

# Study on Working Capital Management and Profitability on Food, Beverage and Tobacco Companies in Sri Lanka

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## Abstract

The purpose of this study is to examine the relationship between the working capital management and profitability of food beverage and tobacco Companies in Sri Lanka. The study used secondary data collected from 20 companies covering the period from 2010 to 2014. The various components for measuring the working capital related variables include the Inventory Conversion Period, Average Collection Period and Average Payment Period. And also profitability includes Return on Asset and Return on Equity. The results depict that, there is a weak negative relationship between the Inventory Conversion Period, Average Collection Period and the Profitability ratios of the food beverage and tobacco companies in Sri Lanka. This indicates that, above working capital variables are increase it would tend to reduce the profitability of the company. Nevertheless there is a weak positive relationship between the Average payment period and profitability.

**Keywords:** Average Collection Period, Inventory Conversion Period, Average Payment Period, Profitability

## Introduction

Working capital management is an important component of management of corporate finance; since it directly influences firm's profitability as well as liquidity in everyday activities. In any business organization, it is obvious that there must be sufficient working capital to run day to day operation. Therefore, to operate the business activities smoothly, working capital of firm's must be sufficient. Then, the concern of working capital management is setting sufficient (optimal level) of working capital and managing short term assets and liabilities of firms within a specified period of time, usually one year. It is obvious that, the importance of efficient working capital management is unquestionable to all business activities. Because, business capability relies on its ability to effectively use (manage) receivables, inventories and payables, Filbeck and Kruger (2005). Many firms suffer from how can manage its working capital in order to reach to the optimum, then to enhance their profitability. In this context, the research problem for this study is identified as "What is the relationship between working capital management and profitability?"

## Literature Review

### Definition of working capital

The WC is needed in a company for meeting the short-term financial obligation which the company is expected to have while in operations. It can be termed as a capital solely used for the trading purposes and it can't be retained (any form) in the business for more than 1 year.

In the normal course of business operations, the form on which the money is invested keeps changing. The need for WC is just like the circulation of blood in the human body to maintain life. Lack of WC might make a firm weak and it might not survive longer. Majority of the businesses fail due to the WC starvation and the success of the firms depend on the timeliness of the cash generation procedure (Rafuse 1996).

### **Working capital management**

Working capital management is concern short-term capital. The short-term capital refers to the capital that companies use in their daily operations and it consists of companies' current assets and current liabilities. A well- managed working capital promotes a company's well-being on the market in terms of liquidity and it also acts in favor for the growth of shareholders value (Jeng-Ren, et al 2006).

### **Profitability**

Profitability is a measure of profit generated from the business and is measured in percentage terms e.g. percentage of sales, percentage of investments, percentage of assets. High percentage of profitability plays a vital role to bring external finance in the business because creditors, investors and suppliers do not hesitate to invest their money in such a company (Gitman, 2002).

### **Working capital management and profitability**

The components of working capital, generally, include cash, debtors, receivables, inventories, marketable securities and redeemable debentures (Appuhami, 2008). Day's inventory held can be defined as the time between the receipt of raw material and delivery of finished goods. The time between the sale and the receipt of payment is known as trade credit period or days account receivables. Account payables are generated when you buy the product and agree to pay your liability on a specify time in the future. It is a time between the purchase of goods and its payment (Arnold, 2008).

There are several measures of profitability which a company can use. ROE is a routine analysis tool that shows the returns of a firm has generated using the equity of its owners. ROA reflects the earnings generated by the capital invested. This ratio explains that how efficient a company is to utilize its available assets to generate profit.

