Published and Presented in ICCM 2014, Faculty of Management Studies and Commerce, University of Jaffna, Sri Lanka.

Liquidity Management, Capital Structure and Their Impact on Profitability: A Study of Selected Listed Beverage, Food and Tobacco Firms in Colombo Stock Exchange (CSE) in Sri Lanka.

Vickneswaran Anojan

Department of Accounting, Faculty of Management Studies and Commerce, University of Jaffna, Sri Lanka.

v.anoabt@gmail.com

Abstract

The focus of this study is to identify significant impact of liquidity management and capital structure on profitability and find the association between capital structure, liquidity management and profitability of selected listed Beverage, Food and Tobacco firms in Colombo Stock Exchange (CSE) from the financial year 2008 to 2012. Many researchers stated that liquidity management is vital for the firms to maintain its profitability through their research findings and also liquidity management theory states there is negative association between liquidity position and profitability. Capital structure is vital in determining the return on equity (ROE). Most of Beverage, Food and Tobacco firms have not too much of current assets and current liabilities than other business firms, it can be seen through their financial statements due to that there is question whether liquidity management necessary to this type of firms. Regression and Correlation analysis were performed in this study. Regression results confirmed that there is ($R^{2=}$ 0.104) no significant impact of capital structure on the profitability and also there is ($R^{2=}$ 0.068) no significant impact of liquidity management on profitability. Correlation results confirmed that there is (P = 0.435) no significant association between capital structure and profitability and also there is (P = 0.531) no significant association between liquidity management and profitability. It implies that the liquidity management and capital structure has little role in Beverage, Food and Tobacco firms. Although this study supports the number of earlier studies, it could not provide the conclusive evidence on some important issues. The differences in the results from earlier studies suggest that liquidity management and capital structure design in selected firms may not be similar to that of other industries.

Keywords: Liquidity Management; Capital Structure; Profitability; Listed Firms; Beverage Food & Tobacco.

1. Introduction

Sri Lankan food, beverage and tobacco firms are functioning very well in the current market; it can be seen through their annual report. Those firms' share prices are increasing in past years. More than 21 food, beverage and tobacco companies have listed in CSE. After the ending of the 30 years continuous ethnic battle Sri Lankan firms are entering into a new era, each industry have the huge opportunity to enhance their business all over the island especially Cargills has opened their number of outlets and branches in the Northern Province. This hinds of firms differ from other type of firms. Food, beverage and tobacco firm's products are very fast moving goods due to that such firms are not involved with credit sales and keeping high level of inventories. Those firm's most of the goods are related with health and high level of requested obligations by the government. Number of government rules and regulations should be obeyed by the food, beverage and tobacco firms in Sri Lanka.

Liquidity management is a vital one in every firms here liquidity management means managing the firm's current assets and current liabilities. Current assets mean which assets can be converted into cash within one year by firm as well as current liabilities mean which liabilities can be settle down within next 12 months. Firm's liquidity express, its ability to meet its current liabilities and it is measured by current ratio. Liquidity management is a concept that is receiving serious attention all over the world especially with the recent financial situations (Priya & Nimalathasan, 2013). All over the world finance personalities have the strategy of managing their day to day operations to meet their target achievement and increase profitability of the firm and wealth of shareholders. Liquidity management is frequently consider working capital management (WCM) of the firm, WCM includes cash conversion period, debtor's collection period, creditor's payable period and inventory conversion period of the firms. Managing working capital is needed to maintaining firm's liquidity to meet day to day operations. Liquidity management also needs to keep firm's goodwill in the market as well as society because proper liquidity management can lead effective and efficient daily operations of the firms.

