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The Effects of Liquidity Management on Firm Profitability: Evidence from Sri Lankan Listed Companies

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Abstract
This paper has focused on analyzing the nature of the liquidity and its impact of profitability from listed companies in Sri Lanka. In this study an attempt has been made to analyze the liquidity and its impact on profit earning capacity during 2008 to 2012.To evaluate the profitability it has been used the ratio of ROE and ROA. Based on the nature of data collection through different tools, the following statistical techniques were employed: Descriptive analysis, correlation and regression. The research findings show that there is no significant relationship between liquidity and profitability. These results are consistent with prior empirical studies.
Keywords: liquidity ratios, corporate profitability, Sri Lanka.

INTRODUCTION

Liquidity and profitability are very closely related. When one increases, the other one will decrease. Apparently liquidity and profitability goals conflict in most of the decisions which the finance manager makes. Liquidity management is a concept that is receiving serious attention all over the world especially with the current financial situations and the state of the world economy. The concern of business owners and managers all over the world is to devise a strategy of managing their day to day operations in order to meet their obligations as they fall due and increase profitability and shareholder's wealth. Profitability is a major factor in the going concern of a business. Managers should strive to achieve a reasonable level of profitability in order to maximize their shareholders wealth. Liquidity requirement of a firm depends on the peculiar nature of the firm and there is no specific rule on determining the optimal level of liquidity that a firm can maintain as to ensure positive impact on its profitability.

This research therefore sought to find out the relationship existing between the liquidity and the profitability of selected companies in Sri Lanka, with specific reference to those listed on the Colombo Stock Exchange. The purpose of the study was to find out the relationship between the liquidity and the profitability of Companies listed on the Colombo Stock Exchange.

To carry out these objectives, the remainder of this paper is organized as follows: section two presents the objectives of the research. Section three reviews the literature for relevant theoretical and empirical work on liquidity and its impact on profitability. Section four and five describes the conceptualization and hypotheses. Section six describes the methodology followed in this study. Section seven portrays and discusses the statistical results and their implications. The final section makes some recommendations followed by the conclusion in this study.

OBJECTIVES OF THE STUDY

The main objective of the study is to find out the impact of liquidity on profitability in selected listed companies in Sri Lanka. The following specific objectives are taken for the study.

- To identify the profitability of selected companies over the five financial years during 2008 to 2012
- To identify the relationship between liquidity and profitability
- To measure the nature the nature and extent of the relationship between liquidity and profitability
- To suggest appropriate management policy recommendations

REVIEW OF LITERATURE

Qasim Saleem, Ramiz Ur Rehman (2011) made a research on Impacts of liquidity ratios on profitability of selected enterprises in Pakistan with the sample of 26 oil and gas companies listed under the Karachi Stock Exchange (KSE). Findings reveal that there is a significant impact of only liquid ratio on ROA while insignificant on ROE and ROI; the results also show that ROE is no significant effected by three ratios current ratio, quick ratio and liquid ratio while ROI is greatly affected by current ratios, quick ratios and liquid ratio.

Ben-Caleb, Egbide, Olubukunola, Uwuigbe, Uwalomwa (2013) examined the Liquidity Management and Profitability of Manufacturing Companies in Nigeria. The analysis was based on a sample of 30 Manufacturing Companies. The result suggests that current ratio and liquid ratio are positively associated with profitability while cash conversion period is negatively related with profitability of manufacturing companies in Nigeria. The association in all the cases was however, statistically insignificant, indicating low degree of influence of liquidity on the profitability of manufacturing companies.

Takon Samuel Manyo, Vera N. Ogakwu (2013) investigated the Impact of Liquidity on Return On Assets Of 46 quoted firms listed on the Nigerian Stock Exchange from 2000-2009.the result of the study show that liquidity has a significant positive impact on Return on Assets (ROA), implying that a unit change in liquidity will result into a corresponding increase in ROA. Victor Curtis Lartey, Samuel Antwi and Eric Kofi Boadi (2013), in their study found a very weak positive relationship between the liquidity and the profitability of the listed banks in Ghana.

Ajanthan.A (2013) investigated the relationship between liquidity and profitability of trading companies in Sri Lanka over a period of past 5 years from 2008 to 2012. The study reveals that there is a significant relationship exists between liquidity and profitability among the listed trading companies in Sri Lanka. Furthermore, Velnampy, T. and Nimalathasan, B. (2010) using sample of Bank of Ceylon and Commercial Bank of Ceylon ltd in Sri Lanka, find there is a positive relationship between firm size and profitability in Commercial Bank of Ceylon ltd, but there is no relationship between firm size and profitability in Bank of Ceylon.

