



The impact of Working Capital Management on Profitability of the Listed Firms in Sri Lanka

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Abstract

In this research the researcher attempt to take result of comparison among industries based on working capital management. Working capital to the company is like the blood to human body. If it is carried out effectively, efficiently and consistently, that will assure the health of an organization. The purpose of this research is to contribute towards a very important aspect of financial management known as working capital management with reference to Sri Lanka. Here the relationship between working capital management Practices and its effects on profitability of selected industries listed on Colombo stock Exchange for a period of five years from 2003-2007. Five sectors have been selected out of 20 business sectors. This research study concluded that working capital has significant impact on profitability of the sector. Therefore significant indicates that closed relationship between working capital and profitability. It may be positive or negative.

Key words: Working Capital Management, Profitability.

1. Introduction

1.1 Background of the study

In the fast moving world, firms are highly competing among them. A well designed and implemented working capital management is expected to contribute positively to creation of firm's value. A firm is required to maintain a balance between liquidity and profitability while conducting its day-to day operations. Liquidity is an effective tool to ensure that firms are able to meets its short-term obligations and its continued flow can be guaranteed from a profitable venture.

Working capital management is a significant fact of financial management due to the fact that it plays a pivotal role in keeping the wheels of a business firm running. It is concerned with short term financial decisions have been relatively neglected in the literature of finance.

Total capital of the firm will be invested in two assets such as fixed assets another is current assets. Fixed assets will help to earn income but current assets is important to run daily operation of the business or to smooth operations of the firm current assets includes mainly cash, raw martial, debtors, advance payments and etc.

If the company or industry has poor working capital management that will affect the industry's output and it leads to problem to handle daily operation effectively. Such problems are as follows,

- Decreasing profitability by the shortage of working capital.
- Are the current assets, current liabilities, working capital, current ratio, liquidity ratio and ROCE of selected industrial's firms near to the industry average?
- Difficulties in smooth running of operation.

1.2 Objective of the study

The main focus of this study is configurative the role of working capital management and industrial comparison in the listed companies in Sri Lanka. The basic objective of working capital management is to manage the firm's current assets and current liabilities in such a way that the satisfactory level of working capital is maintained. The objectives of this study were categorized as primary & secondary objectives.

Primary Objective

- To identify the impact of working capital management on profitability.

Secondary objectives

- To carry adequate level of stocks and continue their activities by the industrial's firms.
- To determine the relationship between the current assets and current liabilities.
- To analyze the working capital of each industry organization.
- To identify the impact of the net working capital on firm's profitability.
- To evaluate liquidity position of selected industry organizations.

2. Literature Review

2.1 Working capital

Working capital meets the short term financial requirements of a business enterprise. It is a trading capital not retained in the business in the particular form for longer than a year. Working capital management is maintained equally among the reduce risk and increase the income from assets. Management of working capital like long-term financial decisions affects the risk and profitability of business.

The need for working capital is different in different business. The financial management aims at maximizing the wealth of shareholders, to achieve this objective. It is necessary to earn adequate profits. The profit depends largely on sales but sales do not result in cash immediately. The need for working capital can be explained with the help of operating cycle or cash cycle.

2.2 Profitability

The profitability of a business organization would depend on the resources it owns and the obligations it has to meet. Companies carry out various activities to make profits, and to generate wealth for further growth. Profit helps to make finance. Finance is considered as the most important for these activities. The actions of managers have financial consequences for the business firm. Therefore it is imperative that they know the importance of finance (profit) functions and their linkage with their own activities (I.M. Pandey, 1997).

Hence financial position or condition of the firm should be assessed and future position of the companies should predict. To make the business activities in order to make profit, it would be necessary to keep the financial position favorably. Hence the present study is initiated to predict the financial position of the firms and to find out the linkage between financial position and profitability. Financial statements provide information about the financial positions of an enterprise that is useful to a wide range of users in making economic decisions (Chartered institution, 1997).