Capital structure includes equity capital and debt capital, both holders have prime concern on the wealth of the firm here equity capital holders are interest with dividend and share price of their share as well as debt capital investors are primary attention with interest on their investments and firm's capability of debt repayment. Ultimately debt to equity ratio is vitally use to analyses the capital structure of the firms, here capital structure compose equity and debt capital. Most of the firms try to sustain their capital structure to maximize their profitability and stability of their firms. It means how much of fund should be made by equity share holders and how much should be borrowed from outsiders as non-current liabilities. According to the Sri Lankan company Act No. 07 of 2007, equity share holders only can get the dividend, if the firms have profit after the tax, the board of directors is the responsible people to create profitability and increase the share price to shareholders fund. Also the board of directors have the power to decide the dividend of equity capital due to that dividend may declare or not according to the board of director's decision on the other hand every firms have the obligation to pay the interest on their debt capital here any firm's profitability or profit for the year never consider. Due to that every firms nowadays key concern on capital structure of their firms to avoid unnecessary issues and risk on profitability. Firms may not give dividend to their equity capital for a certain period even though it must be paid the interest on debt capital, interest payments are included under the finance cost of the firm due to that it is directly affected the net profit of the firm so the decision of capital structure is vital of the firms. Velnampy & Aloy (2012) noted that the term capital structure of an enterprise means combination of equity shares, preference shares and long-term debts. There are number of theories in the capital structure especially number of the firms and academic people are very familiar with theory of Miller & Modigliani. The finance theories stated that an ultimate goal of the firm is maximize of wealth. Profitability is needed for all the firms for their successful business activities, successful competition with competitive firm, create competitive advantage and survival in the market. Firm's profitability is the ability of the firms to generate revenue in excess of cost (operating and non-operating cost). A sound and profitable firms are better able to contribute to the stability of the country's economic system. Profitability of the firms is evaluated by different ratios such as Return on Assets (ROA) and Return on Equity (ROE).

2. Statement of the Problem

There are problem in every firm which are whether the liquidity management and capital structure impact on firm's profitability, liquidity management and capital structure have relationship with firm's profitability. There are number of studies conducted in the field of liquidity management, capital structure and profitability. Here as researcher could not find the any research on the above field related with food, beverage and tobacco companies in Sri Lanka. Also these types of firms are doing their business very well, contributing to the economy. Many studies found positive and negative link of liquidity management and capital structure on firm's profitability in varies industry. Priya and Nimalathasan (2013); Ajanthan (2013); Justyna Zygmunt (2013) have stated that liquidity management significantly impacts on firms profitability and Victor, Samuvel & Eric (2013) found that there was very weak positive relationship between the liquidity management and the profitability of the listed banks in Ghana there is a question arise whether liquidity management impact on profitability of food, beverage and tobacco firms in Sri Lanka. Velnampy & Aloy (2012) stated that there is negative association between capital structure and profitability, Rametulla & Elsana found that return rates present a positive correlation with short-term debt and equity, and an inverse correlation with long-term debt, Simon & Afolabi (2011) found that positive relationship between firms' performance and equity financing and also a positive relationship between firms' performance and debt-equity ratio. According to the above studies, there is a question arise does capital structure impact/ associate on/ with profitability of food, beverage and tobacco firms in Sri Lanka. Also most of Beverage, Food and Tobacco firms have not too much of current assets and current liabilities than other sector firms, it can be seen through their financial statements in Sri Lanka due to that there is question whether liquidity management necessary to this type of firms.

Research Questions

Based on the research problem of the study the following research questions (RQ) are formulated,

- RQ_1: Do liquidity management impact on firm's profitability?
- RQ_2: Is there any impact between capital structure and firms profitability?
- RQ_3: Is there any association between liquidity management and firm's profitability?
- RQ4: Do capital structure associate with firm's profitability?

3. Significance of the Research

This research aims to analyze and evaluate the impact and association of liquidity management and capital structure on firm's profitability. The main purpose of the liquidity management is keep the liquidity of the firm to achieve target firm's profitability as well as capital structure is needed for every firm especially the composition of debt and equity capital is needed.

4. Research Objectives

The prime objective of the research is to find out the impact of liquidity management and capital structure on profitability of selected listed beverage, food and tobacco firms in CSE, the following objectives are developed as sub objectives.

- To find out the association between liquidity management and profitability of selected listed beverage, food and tobacco firms in CSE.
- To reveal the association between capital structure and profitability of selected listed beverage, food and tobacco firms in CSE.
- To give the possible recommendations and suggestions to listed beverage, food and tobacco firms in CSE.

5. Scope of the Research

This researcher has considered only eight (08) listed food, beverage and tobacco firms in CSE. Other remaining listed firms and unlisted firms under the food, beverage and tobacco sector were not considered in this study. Current ratio as proxy for evaluate liquidity management, gearing ratio as proxy to analyze capital structure and Return on Assets (ROA), Return on Equity (ROE) have used for calculate profitability of the firms. The past five years (05) annual financial reports of the firms from 2008 to 2012 have been used in this study.

6. Literature Review

Liquidity management and keep the optimum capital structure is the vital activity in every firm here liquidity management is related with day-to-day operation of the firm. Especially managers are involving liquidity management. Many studies conducted in impact and association of liquidity management, capital structure on profitability in varies countries and different industries.

