capital banks can get the high profitability. And also some empirical evidence by A & Huizinga (1999), Ben & Goaid (2008), Kosmidou (2008), revealed that high profitable banks have high level of equity relative to their assets. Bourke (1989), stated a significant positive relationship between capital adequacy and bank profitability. Similarly, the studies of Berger, (1995b), and Angbazo (1997), concluded that

the US banks, those which are well-capitalized, are more profitable than the others.

Customer Deposit

Customer Deposit is a liability to the bank. It is the main source of funding for banks. Banks have more deposits, the bank can provide more loan opportunities to customers. Then it will be able to create profits in future. Generally supposed that customer deposits positively related to bank profitability, if there is a satisfactory demand for loan opportunities in the market. Additional deposits can generate more profits and lower level of deposits negatively impact on bank profitability. By the way, banks have additional deposits bank can get more loan opportunities. Hence bank can generate higher profits. Therefore customer deposits are positively related to bank profitability. (Lee & Hsieh, 2013).

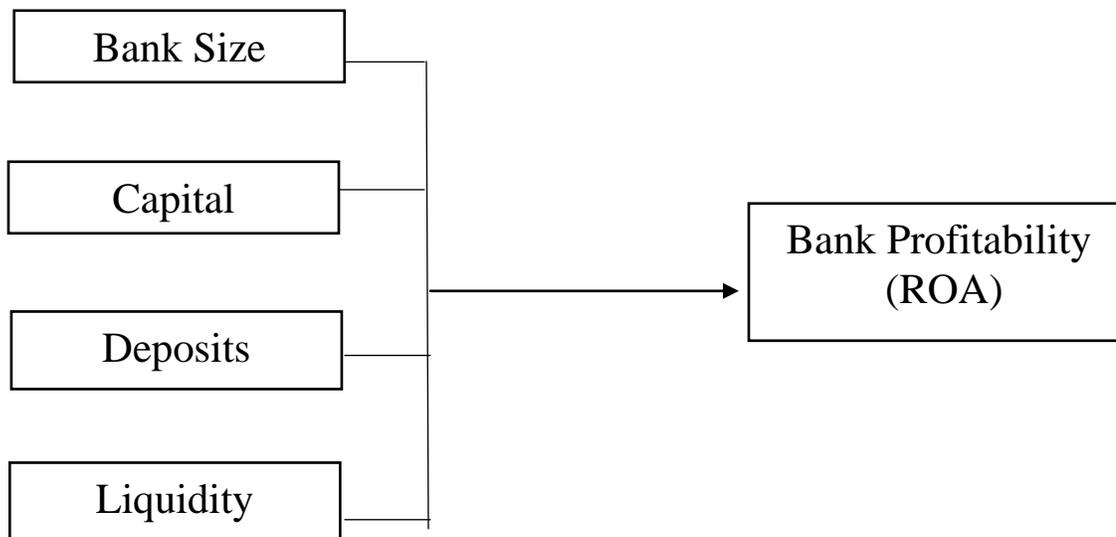
Liquidity

According to Shim & Siegel (2000), accounting Liquidity is the company's capacity to liquidate maturing short-term debt

(within one year). Maintaining adequate liquidity is much more than a corporate goal is a condition without which it could not be reached the continuity of a business. This ratio measures the ratio of liquid assets by total assets. Liquid assets include cash & equivalent and cash reserve at the central bank, short-term deposits in banks and other government and non-government guaranteed securities as a percentage of total bank assets. Liquidity ratio can be calculated by dividing the acid liquid ratio to total assets. Liquidity risk is one of the types of risk for banks; when banks hold a lower amount of liquid assets they are more vulnerable to large deposit withdrawals. Pasiouras & Kosmidou (2007) have found that there is a negative relationship between liquidity ratio and profitability. And also Molyneux & G (1992) and Guru (2002) have found a negative relationship between liquidity and bank profitability.

Thus, the conceptual framework of the study is shown in Figure 1.

Figure 1: Proposed Conceptual Model



Thus, the following hypothesis are derived based on the conceptual framework.