2.3 Review of Empirical Evidence

Shin & Soenen [1998] used net-trade cycle (NTC) as a measure of working capital management. NTC is basically equal to the CCC whereby all three components are expressed as a percentage of sales. The reason by using NTC because it can be an easy device to estimate for additional financing needs with regard to working capital expressed as a function of the projected sales growth. This relationship is examined using correlation and regression analysis, by industry and working capital intensity. Using a sample of 58,985 firm years covering the period 1975-1994, in all cases, they found, a strong negative relation between the length of the firm's net-trade cycle and its profitability. In addition, shorter NTC are associated with higher risk-adjusted stock returns. In other word, they suggest that one possible way the firm to create shareholder value is by reducing firm's NTC.

Lyrouti & Lazaridis (2000) used food industry Greek to examined the cash conversion cycle (CCC) as a liquidity indicator of the firms and tries to determine its relationship with the current and the quick ratios, with its component variables, and investigates the implications of the CCC in terms of profitability, indebtness and firm size. The results of their study indicate that there is a significant positive relationship between the cash conversion cycle and the traditional liquidity measures of current and quick ratios. The cash conversion cycle also positively related to the return on assets and the net profit margin but had no linear relationship with the leverage ratios. Conversely, the current and quick ratios had negative relationship with the debt to equity ratio, and a positive one with the times interest earned ratio. Finally, there is no difference between the liquidity ratios of large and small firms.

Deloof. M [2003] analyzed that large Belgian firms and the results confirmed that by reducing the inventories and average collection period the Belgian firms could improve profitability. He suggested that managers can increase corporate profitability by reducing the number of day's accounts receivable and inventories. Less profitable firms wait longer to pay their bills.

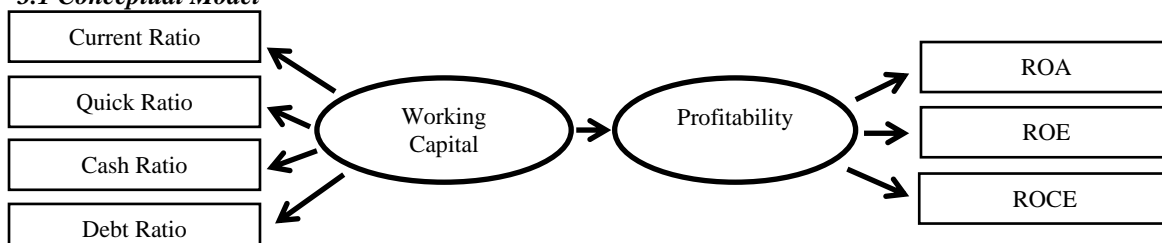
Teruel and Solano [2005] suggested that managers could create value by reducing their firm's number of day's accounts receivables and inventories. Similarly, reducing the cash conversion cycle also enhance the firm's profitability. In the Pakistani context, Rehman [2006] concluded that there is a significant negative relationship among working capital ratios and returns of firms. Furthermore, managers can create a positive value for the shareholders by reducing the cash conversion cycle up to an optimal level. Similar studies on working capital and profitability includes Smith and Begemann [1977], Ghosh and Maji [2004] and Lazaridis and Tryfonidis [2006].

Kesseven padachi [2006] has concluded that increasing trend in the short-term component of working capital financing. T. Afza and M. S. Nazir [2007] found that negative relationship between working capital policies and profitability validating the findings of Carpenter and Johnson [1983] and found no significant relationship between the level of current assets, current liabilities and risk of the firms. Anup Chowdhury and Muntasir Amia [2007] said that a positive correlation has been found in the mathematical model between current asset management and financial performance of pharmaceutical firms. Thus, it is evident that for the overall performance of this industry, working capital plays a vital role.

Gupta [1969] and Gupta Huefner [1972] found that there are differences exist in mean profitability, activity, leverage and liquidity ratios amongst industry groups. Smith [1980] said that management of short-term assets and liabilities warrants a careful investigation since the working capital management plays an important role for the firm's profitability and risk as well as value.