Priya & Nimalathasan (2013) stated that liquidity management and profitability are very important issues in the health and wealth of business. They conducted the study in Sri Lanka which covered listed manufacturing companies in Sri Lanka. According to the correlation and regression analysis, they found that there is a significant relationship between liquidity and profitability of listed manufacturing companies also researchers have pointed that inventory sales period, current ratio are significantly correlated with ROA and operating cash flow ratio are significantly correlated with ROE of the firms. Victor, Samuvel and Eric (2013) found the association between the liquidity and the profitability of listed banks in Ghana Stock Exchange. They have used financial reports of the banks to compute relevant liquidity and profitability ratios. They have used time series analysis to analyze and show the trend in liquidity and profitability. They have Researchers found that both the liquidity and the profitability of the listed banks were declining from 2005 to 2010. Furthermore they found that there was very weak positive association between liquidity and profitability of selected firms. Justyna Zygmunt (2013) stated that the liquidity management is vital in company performance and might influence on firm's profitability. This study conducted to recognize the liquidity impact on profitability of polish listed IT firms. The study revealed that liquidity impact on profitability of polish listed IT firms. Ajanthan (2013) investigated the association between liquidity and profitability of Sri Lankan listed trading firms. Correlation and regression analysis have performed to examine the nature and extent of the association between the variables. This study covered eight (08) listed trading firms during the period of 2008 to 2012 and findings; researcher has suggested that there is a significant association between liquidity and profitability among listed Sri Lankan trading firms.

Velnampy & Aloy (2012) stated that capital structure decision is the vital one since the profitability of firms affected by such decision. Composition and maintains of optimum capital structure is one of the key concept under the financial strategy of the firms. They found the relationship between capital structure and profitability of selected Sri Lankan banks from 2002 to 2009 and they used descriptive and correlation analysis revealed that there is a negative association between capital structure and profitability and the results suggest that 89% of total assets of Sri Lankan banking sector are represented by debt capital. They pointed the outcomes of the study may guide banks, loan-creditors and policy planners to formulate better policy decision as far as the capital structure is concerned. Rametulla & Elsana noted that determination of a firm's capital structure consist a difficult decision, includes several factors such as risk and profitability. They tried to examine the influence of the capital structure of Macedonian firms regarding the factor profitability in their study. The study covered 150 firms and results indicated that return rates present a positive association with short term debt and equity and an inverse association with long term debt. Simon & Afolabi (2011) examined the impact of capital structure on industrial performance in Nigeria. The study covered five listed firms from1999 to 2007. Debt to Equity finance has measured by gearing ratio. Firm's performance has measured by profitability index in the study. The results of the study revealed a positive association between firm's performance and equity financing and a positive association between firm's performance and debt-equity ratio however a negative association exists between firm's performance and debt financing. The study suggested better use of borrowed funds and emphasizes the importance of efficient management. Abdul, Bushra & Mustafa (2007) examined the effect of capital structure on the profitability of listed firms on Islamed Stock Exchange (ISE) which study considered 94 of non-financial firms from 1999 to 2004. They used correlation and regression analysis in the study. The findings revealed that the capital structure of the listed non-financial in ISE has a significantly effect on the profitability of these firms. They pointed that if the firms want to increase their profitability, they will have to give much consideration to the financing mix to avoid losses.

7. Hypothesis

The following hypothesis were formulated for this study based on the clear Literature Review in the field of capital structure, liquidity management and their impact on firm's profitability.

H_1: There is a significant impact of liquidity management on profitability of selected listed beverage, food and tobacco firms in CSE.

H_2: Capital structure is significantly impact on profitability of selected listed beverage, food and tobacco firms in CSE.

H_3: Liquidity management is significantly associates with profitability of selected listed beverage, food and tobacco firms in CSE.

H_4: There is a significant association between capital structure and profitability of selected listed beverage, food and tobacco firms in CSE.

8. Conceptualization Model

Based on the literature review and hypothesis, the following conceptual modal is formulated to depict the relationship between liquidity management, capital structure and profitability.