More recent studies have also confirmed the existence of the trade-off between liquidity and profitability trade-off. Bhunia,et. al. (2011) investigated the liquidity management efficiency and liquidity profitability relationship. The data utilized was extracted from the income statements, balance sheets, and cash flow statements of sampled firms from the India Stock Exchange and CMEI data base. The purposive sample design method was applied in their analysis. Preferred sample of private sector steel companies from 1997-2006 were utilized in the analysis. Results showed that correlation and regression results are positively significant and associated to the firm profitability.

CONCEPTUALIZATION

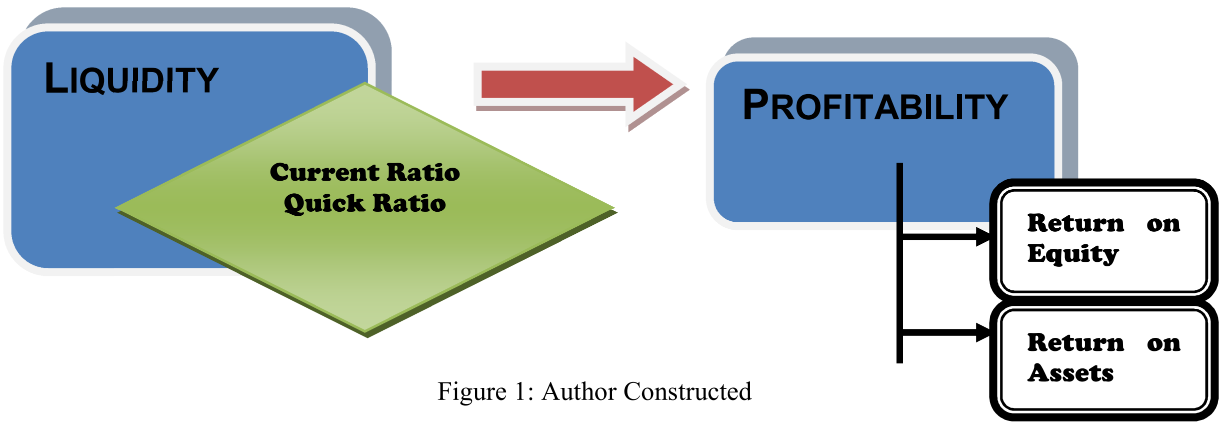

Figure 1: Author Constructed

HYPOTHESES OF THE STUDY

The following hypotheses are developed for testing.

H1: liquidity management and profitability are significantly correlated

H0: there is no significant impact of liquidity on profitability

METHODOLOGY

This methodology part embraces the following five components: the first section discusses the scope of the study. The second section presents the period of the study. In the third section, data sources used for this study are discussed. The fourth section highlights the reliability and validity where as the last section illustrates the types of statistical techniques used to analyze data.

Scope

The concern of this study is to assess the impact of liquidity on profitability of listed companies in Sri Lanka. As per the scope of the study, Simple random sampling has been used by the researcher to select 40 firms which are listed on Colombo stock exchange from six major Different business sectors. In the following table shows the way of Number of firms selected from each sector.

Table 1: Sample selection

Sectors	Number of selected firms
Beverage Food and Tobacco	12
Chemicals and Pharmaceuticals	6
Diversified Holdings	11
Footwear and Textile	4
Stores Supplies	4
Manufacturing	8
Total	**45**

Period of the study
The period of the study was past 5 financial years from 2008 to 2012.

Data source
The sources of the data were collected from the published annual reports of the selected organizations, which were published by CSE.

Reliability and validity
The data used for this study were derived from the audited financial statements (Income statement and Statement of Financial position) of the listed organizations as fairly accurate and reliable. Therefore, these data may be considered reliable for the study. The reliability and validity of the test were found to maximum. This indicates that the researcher satisfied content validity.

Types of statistical techniques
Based on the nature of data collection through different tools, the following statistical techniques were employed: Descriptive analysis, correlation and regression. A well known statistical package like "statistical package for social science (SPSS) 16.0 versions was used to analyze and interpret the results.

VARIABLE DESCRIPTION
Table 2 Table 3 below show the variables and their descriptions as used in this study.

Table No 2: Description of independent variable

Variable	Description/Measurement
Current ratio	Current Assets (CA) / Current Liability(CL)
Acid test ratio/Quick ratio	(Current Assets- Inventory) / Current Liability

Table No 3: Description of dependent variable

Variable	Description/Measurement
Return on Equity	Profit after Interest and Tax *100 / Equity Capital
Return on Assets	Profit after Interest and Tax *100 / Total Assets

MODEL SPECIFICATION
The linear model used for this study is given as
ROE= β + β 1**CR** + β 2**ATR**+e

ROA = β 0+ β 1**CR** + β 2**ATR** + e

This study employs two profitability measures
1. ROE-Return on Equity
2. ROA-Return on Assets

Based on the above model CR and ATR are considered as the independent variables whereas ROE and ROA are the dependent variables. The detail analysis is carried out with the help of above variables.

