A Nexus Between Liquidity & Profitability: A Study Of Trading Companies In Sri Lanka.

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ABSTRACT

This study has investigated the relationship between liquidity and profitability of trading companies in Sri Lanka. The main objective was to examine the nature and extent of the nexus between liquidity and profitability in profit-oriented quoted trading companies and also to determine whether any relationship exist between the two performance measures. Analysis was based on data extracted from annual reports and accounts of the companies for the relevant period. Correlation and regression analysis respectively were employed to examine the nature and extent of the relationship between the variables and determine whether any cause and effect relationship between them. The study covered 08 listed trading companies in Sri Lanka over a period of past 5 years from 2008 to 2012. Correlation& regression analysis and descriptive statistics were used in the analysis and findings suggest that there is a significant relationship exists between liquidity and profitability among the listed trading companies in Sri Lanka. However, the findings of this paper are based on a study conducted on the selected companies. Hence, the results are not generalizable to non-quoted companies. Secondly, the sample only comprises trading companies. Therefore, the results are valid for this sector.

Key Words: Liquidity, Profitability &Trading companies

INTRODUCTION:

Profitability and liquidity are the most prominent issues in the corporate finance context. The concept of financial liquidity is not very straight, as it has various aspects, although generally it refers to the current assets and liabilities management. Financial liquidity together with profitability are the core categories of enterprise activities which, in order to function efficiently, the company should treat as equally important. The growth of financial liquidity may negatively influence the company profitability. If the company is to liquid in the static sense than it will affect negatively the profitability since some capital will be frozen in current assets. Decision on either liquidity or profitability is all about planning which is necessary for the efficient working of any organization. The aspect of planning could be viewed from marketing, production, human resource and financial plans. For effective running of any business, there has to be proper flow of funds. This fund is called working capital which is equally defined as the net current assets, or the current assets less the current liabilities (Prasana, 2000).

Liquidity is a precondition to ensure that firms are able to meet its short-term obligations Liquidity plays a significant role in the successful functioning of a business firm. A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions. A study of liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business (Bhunia, 2010).

Profitability is a measure of the amount by which a company's revenues exceeds its relevant expenses. Profitability ratios are used to evaluate the management's ability to create earnings from revenue-generating bases within the organization. A profit ratio indicates how effectively management can make profits from sales. It also indicates how much room a company has to withstand a downturn, fend off competition and make mistakes. Potential investors are interested in dividends and appreciation in market price of stock, so they focus on profitability ratios. Managers, on the other hand, are interested in measuring the operating performance in terms of

profitability. Hence, a low profit margin would suggest ineffective management and investors would be hesitant to invest in the company.

RESEARCH PROBLEM:

Managing sufficient liquidity means, that funds are tied up in liquid assets, thereby making them unavailable for the use either for operation or investment Increasing profitability would tend to reduce firm's liquidity and too much attention on liquidity would tend to affect the profitability (Smith, 1980). Therefore, firms should always try to maintain a balance between conflicting objectives of liquidity and profitability. The firm's liquidity should not be too high or too low. Excessive dependence on liquidity indicates the accumulation of idle funds that don't fetch any profits for the firm (Smith, 1980). On the other hand, insufficient liquidity might damage the firm's goodwill, deteriorate firm's credit standings and that might lead to forced liquidation of firm's assets. Hence, the present study is initiated to identify the nexus between liquidity and profitability of listed trading companies in Sri Lanka.

RESEARCH QUESTIONS:
In order to gain an insight and understand the nexus, if any, between liquidity and profitability in a profit-oriented business, the following questions below are addressed in the course of the study:

- Is there any relationship between liquidity and profitability?
- What is the nature and extent of the relationship between liquidity and profitability?
- Is there any functional relationship between liquidity and profitability, and in what direction?
- Does profitability means liquidity?

OBJECTIVES OF THE STUDY:
The present study is envisaged with the following objectives:

- To understand the relationship between liquidity and profitability in a profit-driven business enterprise.

- To determine the nature and extent of the relationship between liquidity and profitability.

- To determine whether a functional relationship exists between liquidity and profitability and, thus establish whether or not both reinforce each other.

- To proffer appropriate management policy recommendations.