- H1: There is a Positive Relationship between Bank Size and Bank Profitability
- H2: There is a Positive Relationship between Capital Ratio and Bank Profitability
- H3: There is a Positive Relationship between Deposits and Bank Profitability
- H4: There is a Negative Relationship between Liquidity and Bank Profitability

III. RESEARCH METHODOLOGY

This study used the quantitative approach to analyze the data. The population of this study was banks in Sri Lanka. The desired sample size is 60 commercial banks in Sri Lanka during 2011-2015. The study investigate the significant determinants of bank profitability in commercial banks in Sri Lanka. To measure

determinants of bank profitability, Bank Size (BSIZE), Capital Ratio (CAP), Deposits Ratio (DEP) and Liquidity Ratio (LIQ) are used as independent variables. Return on Assets. (ROA) is used as dependent variable.

Model

$$ROA = \beta_0 + \ln_BSIZEx_1 + CAPx_2 + DEPx_3 + LIQx_4 + e$$

Where,

ROA= Return on Assets

β_0 is Constant

BSIZE= Bank Size

CAP= Capital Ratio

DEP= Deposits Ratio

LIQ= Liquidity Ratio

E=Error Term/Residual Term

Table 1: Operationalization of Variables

Concept	Variable	Indicator	Measurement
Profit	Return on Asset Ratio	Ratio	Net income/Average Total assets
	Bank Size	Number	Logarithm of Total assets
Determinants of Bank Profitability	Capital Ratio	Ratio	Equity/Total assets
	Deposits Ratio	Ratio	Total deposits/Total assets
	Liquidity Ratio	Ratio	Cash and cash equivalent/Total assets

Source: Research Data

IV. DATA ANALYSIS

Table 2: Descriptive Statistics of Variables

	Variable	N	Mean	St. deviation	Minimum	Maximum
DV	ROA	60	.0153983	.0171234	-.0204	.1227
IV	BSIZE	60	19.14215	1.218613	16.4942	21.1733
	CAP	60	.1217033	.0933836	.0334	.3847
	DEP	60	.69283	.1547201	.1535	.8544
	LIQ	60	.0372833	.0340393	.001	.2325

Source: Research Data

As stated in the above table, (Table 2), the profitability measurements (ROA) indicates that the Sri Lankan domestic commercial banks have an average positive profit over the last five years. From the total of 60 observations, the mean of ROA equals .0153983 percent with a minimum of -.0204 and a maximum of .1227 percent respectively. The mean of Bank size equals to 19.14215 present with a minimum of 16.4942 and a maximum of 21.1733 present respectively.

Continuing to the explanatory variables of the model, there are some interesting statistics to mention. Like the large dispersion in the minimum and maximum observation of ROA, there could be seen high variation in the CAP. On average, CAP equals of .1217033 percent. In the industry, there is the high variation of CA with the maximum of .3847percent and a minimum of .0334percent. Deposits also saw high variation. On average, DEP equals of .69283 percent. In the industry there is high variation of DEP with the maximum of .8544 percent and a minimum of .1535 Percent respectively. The descriptive statistics for liquidity indicated that the availability of cash and cash equivalent assets are averagely .0372833 percent. The maximum and minimum value of LIQ is .2325 and .001 respectively.

The Size of the bank which represented by the total assets represents a larger standard deviation with 1.218613 compared

with other variables. It revealed that the size of the bank has more significant variance than other variables. The regression analysis was carried out to test the hypothesis derived. The model summary shows in Table 3.

Table 3: Model Summary

Model	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Waston
1	.334	.286	.0144736	1.629

Source: Research Data

According to the model summary the bank profitability can be explained by Bank Size (BSIZE), Capital (CAP), Deposits (DEP) and Liquidity (LIQ). Since R² is 0.334, it can be conclude that 33.4% of variations in bank profitability can be explained by Bank Size (BSIZE), Capital (CAP), Deposits (DEP) and Liquidity (LIQ).

