

Relationship Between Capital Structure and Financial Performance of Licensed Commercial Banks In Sri Lanka

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ABSTRACT

The study examines the relationship between capital structure and financial performance of licensed commercial banks of Sri Lanka. The study sample included 09 competitive Licensed Commercial Banks of Sri Lanka for the period of 2010 to 2014 to examine the relationship between Capital Structure and financial performance of licensed commercial banks in Sri Lanka and identifying effect of unobserved data (entity effect and time effect) are main objectives of this study. Here explained variables were Return on Assets and earnings per share, whereas explanatory variables were equity to assets, equity to loan, equity to liability and firm size. Descriptive statistics and regressions analysis were used to analyse the collected data.

Findings discovered equity to assets and firm size has significant negative relationship with ROA. As well as firm size positively and significantly associate with earning per share. However equity to liabilities has negative relationship with earning per share. Oppositely, firm size negatively affected on EPS. The impacts of the unobserved variables were identified from entity effect model and time effect model, here study validated that return on assets and earnings per share have no time effect although the outcomes point out earnings per share have significant entity effect.

KEYWORDS: *Capital Structure, Performance & Unobserved effect*

1 Introduction

The performance of the organization is central to retain and attract the stakeholders to the organization. In today business world financial managers emphasize on wealth maximization rather than profit maximization. The Modern theory of the wealth maximization is aligning with the objective of making maximum profit and generating optimum growth in company share price in the long term. To exploit the profit for the organization every company must maintain optimal capital structure as well. So there was interdependence, interrelated relationship between each other thus the capital structure of the organization is influencing on shareholders return. Optimal capital structure means the best debt to equity ratio for a firm that maximizes its value. The optimal capital structure of a company is one which offers a balance between the ideal debts to equity ranges and minimizes the firm's cost of capital. Sri Lankan banking sector competitive pressures have been drastically increasing, due to arrivals of new financial instruments on competitive terms and increase the competitiveness between the existing bank and financial institution for grape the same customer. Technological changes, increase knowledge of customer, easy technique to connect and inform the customers so, discovery of funding and the usage of the capital effectively have given big pressure to organizations. The bank must use limited sources effectively and efficiency to face for competitiveness of the banking sector in order to derive maximum profit. Financial managers make efforts to ascertain effective combination of debt and equity on that managers are able to maximize profitability of the firm and increase firm's market value to satisfy the shareholders with proper combination of debt and equity hence, this study attempts to identify the relationship between bank financial performance and capital structure.

The objectives of this study are,

- I. To examine the relationship between Licensed Commercial Banks financial performance and capital structure.
- II. To measure the impact of unobserved effect on Licensed Commercial Banks.

2 Literature Review

Capital structure decisions is one of the most challenging and difficult issue faced by financial managers of any organization. The decision about a capital structure state continued survival of companies. And the collected funds is finance firm operations with the objective of the maximizing the shareholder wealth of an organization.

The Modigliani Miller theory gives basis for the capital structure models and for the modern financial theories as well. The Modigliani Miller theory is also often called the capital structure irrelevance principle. The basic theory states that capital structure and value of the firm under perfect capital market condition assumption. The assumption was that there is no bankruptcy cost, frictionless capital markets and without taxes. In that Modigliani Miller theory states that firm value is independent of its capital structure. After that considering the tax for the assumption said that corporate income tax and the cost of capital exist the market value of the firm is positively related to the amount of long term debt used in its capital structure (Modigliani and Miller, 1963). Contract to MM theory, Trade-off Theory primarily deals with the two concepts, which are Cost of financial distress and agency cost. These two concepts not considered in MM theory. The validity of trade-off theory is higher than MM theory in practical situations. Trade off theory explains the strategy of firms to finance their investments by debt. As well as in the agency theory estimated that increased leverage in the context of lower agency costs may raise the level of efficiency and thereby contribute to upgrading firm performance. Pecking Order Theory considered one of the most convincing theories of capital structure. In first time the Pecking Order Theorist Myers introduced empirical test of the pecking order theory. Myers and Majluf (1977) assert that information asymmetry exists among the investors. Investors have less information than insiders. Information asymmetry resulted in the undervalued of the company's common shares. This is lead to positive relationship between growth of the companies and debt level. Pecking Order theory is not like trade off theory; in trade off theory companies do not have target capital structure. Pecking Order Theory is assumed that companies would prefer internal to external fund mean prefer debt to equity. With debt issue is a less is given less worrisome signal to investors about the organization. Instead of the theories there are several empirical studies relates to investigating the relationship between capital structure and profitability in banks. Velnampy and Niresh conducted a study in 2012 assessing the Relationship between capital structure and profitability of ten listed Sri Lankan banks for the period of 2002 to 2009. Here outcomes showed that there is a negative