REVIEW OF LITERATURE:

Various studies attempted to proper suitable landing ground for business in dealing with this ever-lingering liquidity & profitability nexus. In the literature, however, while some have argued that liquidity is more important than profitability, some see profitability to be more important than liquidity, and yet others argue that both are equally important;

Liquidity plays a significant role in the successful functioning of a business firm. A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions. A study of liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business (Bhunia, 2010). Dilemma in liquidity management is to achieve desired tradeoff between liquidity and profitability (Raheman et all, 2007).

Velnampy (2013) in his study of corporate governance and firm performance" with the samples of 28 manufacturing companies using the data representing the periods of 2007 – 2011 found that determinants of corporate governance are not correlated to the performance measures of the organization. Regression model showed that corporate governance don't affect companies' ROE and ROA. revealed that corporate governance measures are not correlated with performance measures

Walt (2009) opines that profitability is more important because profit can usually be turned into a liquid asset, and that liquidity is also important but does not mean that the company is profitable. Don (2009), while acknowledging the relative importance of both, submits that liquidity is more important because it has to do with the immediate survival of the company.

Velnampy.T (2006) examined the financial position of the companies and the relationship between financial position and profitability with the sample of 25 public quoted companies in Sri Lanka by using the Altman Original Bankruptcy Forecasting Model. His findings suggest that, out of 25 companies only 4 companies are in the condition of going to bankrupt in the near future. He also found that, earning/total assets ratio, market value of total equity/book value of debt ratio and sales/total assets in times are the most significant ratios in determining the financial position of the quoted companies.

The study found (Eljelly, 2004) significant negative relationship between the firm's profitability and liquidity levels as measured by current ratio, and that the relationship is more evident in firms with high current ratios and longer cash conversion cycles. The study also found that at industry level, however, the cash conversion cycle or cash gap is of more importance as a measure of liquidity than current ratio that affects profitability. The size variable is also found to have significant effect on profitability at industry level. Similarly in his study, Jose et al (1996) showed that day-to-day management of a firm's short term assets and liabilities plays an important role in the success of the firm. Firms with glowing long term prospects and healthy bottom lines do not remain solvent without good liquidity management.

Velnampy, T. (2005) made a study on investment appraisal and profitability of toddy bottling project in Sri Lanka. He found that, the management of the project failed to achieve the budgetary results. Even though, the Net Present Value (NPV), Internal Rate of Return (IRR) and benefit cost ratio shows the project as worthwhile. Another study of Velnampy.T(2005) found the same results in Kanchipuram Modern rice Mill.

In a study to measure the effect of working capital management on the net operating profitability and liquidity, Raheman and Nasr (2007) selected a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of 6 years, and found that there is a strong negative relationship between variables of working capital management and profitability of the firms. The study also shows a significant negative relationship between liquidity and profitability, and that a positive relationship exists between size of the firm and its profitability. Also, there is a

significant negative relationship between debt used by the firm and its profitability. Variables used in their analysis included average collection period, inventory turnover in days, average payment period, cash conversion cycle, current ratio, debt ratio, size of the firm and financial assets to total assets ratio.

Velnampy.T and Nimalathasan, B. (2009) investigated the association between organizational growth and profitability of Commercial bank ltd in Sri Lanka over the period of 10 years from 1997 to 2006. They found that, sales are positively associated with profitability ratios except operating profit, return on equity and number of depositors are negatively correlated to the profitability ratios except operating profit and return on equity. Likewise, number of advances is also negatively correlated to the return on average shareholders' funds.

Garaz-Teruel and Martinez-Solano (2007) equally used sample of small and medium-sized Spanish firms to study the effects of working capital management on their profitability, their findings was that, managers stands the chance of creating value by reducing the inventories, and the number of days in which their accounts are outstanding. They equally uncover that the shorter the cash conversion cycle the higher the firm`s profitability.

However, Filbeck and Krueger (2005) in their study found a significant differences in working capital measures between different industries across time, and therefore employ that firm`s should device a means of reducing financing costs, and the funds tied up in current assets.

In addition to that, Chakraborty (2008) studied the relationship between working capital management and profitability of Indian pharmaceutical companies. He concludes a two school of thoughts. The first is that, working capital itself is not a factor of improving profitability, hence there may be a negative relationship between them, the second being that it is the investment in working capital even at minimum level, the sales and output cannot be maintained, and will keep fixed assets inoperative.