3. Methodology

3.1 Conceptual Model



3.2 Data collection

Data collection is important for any research. There are two types of data, namely primary data and secondary data. This study is carried out based on secondary data. This secondary data was collected from annual report published by the Colombo stock exchange.

3.3 Research sample

According to this research, the companies of selected five industries are selected from the hand book of listed companies of Sri Lanka. Such industries are as follows,

1. Construction and Engineering Sector.
2. Foot ware and Textiles Sector.
3. Healthcare Sector.
4. Power and Energy Sector.
5. Telecommunications Sector

3.4 Research Hypotheses

For this study, the following hypotheses were formulated.

H₁:- There is a negative relationship between working capital management and profitability.

H₂:- Working capital management has significant impact on profitability of the sectors.

4. Results and Analysis

4.1 Correlation and Regression Analysis

Here correlation analysis is made between net working capital and net profit.

Sector	Correlation	Regression
Telecommunication	0.768**	0.59
Construction and Engineering	0.659**	0.434
Foot ware and Textiles	0.598**	0.358
Health care	-0.311**	0.096
Power and Energy	-0.029**	0.001
Over all industries average	0.855**	0.731

The telecommunication sector's correlation is 0.768**. So, there is a strong positive relationship between networking capital and net profit. So, we can say that this sector has adequate working capital. It leads to higher profitability than other sectors, because there is a strong positive relationship between networking capital and net profit.

The construction and engineering sector's correlation is 0.659**. So, that indicates this sector has average positive relationship between networking capital and net profit. So, we can say that, the sector has average working capital. It leads to average profitability, because there is average positive relationship between networking capital and net profit.

The correlation of foot ware and textile sector is 0.598**. So, that indicates this sector has average positive relationship between networking capital and net profit. So, we can say that this sector has average working capital. It lead to average profitability, because there is average positive relationship between networking capital and net profit.

The correlation of health care sector is -0.311**. So, there is a weak negative relationship between networking capital and net profit. Here other factors than net working capital has influence on net profit. The correlation of power and energy sector is -0.029**. So, there is also very weak negative relationship between networking capital and net profit. Here other factors than net working capital has influence on net profit.

The overall relationship between net working capital and net profit of the selected five industries is strong positive correlated (0.855**). This means, that the net working capital is highly related with net profit. So, net working capital has significant impact on its net profit. According to the regression analysis r^2 value between net working capital and net profit, 73% of change in net profit is accounted by the net working capital.

Current assets are different level between among the sector's companies. So companies should maintain current assets to their requirements. If not, excess assets are idle funds which earn no profits for the companies. If suddenly, some surplus funds arise, they should not be allowed to remain idle but should be invested in short term securities. Current liabilities are different level in company to company.

Current ratio is different level in company to company. It is high or low in company to company, and it is compared with the industry average of current ratio. So, firms are faced inadequate or excess working capital and low profitability.

Liquid ratio is different level in the companies. And low value compared with standard (1:1). Here liquidity ratio of companies may really be prospering and paying its current obligation in time. ROCE is different level between these sectors. If the company has adequate level of working capital, the profit also will be high, so ROCE also will be high. Other ratios such as debt to equity ratio, ROE, ROA, DPS and EPS are also decided by level of working capital.

5. Conclusion

The study shows that, there is a strong overall relationship between net working capital and net profit of the selected five industries is strong positive correlated (0.855**). This means, that the net working capital is highly related with net profit. So, net working capital has significant impact on its net profit. 73% of the net profit is accounted by the net working capital. Remaining 27% is only determined by other factors other than working capital.

According to the analysis and findings of the research study, working capital has significant impact on profitability. In future through conducting a detailed research in this field further obvious findings can be obtained.

5.1 Discussion of the findings

In this study, all companies under the five selected industries are selected and these sectors are compared among the selected industry average.

Current assets are maintained at different levels for different companies. Companies should ensure the level of current assets as per their requirements. If not, excess assets are idle funds which earn no profits for the companies. If suddenly, some surplus funds arise, they should not be allowed to remain idle but should be invested in short term securities. Current liabilities also differ from company to company.