association between capital structure and profitability same as Titman and Wessels (1988) evaluated the relationship between capital structure and profitability and found out that firm with high profit levels usually maintain relatively lower debt levels since they can realize such funds from internal sources. As well as Abdul (2012) conducted a study to determine the relationship between capital structure decisions and the performance of firms in Pakistan. The relationship between financial leverage and firm performance as measured by the return on equity (ROE) was negative but not statistically significant, thus Aburub in 2012 investigated the impact of capital structure on the firm performance of companies listed on the Palestine Stock Exchange during 2006 to 2012. Results indicate that leverage has a negative effect on bank profits, an increase in each ROA and Total Deposit to Assets increase bank efficiency. Zeitun and Tian in 2007 study the impact of capital structure on the firm performance for 167 Jordanian companies during 1989 to 2003. The results suggest that capital structure has significantly negative impact on accounting measures of firm performance evaluation. Also they indicate that short term debt to total assets ratio (SDTA) has significantly negative impact on the market measure of Jordanian companies' performance evaluation. Nor Edi and Fatihah in 2010 examine the role of capital structure in determining the firm performance. Debts to asset ratio (DTAR), debt to equity ratio (DTER) are used in the performance model to identify the affiliation of capital structure when regressed with ROA, ROE and ROIC with 1170 observations from companies listed on Bursa Malaysia since 2002 to 2010. The result also consistent with the pecking order theory which indicates leverage is negatively related to firm's profitability as high level of debt decreases the financial performance of the business. In the year of 2012, Vedran Skopljak has done a research to discover capital structure effect on firm performance of Authorized Deposit in Australia market. The result showed that increase in debt leads to increased profit efficiency hence superior bank performance. Contrast to above; Khalaf Taani conducted a research to exams Capital structure effects on banking performance in Jordan. Twelve commercial banks listed on Amman Stock Exchange were used for this study, which covers period of five years from 2007 to 2011. The results show that bank performance, which is measured by net profit, return on capital employed and net interest margin is to be significantly and positively associated with total debt, while total debt is found to be insignificant in determining return on equity in the banking industry. Alternatively Ross (1977) showed that managers are knowledgeable about the distribution of firm's returns, but investor's has lack of knowledge about the internal information about the organization and about industry that company has operated. In this situation managers decide to increase debt into capital structure, investors may interpret this as a signal of increased future cash flows and the organization's commitment towards its contractual obligation. This will show a higher level of confidence that the management has towards the organization prospect in the near future. However, if managers decide to raise capital by issuing new equity it shows which signal to the shareholders that management has no confidence towards future prospects of the organization.

According to above empirical studies reviewed, the following methodology was developed to achieve the objectives of the current study.

3 Methodology

The present study has used secondary data for the analysis. The data utilized in this study was extracted from the comprehensive income statements and Statement of financial position 09 licensed commercial banks over a period of five years from 2010 – 2014.