Various studied attempted to examine the relationship between working capital management, which embodied liquidity as a component and profitability (Deloof; 2003, Padachi; 2006, Shin and Soenen 1998, and Raheman & Nasr, 2007).

Cash conversion cycle shows the relation between liquidity and profitability. It is more important to measured profitability compared to if the company is using current ratio (Eljelly, 2004).The higher the ratio the higher the comfort level. All of the cash flow ratios are not uniform but vary by industry characteristics. The analyst would then adjust his assumptions accordingly to assess the liquidity of a firm.

Velnampy, T. and Niresh, J.A. (2012) investigated the association between capital structure and profitability of listed Sri Lankan banks over the period of 8 years from 2002 to 2009. Results of their analysis show that, there is a negative association between capital structure and profitability except the association between debt to equity and return on equity. Velnampy and Pratheepkanth.(2012),revealed the relationship between portfolio management and profitability.

Furthermore, Velnampy, T(2010) made a research on value added, productivity and performance of few selected companies in Sri Lanka with the sample of 15 financial companies listed under the Colombo Stock Exchange (CSE). The study reveals that, profit before tax per employee and value added per rupee of fixed asset is positively correlated and labour cost to sales and gross profit is also positively correlated. Further the labour cost to value added is correlated with gross profit and value added per rupee of fixed asset and no relationship was found between the rest of the productivity and performance measures.

Furthermore, Velnampy, T. and Nimalathasan, B. (2010) made a research regarding the association between firm size and profitability of all the branches of Bank of Ceylon and Commercial Bank of Ceylon ltd over a period of 10 years from 1997 to 2006. Findings reveal that, 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.

Narware (2004) in his study of working capitalmanagement and profitability of NFL, a fertilizer company found both positive and negative association.

Bardia (2004) and Sur and Ganguly (2001) intheir study on steel giant SAIL and aluminum producing industry believed that, there is a positiveassociation between liquidity and profitability and this observation tallies with the observation derived byNarware (2004).

CONCEPTUALIZATION:

LIQUIDITY

Current Ratio

Quick Ratio

Liquidity Ratio
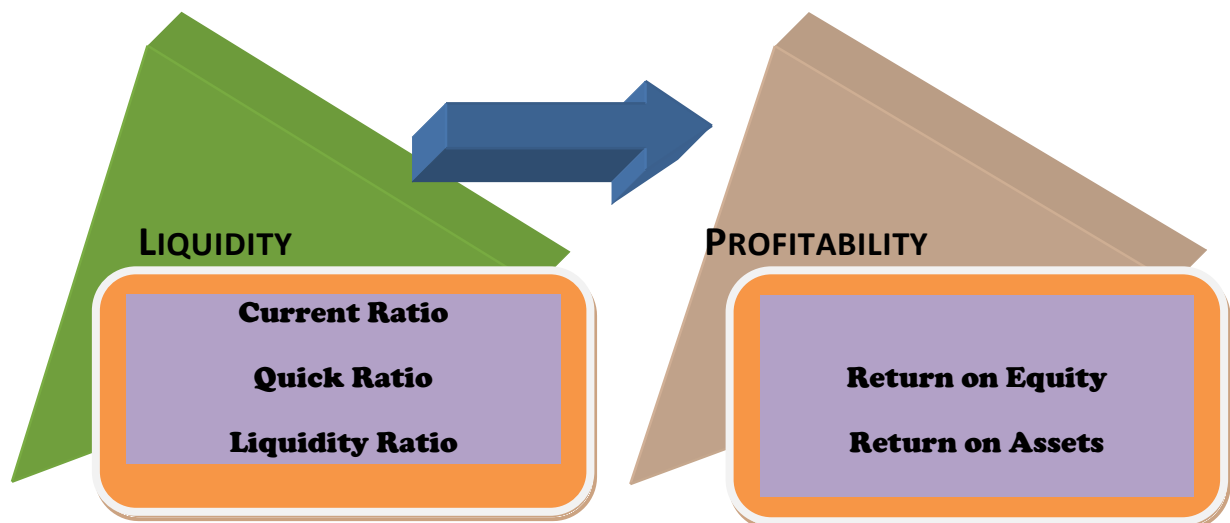
PROFITABILITY

Return on Equity

Return on Assets

Figure 1: Author Constructed

HYPOTHESES OF THE STUDY:

The hypotheses below are operationalized as a basis for analysis and conclusion on the relationship between liquidity and profitability.