RESULTS & ANALYSIS:

Table No 4: Descriptive Statistics of the Variables

	Range	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Current ratio	32.45	.06	32.51	2.2904	3.38701	33.174	.295
Acid test ratio/Quick ratio	24.38	-.38	24.00	1.5353	2.56672	40.372	.295
Return on Equity	197.17	-27.04	170.13	7.8449	16.05587	53.130	.295
Return on Assets	2.15E4	-2.12E4	288.58	-66.1843	1293.72511	268.384	.295
Valid N (listwise)							

The following descriptive statistics were obtained with the intension of inferring nature of liquidity and the study of ROE and ROA ratios within the listed companies in Sri Lanka. It can be noted from table No 4 that the current ratio has 2.2904 averages with a minimum of 6% and maximum of 325.1% and SD of 3.387, while acid test ratio has an average of 153.5 with a minimum and maximum of -.38 and 24 with a SD of 2.567 respectively. The mean ROE of the sampled firms is about 7.8 and the mean EOA is – 66.18.

Correlation Analysis

Table No 05: Correlations matrix for liquidity and profitability

Variables	**ROE**	**ROA**
Current Ratio		
Correlation coefficient	.070	.031
Sig.(1-tailed)	.252	.614
Acid Test Ratio		
Correlation coefficient	.049	.029
Sig.(1-tailed)	.425	.640

The table No 5 shows the correlation values of the dependent and independent variables. It is apparent that none of the relationships are statistically significant which is in line with many of the previous study. There was a weak relationship between liquidity and profitability of the selected companies.

Regression Analysis

A simple linear regression was carried out to recognize the impact of liquidity on firm performance. The following Tables show the results of the analysis.

Table 06: ANOVA – ROE as a Dependent Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	717.009	2	358.504	1.395	.250[a]
	Residual	68628.750	267	257.037		
	Total	69345.759	269			

a. Predictors: (Constant), Acid test ratio/Quick ratio, Current ratio

b. Dependent Variable: Return on Equity

Table 07: ANOVA – ROA as a Dependent Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	438494.246	2	219247.123	.130	.878[a]
	Residual	4.498E8	267	1684619.621		
	Total	4.502E8	269			

a. Predictors: (Constant), Acid test ratio/Quick ratio, Current ratio

b. Dependent Variable: Return on Assets

Table No 6 and table no 7 show the analysis of variance (ANOVA) of the variables. With f-value of 1.395 (sig 0.250) and 0.130 (sig 0.878) for ROE and ROA as profitability proxies respectively, it clearly shows that there is no significant relationship between the dependent variables (ROE and ROA) and the independent variables at 1 % level of significance.

Table No 8: Coefficients for Predictors of Performance

Model	Unstandardized Coefficients				Standardized Coefficients		**t**		**Sig.**	
	B		**Std. Error**		**Beta**					
Dependent variable	ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA
(Constant)	6.827	-94.515	1.198	96.970			5.699	-.975	.000	.331
Current ratio	1.660	18.674	1.133	91.686	.350	.049	1.466	.204	.144	.839
Acid test ratio/ Quick ratio	-1.813	-9.407	1.494	120.987	-.290	-.019	-1.213	-.078	.226	.938

The results of the regression analysis in table No 7 show that the coefficient for all two variables such as current ratio and Acid test ratio are not significant. Further t values for both variables of liquidity are insignificant at 1% level it means that these variables are not contributing to the profitability measures of ROE and ROA. Both models are also not significant at 1% level of significance. For model 1 F-value is 1.395 and respective p value is 0.250 which is not statistically significant at 1% level of significance. In this case it reveals that liquidity ratio has no significant impact on ROE at 1% level. Similarly model 2 is also statistically insignificant at 1% level (F-value 0.130 and P value 0.878).

CONCLUSION

In this paper, researchers have analyzed the impact of a carefully selected set of determinants on profitability of listed firms from different sector.

The implication of the results is that liquidity has low degree of influence on the profitability of selected companies from different sector in Sri Lanka. From the forgoing, it is the candid recommendation of this paper that overall state of liquidity should be improved so as to have a favorable impact on the profitability of the company. Further the study could not provide a significant relationship between liquidity and profitability. Therefore it can be concluded that profitability is independent of the liquidity ratios.

This is an indication that changes in the liquidity position exert no remarkable changes in the profitability. Other factors may contribute a high degree of influence on the profitability. One of the unique features of this study is that usage of different sectors to assess the association of liquidity and profitability. However, there is a limitation that the data is only of five years due to availability of data constraints. The study does not consider all the elements of liquidity management, which impact the performance of the company. In using the finds of this research these conceptual limits are needed to be considered. Hence further research is significantly recommended.

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