3.1 Conceptualization

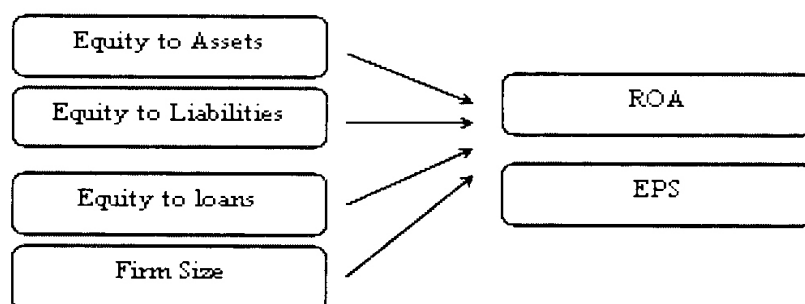


Figure 1: Conceptual Framework

3.2 Variables Description

Independent Variables

Equity to Assets	= Equity / Total Asset
Equity to loans	= Equity / Total Loans
Equity to Liabilities	= Equity / Liabilities
Firm Size	= Natural Logarithm of absolute total assets variation

Dependent Variables

Return on Assets	= Operating Income / Total Assets
Earnings per Share	= Net Earnings/ No of Shares

Figure 2: Variables Description

3.3 Model Specification

This study has analysed data based on classical linear regression assumptions and used SPSS package version 19.0. The study developed six equations to achieve the stated objectives based on basic two equations as bellows;

$$ROA = \infty + \beta_1 ETA + \beta_2 ETL + \beta_3 ELI + \beta_4 FS + \varepsilon \dots \dots \dots \text{Equation 01}$$

$$EPS = \infty + \beta_1 ETA + \beta_2 ETL + \beta_3 ELI + \beta_4 FS + \varepsilon \dots \dots \dots \text{Equation 02}$$

Where;

* ROA = Return on Asset

* EPS=Earnings per share

* ∞ = Intercept

* $\beta_{1 \sim 5}$ = Regressions Coefficients

*ETA= Equity to Assets

* ETL= Equity to loans

*ETLI= Equity to Liabilities

* ε =Error term

*FS= Firm Size

In addition, to achieve second objective of the study re built the basic equation 01 & 02 introducing time dummies and entity dummies to each equations at one time it mentioned as bellow;

- To Entity Effect

$$ROA = \infty + \beta_1 ETA + \beta_2 ETL + \beta_3 ELI + \beta_4 FS + B_5 D_1 + B_6 D_2 + B_7 D_3 + B_8 D_4 + B_9 D_5 + B_{10} D_6 + B_{11} D_7 + \varepsilon \dots \dots \dots \text{Equation 03}$$

$$EPS = \infty + \beta_1 ETA + \beta_2 ETL + \beta_3 ELI + \beta_4 FS + B_5 D_1 + B_6 D_2 + B_7 D_3 + B_8 D_4 + B_9 D_5 + B_{10} D_6 + B_{11} D_7 + \varepsilon \dots \dots \dots \text{Equation 04}$$

- To Time Effect

$$ROA = \infty + \beta_1 ETA + \beta_2 ETL + \beta_3 ELI + \beta_4 FS + B_5 D_1 + B_6 D_2 + B_7 D_3 + B_8 D_4 + \varepsilon \dots \dots \dots \text{Equation 05}$$

$$EPS = \infty + \beta_1 ETA + \beta_2 ETL + \beta_3 ELI + \beta_4 FS + B_5 D_1 + B_6 D_2 + B_7 D_3 + B_8 D_4 + \varepsilon \dots \dots \dots \text{Equation 06}$$

4 Analysis & Interpretations

4.1 Descriptive Statistics

The below descriptive statistics show, according to equation 01 mean value of performance ordered low of 0.069 to highest of 19.19. As per equation 02 mean value of performance ordered low of 0.2009 to highest of 19.19. Both cases average of firm size were 19.19%. EPS stood to 234% but there was high fluctuation, so based on EPS measurement unable to conclude correct forecasting. Also equity to Assets, Equity to loan, and Equity to liability averaged were 0.20%, 0.12%, and 0.44%. It emphasizes Banking industry was highly geared. Among three values there are no more fluctuations as well.