Hypothesis One

H0: There is no relationship between liquidity and profitability.

H1: There is relationship between liquidity and profitability.

Hypothesis Two

H0: Liquidity and profitability do not affect each other.

H1: Liquidity and profitability affect each other.

Hypothesis one is evaluated based on the correlation analysis while regression analysis the basis of evaluation of hypothesis two.

METHODOLOGY:

DATA SOURCE:

The present study used secondary data for the analysis. The data utilized in this study is extracted from the comprehensive income statements and financial position of the sample trading companies quoted in Colombo Stock Exchange (CSE) database. In addition to this, scholarly articles from academic journals and relevant textbooks were also used.

SAMPLING DESIGN:

Sampling design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt on selecting items for the sample (Kothari, C.R.,2004). The sample of this study is confined to the trading sector consists of 08 trading companies listed in the Colombo Stock Exchange (CSE).

MODE OF ANALYSIS:

In the present study, we analyze our data by employing correlation; multiple regressions& descriptive statistics. For the study, entire analysis is done by personal computer. A well known statistical package like 'Statistical Package for Social Sciences' (SPSS) 16.0 Version was used in order to analyze the data. The following liquidity and profitability ratios are taken into accounts which are given below.

Table-1: Calculations of Liquidity and Profitability Ratios

Liquidity Ratio	
Current Ratio	= Current Assets (CA)/ Current Liability(CL)
Quick Ratio	= [Current Assets- Inventory]/ Current Liability
Liquidity Ratio	= [Cash in hand + Short Term Investment]/ Current Liability
Profitability Ratios	
Return on Equity	= Profit after Interest and Tax / Equity Capital X100
Return on Assets	= Profit after Interest and Tax / Total Assets X100

Multipleregressionanalysiswasperformedtoinvestigatetheimpactofcapita1l structure oncorporate performance whichthemodel used for the study is given below.

$$\text{Profitability} = f(CR;\ QR;\ \text{and}\ LR)$$

It is important to note that the Profitability depend upon Current Ratio (CR); Quick Ratio(QR)& Liquidity Ratio (LR). The following two models are formulated to measure the impact of Liquidity and Profitability.

ROE= $\beta_0 + \beta_1$**CR** $+\beta_2$**QR** $+\beta_2$**LR**+e -- (1)

ROA =$\beta_0+\beta_1$**CR** $+\beta_2$**QR** $+\beta_2$**LR**+e -------------------------------------- (2)

Where,

$\beta_0, \beta_1, \beta_2, \beta_3$ are the regression co-efficient

ROE ⟶ Return on Equity

ROA ⟶ Return on Assets

CR ⟶ Current Ratio

QR ⟶ Quick Ratio

LR ⟶ Liquidity Ratio

RESULTS & ANALYSIS:

DESCRIPTIVE STATISTICS:

Table 1: Descriptive Statistics of the variables

	N	Minimum	Maximum	Mean	Std. Deviation
Current Ratio	8	.76	3.62	1.5532	.89001
Quick Ratio	8	.57	2.79	1.1428	.70636
Liquidity Ratio	8	.03	.51	.2144	.16987
Return on Equity	8	-16.45	28.22	6.5657	12.84979
Return on Asset	8	-6.72	17.88	3.6995	6.85452
Valid N (listwise)	8				

The descriptive statistics show that over the period under study, the criteria used for measuring profitability including return on equity& return on assetsaveraged 6.5657 & 3.6995 respectively. The Range (Max - Min) values of profitability measures were found to behigher than those of liquidity measures. Thus, reveal the high volatility of profitability measures used in thestudy. Furthermore, the mean values of current ratio and quick ratio were 1.55 and 1.14 respectively. The range of current ratio is 1.5:1 to 2.5:1 and for quick ratio is 1:1 to 1.5:1. Both of these ratios were in line with those of standard range.