Independent Variables Dependent Variables

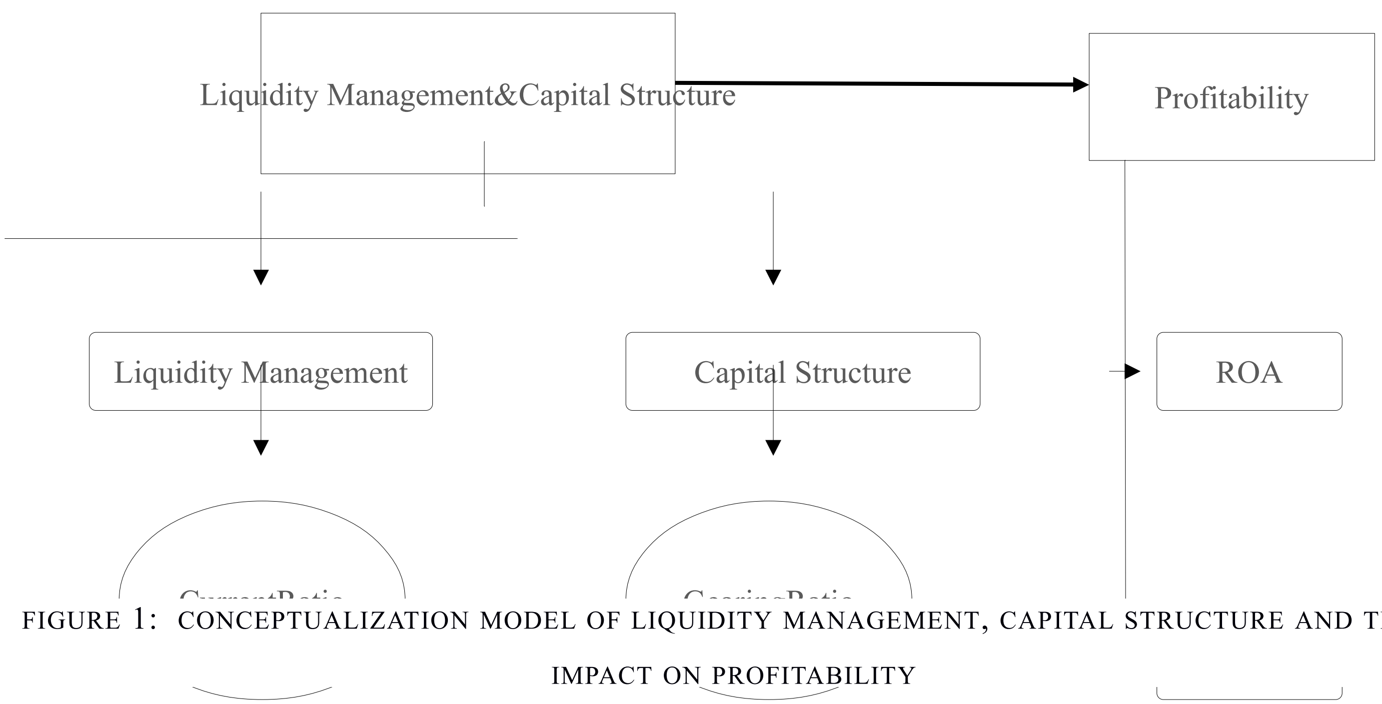

FIGURE 1: CONCEPTUALIZATION MODEL OF LIQUIDITY MANAGEMENT, CAPITAL STRUCTURE AND THEIR IMPACT ON PROFITABILITY

9. Operationalization

The following table gives a clear picture regarding the variables and measurements used in this study.

Table 1: Design of the Variables

Concept	Variables	Indicator	Measures
Liquidity Managemen t	Current Ratio	Firm's current assets to current liabilities	Current Assets / Current Liabilities
Capital Structure	Gearing Ratio	Composition of the firm's equity and debt capital	Debt Fund / Equity Fund
Profitability	Return on Assets (ROA)	How much is earned on firm's total assets	Net Profit after Tax / Total Assets X 100
	Return on Equity (ROE)	How much is earned on firm's capital	Net Profit after Tax / Equity Fund X 100

10. Research methodology

a) ***Data Collection***

Secondary data have used for this study. Here financial statement is the major components of the firm's annual report which is normally included statement of income, statement of financial position, statement of cash flow, statement of changes in equity and other relevant notes. Statement of income and statement of financial position of the sampling firm's has used in this study from the respective firm's annual report of 2008-2012. Specially the researcher ensure that the data of the analysis is true and fair because all listed firm's financial statements included the independent audit report.