Table 1. Descriptive Statistics

	Mean	Std. Deviation
Return on Assets	.0609	.0136
EPS	234.317	610.5160
Equity to Assets	.2009	.0750
Equity to loan	.1241	.0423
Equity to Liability	.4422	.2766
Firm Size	19.19	.9819

4.2 Regression Analysis

Table 2. Model Summary

	R	R ²	Std. Error of the Estimate	Durbin - Watson
ROA (Equation01)	70%	52%	0.0154%	1.698
ROA – Entity Effect (Equation 03)	61.3%	49.6%	0.009%	1.96
ROA – Time Effect (Equation 05)	69%	48.7%	0.0107%	1.497
EPS (Equation 02)	63.7%	43.1%	489.45%	0.726
EPS – Entity Effect (Equation 04)	89.3%	79.8%	311.88%	0.857
EPS – Time Effect (Equation 06)	66.6%	44.3%	200.00%	.803

According to model summary above, return on assets 52% explained by selected variables as well as EPS was 43.1% but there was more fluctuation. In addition that, in time effect of ROA determinants of

coefficient was 49.6% of entity effect and 48.7% of time effect. And also in EPS entity and time effect model fitness were arranged 79.8% and 44.3% respectively. It emphasis there was almost 80% explained by EPS through entity dummies. Further, capital structure decision affect to bank performance different from one bank to another bank. Thus that depends on the bank itself. Because different management style, strategies used by the banks to face massive competition case to that.

Table 3.Coefficients

ROA - (Equation 01)					EPS - (Equation 02)			
		Standardized Beta	T Value	Sig.		Standardized Beta	T Value	Sig.
Constant		.208	6.249	.000			-2.734	.009
Equity to Assets		-.083	-2.77	.008		-.070	-.406	.686
Equity to loan		.092	1.887	.065		-.152	-.962	.341
Equity to Liability		.011	1.664	0.10		-.245	-1.810	.036
Firm Size		-.008	-4.696	.000		.425	3.510	.001

As per table 03 of coefficients, there was negative impact with ROA and equity to assets, firm size respectively. It indicates when equity to assets and firm size increases 1% ROA decrease by 0.083 and 0.008 respectively. Among the other determinants only equity to assets and firm size were significant at 1%. On other hand there was negative significant relationship between equity to liability and EPS. Contrast to that there was positive impact firm size with EPS.

4.3 Hypothesis Testing

No	Hypothesis	Results
H1	There is a significant relationship between ROA and Equity to Assets	Accepted
H2	There is a significant relationship between ROA and Equity to Loan	Rejected
H3	There is a significant relationship between ROA and Equity to Liabilities	Rejected
H4	There is a significant relationship between ROA and Firm Size	Accepted
H5	There is a significant relationship between EPS and Equity to Assets	Rejected
H6	There is a significant relationship between EPS and Equity to Loan	Rejected
H7	There is a significant relationship between EPS and Equity to Liabilities	Accepted
H8	There is a significant relationship between EPS and Firm Size	Accepted

Figure 3: Hypothesis Testing

5 Conclusion & Recommendations

This study examined the relationship between capital structure and financial performance in Sri Lankan banks. The study covered 09 listed banks over the period of 2010 to 2014 and the major discoveries of the study are concise below:

Capital structure of the company has a strong relationship with gaining profit and performing in a dynamic environment. This study emphasis, that Sri Lankan Banking Industry almost depends on the funds taken from the outside parties. Thus Equity to Assets, Equity to liabilities and Equity to Loans were arranged order to .20%, 0.12% and .44% respectively. So it was high geared sector. And faced risk situation. Because of the competitive environment, if damaged reputation of the bank customer withdraw their money. So bank should concern of internal sources as well.

Through Regression table, there was entity effect associated because among other equation highest explanatory power associate with that equation it was 89.3%. Thus when determining the capital structure decision to achieved maximum performance, there may be an entity effect.

Also there were significant negative relationships between ROA and equity to assets and firm size thus,

when Equity capital increases, ROA decreases that obvious with theory. Likewise there was significant negative relationship between ROA and firm Size. It emphasis when firm size increases ROA decreases. But it is not compatible with practical as well as theory because normally there was positive relationship. However as per Equation 02 proved theory thus there was significant positive relationship between EPS and Firm Size. And also there were negative relationship between EPS with Equity to Assets.

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