Current ratio is high or low for those companies based on their assets and liabilities, and it is compared with the industry average of current ratio. By comparing with the industry average, it is decided whether the company has inadequate or excess working capital. Both will cause for low profitability. Therefore, companies should have the ideal level of current ratio.

Liquid ratio is compared with the standard form of 1:1. Here liquidity ratio of companies may really be prospering and paying its current obligation on time.

If the company has adequate level of working capital, the profit will be high. Then it is obvious that the ROCE also will be high. If the working capital is inadequate or excess in a company, it will be a big trouble for the company and the ROCE will also be getting low.

Other ratios such as debt to equity ratio, ROE, ROA, DPS and EPS are also decided by level of working capital. Other factors except working capital have influence on profit of the sectors are,

- New entrants in to market
- Threat from substitute products
- The bargaining power of buyers,
- The bargaining power of suppliers and finally
- Positioning of traditional industry competitors.

If companies have excess working capital, the following disadvantages are occurred;

- Results in unnecessary accumulation of inventories, thus changes of inventory miss leading, waste, theft and losses increases.
- Results in indication of defective credit policy and stock collection period consequently higher incidents of bad debts results, which adversely affects profits.
- Makes management complacent which degenerates into managerial inefficiency.

If the companies have inadequate working capital, the following disadvantages are occurred;

- Difficult further company to undertake profitable project for non availability of working capital funds
- Becomes difficult to implement operating plans and achieve the company's profit target.
- Operating inefficiencies creep in when it becomes difficult even, to meet day-to day commitments.
- The firm faces light credit terms.

So, if these companies maintain sufficient level of working capital, the following benefits are obtained;

- Company can get cash discounts by making cash payment for the raw material purchased by it.
- It increases paying capacity of the business.
- Availability of adequate working capital increases the debt paying capacity of business, as a result, does not face any difficult to raise additional loans in future.
- Whenever there is possibility of increase in the prices of raw materials, business can purchase raw material if it has adequate working capital.

5.2 Hypothesis testing

Data is analyzed totally and also based on the, net working capital and net profit of the selected industries. This analysis is carried out based on statistical techniques such as correlation and regression. The hypotheses were drawn for this study, are tested as follows,

H₁: There is a negative relationship between working capital management and profitability.

H₂: Working capital management has significant impact on the profitability of the sectors.

Here, **H₁** relates to test the relationship between variables. Therefore, correlation analysis is taken into consideration to test **H₁**. According to correlation analysis, overall industry average correlation is 0.855**. It clearly shows that, there is a positive relationship between working capital and profitability. So, **H₁** is rejected.

By contrast, if we take those sectors separately to test **H₁**, three of them have positive relationship and two of them have negative relationship. In this case, **H₁** is partially accepted.

H_2 relates to test the impact of independent variable on dependent variable. Therefore, regression analysis is used to test H_2 . According to regression analysis, overall industry average regression is 0.731. It is obvious that the working capital management has significant impact on profitability. So, H_2 is accepted.

5.3 Limitations of the study

In the circumstances of any event, there are some limitations. It is impossible to get all data to the research accurately and sufficiently. The identified limitations of this study are as follows;

- There are 20 sectors listed under the CSE listing board, but this study focused on only five sectors.
- This study used only secondary data.
- Unavailability of recent/fresh data of those sectors, which were selected for this study.

5.4 Suggestions for further research

- This research only covers up telecommunication, construction & engineering, foot ware & textile, health care and power & energy. Working capital may vary from sector to sector. Therefore, the other sectors such as manufacturing sector, services sector, finance & banking sector should also be taken into consideration.
- This study considered the time period from 2003 to 2007, but the future researchers should consider the recent years as much as possible.
- There are various factors affecting working capital and profitability, but in this research some factors are considered. So, in future when decide to conduct this research, various other factors should also be taken into consideration.
- Here data analysis didn't use the time series. Time series is more suitable to take accurate conclusion about this research.

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