b) ***Sampling Design***

Generally the large sample is always better than small sample from the population. Eight (08) listed food, beverage and tobacco companies in CSE selected for this study the random sampling used by the researcher. There has listed thirty (21) food, beverage and tobacco firms in CSE from those firms the researcher has considered 38.1% sampling and the firms selected according to the researcher's convenience. Also this study only covered five (05) financial years which is 2008 to 2012. 289 firms have listed in CSE under the 20 business sectors up to 31st December 2013. Food, beverage and tobacco firms only considered for this study. From this sector the following firms have been taken as sample for the study such as,

1. Cargills (Ceylon) Limited
2. Ceylon Cold Stores PLC
3. Ceylon Tobacco Company PLC
4. Distilleries Company of Sri Lanka PLC
5. Keells Food Products PLC
6. Lanka Milk Foods PLC
7. Lion Brewery (Ceylon) PLC
8. Nestlé Lanka PLC

c) ***Mode of Analysis***

The quantitative approach is employed to find out the results of the research study. When using numerical and secondary data, quantitative approach is more suitable for the study. The researcher analyzes the data of the firms by employing correlation and regression analysis for this purpose the well known statistical package 'Statistical Package for Social Sciences' (SPSS) 16.0 Version was used in this study. Ultimate purpose of the regression and correlation is testing the hypothesis, make conclusion on the study and give appropriate suggestions to the management of the firms. Here current ratio was used to analyze the liquidity management, gearing ratios was used to analyze the capital structure and ROA; ROE were used to analyze the profitability of the firms.

d) ***Research Model***

Regression analysis was used find out the impact between variables and correlation analysis was used to find out the association between variables. Liquidity management and capital structure are the independent variables and ROA and ROE is the dependent variable. Above independent and dependent variables, the following association was formulated. Profitability of the firms are dependent on the capital structure and liquidity management of the firm. It can be seen as,

P = f (LM)

P = f (CS)

Where;

P = Profitability

LM = Liquidity Management

CS = Capital Structure

Profitability was measured by used ROA and ROE ratios; liquidity management was measured by used current ratio and capital structure was measured by used gearing ratio.

11. Results and Interpretation

a) Regression Analysis

Table 2: Regression Analysis

Independent Variable	Dependent Variable	R	R2	Coefficient	F-Value	T-Value	P-Value
Liquidity Management (Current Ratio)	Profitability (ROA)	0.262	0.068	-0.262	0.441	-0.664	0.531
Capital Structure (Gearing Ratio)	Profitability (ROE)	0.323	0.104	-0.323	0.699	-0.836	0.435

The above mentioned table indicates the impact between the independent and dependent variables which have used in the study, from the above table; it is clearly shown that there is no significant impact of liquidity management on profitability ($P > 0.05$). The R^2 shows only 0.068 which means that liquidity management impact only by 6.8% on profitability remaining part not explain in this study. Also from the above table, it can be seen that there is no significant impact of capital structure on firm's profitability ($P > 0.05$). R^2 of the capital structure and profitability shows 0.104 which means that capital structure impact only by 10.40% on profitability and the remaining part 89.60% is depending on other factors (constant).

b) Correlation Analysis

Table 3: Correlation Analysis

		Return on Equity	Return on Assets
Current Ratio	Pearson Correlation	-.147	-.262
	Sig. (2-tailed)	.727	.531
Gearing Ratio	Pearson Correlation	-.323	.138
	Sig. (2-tailed)	.435	.744

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

According to the table 3 it can be seen that there is no significant (P = 0.531) association between current ratio and return on assets. Current ratio is negatively correlated with food, beverage and tobacco firm's profitability. Also there is no significant association between gearing ratio and return on equity of the firms (P > 0.05). Gearing ratio has negative relationship with return on equity of listed food, beverage and tobacco in CSE.

c) Hypothesis Testing

Table 4: Hypothesis Testing

Hypotheses	Tools	Results
H_1: There is a significant impact of liquidity management on profitability of selected listed beverage, food and tobacco firms in CSE.	Regression	Rejected
H_2: Capital structure is significantly impact on profitability of selected listed beverage, food and tobacco firms in CSE.	Regression	Rejected
H_3: Liquidity management is significantly associates with profitability of selected listed beverage, food and tobacco firms in CSE.	Correlation	Rejected

H_4: There is a significant association between capital structure and profitability of selected listed beverage, food and tobacco firms in CSE.	Correlation	Rejected

12. Conclusion and Recommendation

This study examined the impact of liquidity management and capital structure on profitability selected listed food, beverage, and tobacco firms in CSE and association between liquidity management, capital structure and profitability. Based on the overall findings of the study, as a researcher can conclude that, there is no significant impact of liquidity management on firm's profitability, capital structure on firm's Profitability. Also there is no significant association between liquidity management and firm's profitability as well as there is no significant association between capital structure and firm's profitability. According to the above finding, it is clearly shown that profitability of the firms is not depending on the food, beverage and tobacco firm's capital structure and liquidity management. Also there is no significant association between liquidity management, capital structure and profitability. However correlation analysis clearly stated that, liquidity management is negatively correlated with firm's profitability as well capital structure is negatively correlated with firm's profitability.