CORRELATION REGRESSION AND RELIABILITY ANALYSIS:

Table 2: Correlation, Regression & Reliability Value

Model	Dependent	Independent	R	P – value	R^2	F-Value	Durbin-Watson
1	ROE	CR	0.765*	0.027	77.7	9.063 (0.029)	2.315
		QR	0.583	0.129			
		LR	-0.017	0.969			
2	ROA	CR	0.890**	0.003	85	14.206 (0.013)	2.086
		QR	0.774*	0.024			
		LR	0.204	0.627			

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

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

The above mentioned table indicates the relationship between the various independent and dependentvariables used in the study. As it is observed in the table, the correlation values were found to be mixed (bothpositive and negative) between the variables. The R values were found to be positive between return on assets and liquidity variables as measured by current ratio(CR), quick ratio(QR) and liquidity ratio(LR) , consisting the correlation values of 0.890**, 0.774* & 0.204 respectively. Similarly return on assets (ROA) is positively correlated with liquidity ratios except LR, which has negative value but not significant. Furthermore, only current ratio is significantly correlated with all dependent variables, such as ROE and ROA, as well as QR shows significant correlation only with ROA.

REGRESSION:

Regression analysis is used to test the impact of capital structure on corporate performance of the listed trading companies in CSE. As we mentioned in mode of analysis, two models were formulated and the results are summarized in the above Table-2.

The specification of the three variables such as CR; QR and LR in the above model revealed the ability to predict profitability ($R^2 = 0.777$ &0.850). In this model $R^{2 \text{ value}}$ of above twoprofitability measures denote that 77.7%% &85% to the observed variability in can be explained by the differences in three independent variability namely current ratio; quick ratio and liquidity ratio. The remaining 32.3% & 25% are not explained, because the remaining part of the variance in profitability is related to other variables which are not depicted in the model.

An examination of the model summary in conjunction with ANOVA (F–value) indicates that the model explains the most possible combination of predictor variables that could contribute to the relationship with the dependent variables. Both model 1 and 2 are significant at 5% level of significance. For model 1- F value is 9.063 and respective P value is 0.029 which is statistically significant at 5 percent level of significance. In this case it reveals that only CR has a significant impact on ROE at 5 percent level of significance. Similarly model 2 also statistically significant at 5 percent level of significance value and P value of this model is 14.206 and 0.013 respectively.In this case it reveals that only CR and QR have a significant impact on ROA at 5

percent level of significance. However, it should be noted here that there may be some other variables which can have an impact on corporate performance, which need to be studied. In addition to the above analysis Durbin-Watson test also carried out to check the auto correlation among the independent variables. The Durbin-Watson statistic ranges in value from 0 to 4. A value near 2 indicates non-autocorrelation Model 1 and 2 have the value is 2.315 and 2.086 respectively. This indicates that there is no auto correlation.

HYPOTHESES TESTING:

Table 3: Testing of Hypotheses

No	Hypotheses	Results	Tools
H_0	There is no relationship between liquidity and profitability	**Rejected**	**Correlation**
H_1	There is relationship between liquidity and profitability	**Accepted**	**Correlation**
H_0	There is no significance impact of liquidity on profitability.	**Rejected**	**Regression**
H_2	There is significance impact of liquidity on profitability.	**Accepted**	**Regression**

CONCLUSION & RECOMMENDATION:

Working capital management is important part in firm financial management decision. The optimal of working capital management is could be achieve by firm that manage the tradeoff between profitability and liquidity. The purpose of this study is to investigate the liquidity-management efficiency and liquidity-profitability relationship. Results of this study found that correlation and regression results are significantly positive associated to the firm profitability. Thus, firm mangers should concern on inventory and receivables in purpose of creation shareholder wealth. Consequently, the study proffers the following for policy and investment decisions:

- The trading companies should strike a balance between liquidity and profitability so as to meet regulatory requirement as well as shareholders' wealth aspirations.

- Trading companies should pursue profit maximization since so doing simultaneously enhances liquidity.

- Investors should be guided by the true liquidity and profitability positions of a firm in any of these industries in their investment decisions.

LIMITATIONS &SCOPE FOR FURTHER RESEARCH:

The study suffers from certain limitations which are mentioned below.

1. As the study is purely based on listed trading companies, so the results of the study are only indicative and not conclusive.

2. Furthermore, data representing the period of 5 years were used for the study.

In addition, the findings of this study imply areas that need further study. The scope of this study covers the operations of only trading companies listed in Colombo Stock Exchange for the period of five years. Giving enough time and resources it is possible to attempt to study some other listed companies in Sri Lanka over a long period of time and using different statistical methods in order to have a more comprehensive result. The analyses and findings this study show that there are other factors than the independent variables used for this study that affect profitability. Research could be conducted to identify those other factors so as enhance the profit generating capabilities of the companies.

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