The regression analysis shows that bank size (0.001, p<0.05), capital (0.000, p<0.05) and deposits (0.027, p<0.05) have a significant impact on bank profitability. Therefore the hypotheses 1, 2 and 3 are supported and accepted. The regression results are shown in Table 4.

Table 4: Regression Analysis

Variable	Coefficient	Std. Error	T	Sig
C	-.1758454	.0514489	-3.45	-0.001
BFSIZE	.0071263	.0021391	3.37	0.001
CAP	.1789504	.0423862	4.23	0.000
DEP	.0526832	.0238243	2.23	0.027
LIQ	-.0924886	.0703103	-1.29	0.188

Source: Research Data

V. DISCUSSION

The Researcher intends to give a clear conclusion regarding the view point of determinants of bank profitability. The practical validity of this research also contributed major recommendation for the future researches.

The banking system is an important area for the economic development of all nations. This study has examined how bank-specific variables affect the profitability of domestic commercial banks in Sri Lanka over the time period from 2011 to 2015.

According to the observations derived from (Table 3: Model summary) the explanatory power of the bank-specific determinants in terms of R² for ROA model is 33.40%. Turning to the explanatory variables, the coefficient of the Bank size (BFSIZE) is positive and it is statistically highly significant determinants of profitability for ROA models at 5% significance level, supporting the argument that large banks have taken advantage of economies of scale. This result is in line with the previous studies carried out by Flamini, et al. (2009), for the profitability of banks in 41 Sub-Saharan African Countries and short (1979). However, there is no consensus in the literature on whether there is an escalation in size provides, economies of scale to banks. For example, some researches including Athanasoglou, et al. (2005), claim that there is no significant relationship between profitability and size.

This study confirms a positive and highly significant relationship between capital ratio and profitability in Domestic commercial bank ROA model at 5% significance level. These empirical results are consistent with previous studies of, Berger (1995), Demircuc-Kunt & Huizinga (1999), Pasiouras & Kosmidou (2007), and Kosmidou (2008).

There are positive and highly significant relationship between deposit ratio and profitability in Domestic commercial bank ROA model at 5% significance level. This result is in line with similar studies that have focused on banks' profitability such as Lee & Hsieh (2013) Ben & Goaid (2008).

Liquidity has no statistically significant impact on Sri Lankan domestic commercial bank profitability even though it represented the expected negative relationship. In the previous studies Pasiouras & Kosmidou (2007), Molyneux & Thornton (1992), and Guru (2002) have found a significant negative relationship between liquidity ratio and profitability. But this investigation has found liquidity is insignificant factor for bank profitability.

VI. CONCLUSION

A healthy banking system is one of the basics of sustainable economic growth. Overall these empirical results provide

evidence that, the profitability of Sri Lankan domestic commercial banks are formed by bank-specific factors (internal determinants). The findings provide interesting insights characteristics of bank profitability. In view of these findings, some suggestions may be useful for banks' management, policymakers and shareholders. To increase their profitability, Sri Lankan domestic commercial banks should attempt to emphasize the firm size, represented by total assets because Firm Size is the main determinant of Sri Lankan commercial banks' profits. The findings also showed that capital strength, measured by equity to total assets, which is a significant determinant of bank profitability in Sri Lanka. Well-capitalized banks face lower costs of external financing and that advantage can be translated into higher profitability. According to the results, Deposits is also considered as a significant determinant of Bank profitability. According to the regression result, the domestic commercial banks have little liquid assets. Based on this, the researcher can conclude that, the domestic commercial banks are more utilized idle cash and cash equivalent assets effectively. However liquidity ratio has insignificant effect on profitability of the commercial banks of Sri Lanka. As the above explanation, the profitability of the banks can be increased by increasing the asset base of the banks, increasing the size of the banks, and the deposits.

These bank-specific factors are controlled by the banks themselves, banks are in a better position to increase their profitability by concentrating on these factors and to promote the financial stability in the country which is paramount essential for economic development in Sri Lanka. Profitability of the banking sector is imperative for all countries, since it is an important source of equity which leads to rise in assets base. High profits in the banking sector always leads to financial stability of all countries.