As a researcher suggests to the selected listed food, beverage and tobacco firms that their liquidity management and capital structure are not significantly impacting on its profitability due to that the management and board of director of the respective firms should consider other significant factors on influencing firm's profitability and successful operations in the future. However the firm's liquidity management and capital structure is negatively correlated with its profitability. So the management should give consideration on both liquidity management and capital structure to maintain their profitability and achieve their target profitability in the future. As a Sri Lankan researcher suggest to the such firms to open their new branches all over the island, Specially in the northern province to increase, enhance the business and capture the market opportunities and contribute to the county through giving huge number of employment opportunities in all over the Sri Lanka. . Finally it can be stated that the liquidity management and capital structure has very little role in Beverage, Food and Tobacco firms. Although this study supports the number of earlier studies, it could not provide the conclusive evidence on some important issues. The differences in the results from earlier studies suggest that liquidity management and capital structure design in selected firms may not be similar to that of other industries.

13. Limitation on the Study

The current research has considered only selected listed food, beverage and tobacco firms in CSE. Here the study only covered 8 firms however there are 21 listed firms under this sector in Sri Lanka. This research the data source only from the secondary data source so there may be little error in the calculations. Furthermore this study covered only five financial years from 2008 to 2012.

14. Suggestions for the Further Research or Researcher

As researchers it is the responsible to suggest for the further research. There are more than 20 sector firms in Colombo Stock Exchange and 289 firms have listed in CSE up to 31st December 2013 this study only considered food, beverage and tobacco sector from the sector only 8 firms selected for the study so further researchers can do their research in other different sector which is in CSE and also they can do the research in the same sector with 100% sampling for the accurate findings. In this study considered only regression and correlation analysis so other analysis part can be done by other researchers and the researchers can use other different latest statistical packages. A number of variables have used on this study and one or two ratios have used to measure the variables here much variables and ratios can add value for the study in the future.

15. References

- Abdul, R., Bushra, Z., & Mustafa. (2007). Capital Structure and Profitability: Case of Islamabad Stock Exchange, *International Review of Business Research Papers,* 3, 5.
- Ajanthan,A. (2013). A Nexus Between Liquidity & Profitability: A Study Of Trading Companies In Sri Lanka, *European Journal of Business and Management*, 5, 7.
- Annual Reports, Cargills (Ceylon) Limited, Ceylon Cold Stores PLC, Ceylon Tobacco Company PLC, Distilleries Company of Sri Lanka PLC, Keells Food Products PLC,

Lanka Milk Foods (CWE) PLC, Lion Brewery (Ceylon) PLC and Nestlé Lanka PLC, from 2008 - 2012.

- Justyna, Z. (2013). Does liquidity impact on profitability? A case of polish listed IT companies, *Conference of Informatics and Management Sciences*.
- Priya,K., & Nimalathasan,B. (2013). Liquidity Management and Profitability: A Case Study of Listed Manufacturing Companies in Sri Lanka, *International Journal of Technological Exploration and Learning (IJTEL)*, 2, 4.
- Qasim, S. & Ramiz, U., R.(2007). Impacts of liquidity ratios on profitability (Case of oil and gas companies of Pakistan), *Interdisciplinary Journal of Research in Business*, 1, 7.
- Rametulla Ferati., Elsana, E. Capital Structure and Profitability: *The Macedonian Case, European Scientific Journal*, 8, 7.
- Simon, O., Afolabi, B. (2011). Capital Structure and Industrial Performance in Nigeria (1999-2007), *International Business and Management*, 2, 1.
- Velnampy, T., & Aloy Niresh, J. (2012). The Relationship between Capital Structure & Profitability, *Global Journal of Management and Business Research*, 12, 13.
- Victor, C., Lartey, S., & Eric, K., B. (2013). The Relationship between Liquidity and Profitability of Listed Banks in Ghana, *International Journal of Business and Social Science,* 4, 3.