According to the research the researcher investigates only bank-specific determinants (internal determinants) apart from other external determinants. There are some more external variables can include to obtain the better results.

For the study, researcher have taken only domestic commercial banks in Sri Lanka, as well as for the future researchers they can consider all the commercial banks.

REFERENCES

- [1] A, D.-K. & Huizinga, H., 1999. "Determinants of commercial bank interest margins. *The World Bank Economic Review*, Volume 13, pp. 379-408..
- [2] Allen, L. & Rai, A., 1996. Operational efficiency in banking: an international comparison. *Journal of Banking and Finance*, Volume 20 No. 4, pp. 655-672.
- [3] Alp, A., Ban, U., Demircuc-Kunt, K. & Kilik, S., 2010. "Internal determinants of profitability in Turkish banking sector. *Istanbul Stock Exchange Review*, Volume 12 No. 46, pp. 1-14.
- [4] Angbazo, L., 1997. Commercial bank net interest margins, default risk, interest rate risk and off-balance sheet banking. *Journal of Banking and Finance*, Volume 21, pp. 55-87.
- [5] Arif, M. & Khan, M. Z., 2013. IMPACT OF BANK SIZE ON PROFITABILITY: EVIDENCE FROM PAKISTAN. *International Journal of Applied Research*, Volume 2, pp. 98 - 109.
- [6] Athanasoglou, P. P., Brissimis, S. N. & Delis, M. D., 2008. "Bank-specific, industry-specific and macroeconomic determinants of bank profitability". *Journal of International Financial Markets, Institutions and Money*, Volume 18 No. 2, pp. 121-136.

- [7] Athanasoglou, P. P., Brissimis, S. N. & Delis, M. D., 2005. Bank-specific, Industry specific and Macroeconomic determinants of bank profitability. *Working paper No.25*.
- [8] Athanasoglou, P. P., Delis, S. N. & Staikouras, C. K., 2006. "Determinants of bank profitability in the South Eastern European Region". *Mediterranean Journal of Social Sciences*, Volume 2 No. 1, pp. 58-78.
- [9] Bashir, A. H., 2003. Determinants of profitability in Islamic Banks: some evidence from the middle east. *Islamic Economic Studies*, Volume 11 No. 1, pp. 31-57.
- [10] Ben, N. S. & Goaid, M., 2001. The determinants of the Tunisian deposit banks'performance. *Applied Financial Economics*, Volume 11 No. 3, pp. 317-319.
- [11] Ben, N. S. & Goaid, M., 2008. The determinants of commercial bank interest margin and profitability: evidence from Tunisia. *Frontiers in Finance and Economics*, Volume 5 No. 1, pp. 106-130.
- [12] Berger, A. N., 1995b. The relationship between capital and earnings in banking. *Journal of Money, Credit and Banking*, Volume 27, pp. 432-456.
- [13] Berger, A. N., 1995. The Profit-Structure Relationship in Banking-Tests of Market-Power and Efficient-Structure Hypotheses. *Journal of Money, Credit and Banking*, Volume 27, No.2, pp. 404-31.
- [14] Berger, A. N., Hanweck, G. A. & Hanweck, D. B., 1987. Competitive viability in banking: scale scope and product mix economies". *Journal of Monetary Economics*, Volume 20, pp. 501-520..
- [15] Bourke, P., 1989. "Concentration and other determinants of bank profitability in Europe, North America and Australia". *Journal of Banking and Finance*, Volume 13 No. 1, pp. 65-79.
- [16] Boyd, J. & Runkle, D., 1993. "Size and performance on banking firms: testing the predictions of theory". *Journal of Monetary Economics*, Volume 31 No. 1, pp. 47-67.
- [17] Cooper, D. C. & Schindler, P. S., 2009. *Business Research Methods*.
- [18] Demircuc-Kunt, A. & Huizinga, H., 1999. "Determinants of commercial bank interest margins and profitability: some international evidence". *The World Bank Economic Review*, Volume 13 No. 2, pp. 379-408..
- [19] Dogan, M., 2013. "Does firm size affect the firm profitability? Evidence from Turkey". *Research Journal of Finance an Accounting*, Volume 4 No. 4, pp. 53-59.
- [20] Flamini, V., McDonald, C. & Schumacher, L., 2009. The Determinants of Commercial Bank profitability in Sub-Saharan Africa. *IMF working paper*, p. 09/15.
- [21] Gul, S., Irshad, F. & Zaman, K., 2011. Factors Affecting Bank Profitability in Pakistan. *The Romanian Economic Journal*, Issue 19, pp. 61-87.
- [22] Guru, B. K., 2002. Determinants of commercial bank profitability in Malaysia. *Journal of Money Credit, and Banking*, Volume 5(17), pp. 69-82..
- [23] Javaid, S., Anwar, J., Zaman, K. & Gafoor, A., 2011. Determinants of Bank Profitability in Pakistan:Internal factor Analysis. *Mediterranean Journal of Social Sciences*, Volume 02, No. 01, January, ISSN.2039-2117.
- [24] Kosmidou, K., 2008. The determinants of banks' profits in Greece during the period of EU financial integration. *Managerial Finance*, Volume 34 No. 3, pp. 146-159.
- [25] Lee, C. C. & Hsieh, M. F., 2013. "The impact of bank capital on profitability and risk in Asian banking. *Journal of International Money and Finance*, Volume 32 No. 3, pp. 251-281.
- [26] Miller, S. & Noulas, A., 1997. "Portfolio mix and large-bank profitability in the USA". *Applied Economics*, Volume 29 No. 4, pp. 505-512.
- [27] Molyneux, A. & G, T., 1992. Determinants of profitability in Turkish banking sector. *International Research Journal of Finance and Economics*, Volume 3(2), pp. 55-86..
- [28] Molyneux, P. & Thornton, J., 1992. "Determinants of European bank profitability: a note". *Journal of Banking and Finance* , Volume 16 No. 6, pp. 1173-1178..
- [29] Muhammad, A., Muhammad , Z. K. & Muhammad , I., 2013. Impact of bank size on profitability:evidence from pakistan. *International journal of Applied Research*, Volume 2, pp. 98-109.
- [30] Pasiouras, F. & Kosmidou, K., 2007. "Factors influencing the profitability of domestic and foreign banks in the European Union". *Research in International Business and Finance*, Volume 21 No. 2, pp. 222-237.
- [31] Pimentel, R. C., Braga, R. & Casa Nova, S. P., 2005. Interação entre rentabilidade e liquidez: um estudo exploratório. *Revista de Contabilidade do Mestrado em Ciências Contábeis da UERJ, Rio de Janeiro*, pp. 83-98.
- [32] Rasiah, D., 2010. Theoretical framework of profitability as applied to commercial banks in Malaysia. *European Journal of Economics, Finance and Administrative Sciences*, Issue 19, pp. 74-97.
- [33] Saeed, M. S., 2014. "Bank-related, industry-related and macroeconomic factors affecting bank profitability: a case of the United Kingdom" . *Research Journal of Finance and Accounting*, Volume 5 No. 2, pp. 42-50.
- [34] Sehrish, G., Irshad, F. & Zaman, K., 2011. Factors Affecting Bank Profitability in Pakistan. *the Romanian Economic Journal*, pp. 61-87.
- [35] Shim, J. K. & Siegel, J. G., 2000. Financial Management. 2nd edition; Barron's. s.l.:s.n.
- [36] short, B. K., 1979. The relation between commercial bank profit rates and banking concentration in Canada, Western Europe and Japan. *Journal of Banking and Finance*, Volume 3, pp. 209-219.
- [37] Smirlock, M., 1985. "Evidence on the (non) relationship between concentration and profitability in banking". *Journal of Money, Credit and Banking*, Volume 17 No. 1, pp. 69-83.
- [38] Sufian, F. & Chong, R. R., 2008. "Determinants of bank profitability in a developing economy empirical evidence from the Philippines". *Asian Academy of Management Journal of Accounting and Finance*, Volume 4 No. 2, pp. 91-112.

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