### **Relationship between working capital management and profitability**

Dependent variable	Independent variable
Profitability	Working capital management
Return on asset	Inventory conversion period
Return on equity	Average collection period
	Average payment period

According to Falope et al (2009) has found negative relationship between WCM and firm profitability which selected quoted companies for the period of 1996 to 2005. Mekonnen (2011) shows that there is statistically significant negative relationship between profitability and average collection period. This result suggests that firms can improve their profitability by reducing the number of day's accounts receivable outstanding. The study by Deloof

(2003), states that managers can increase corporate profitability by reducing the average collection period. The longer the number of day's accounts receivable outstanding, the greater the chance that the firm may lose its profitability. If firms don't manage debtors, they gradually lose control due to reduced cash flow and could experience an increased rate of bad debts.

Mathuva (2010) in the study "the influence of working capital management components on corporate profitability: a survey on Kenyan listed firms" shows that average payment period has a positive relationship with profitability. The positive relationship suggests that an increase in the number of day's accounts payable by 1 day is associated with an increase in profitability.

Although most empirical research suggest a negative relationship between inventory turnover in days and profitability (Ruichao, 2013; Lazaridis and Tryfonidis, 2006; Falope and Ajilore, 2009; Mansoor and Muhammad, 2012; Raheman and Nasr, 2007; Dong, 2010), find contradictory findings on the relationship between inventory turnover in days and profitability.

Koperunthevi (2010) analyzed the working capital management and firms' performance of manufacturing firm in Sri Lanka and concluded that the working capital management very much influences the profitability.

## Methodology

In this research study is mainly about the Sri Lankan food, beverage and tobacco firms, required data is collected from the annual reports published in the CSE web site. The survey is carried out among the sample of 20 companies with using 5 years data from 2010 to 2014 of those companies annual report. The unit of analysis is an individual company listed in the Colombo stock exchange.

Table 01 Variables for the study

Dependent variable	Independent variable
Profitability	Working capital management
<ul style="list-style-type: none"> <li>• Return on asset</li> <li>• Return on equity</li> </ul>	<ul style="list-style-type: none"> <li>• Inventory conversion period</li> <li>• Average collection period</li> <li>• Average payment period</li> </ul>

Working Capital can be basically described as the capital which is required for the businesses in their day to day operations such as purchasing of raw materials, payments for direct and indirect expenses to carry on production, investments in stock and store, etc. Working capital management is the independent variable and it can be measured by Inventory conversion period, Average collection period and Average payment period. Profitability is the dependent variable and it can be measured by return on asset and return on equity.

Table 02 Measurement of variable

Variable	Dimension	Calculation
	Inventory conversion period	Average inventory / Cost of goods sold*360
Working capital management	Average collection period	Average account receivables/ Credit sales*360
	Average payment period	Average accounts payable / Credit purchases*360
Profitability	Return On Assets	Net profit after tax / Total assets *100
	Return on Equity	Net profit after tax / Shareholder's equity*100

## Discussion and Findings

Table 03 is showing the descriptive statistics of all variables used in this research the information in relation to sample of the twenty food, beverage and tobacco companies is collected from 2010-2014. Total 100 annual reports were used for analysis. Information about the ranges of the variables is contained in the Minimum and Maximum. Variability can be assessed by examining the values in the Standard Deviation column. The standard deviation measures the amount of variability in the distribution of a variable. Average payment period and return on equity have highest standard deviation of 74.91 and 45.76 respectively. This indicates that the observations in the data set are widely dispersed from the mean. So the management of food, beverage and tobacco companies should monitor their inventory and total equity.

Table 03 descriptive statistic

	N	Minimum	Maximum	Mean	Std. Deviation
Inventory conversion period	100	3.16	228.68	46.48	44.57
Average collection period	100	8.56	110.27	47.76	24.56
Average payment period	100	10.72	565.67	61.19	74.91
Return on asset	100	-17.65	122.85	12.95	16.59
Return on equity	100	-33.58	221.08	28.01	45.76

Table 04 indicates the relationship between the various independent variables and the dependent variable used in the study. The correlation matrix below shows that Inventory conversion period, Average collection period, Average payment period, Return on asset and Return on equity. According to the results of the Pearson correlation, there is a Weak Negative correlation between the inventory conversion period and return on asset (-0.079) and return on equity (-0.206). Significant level is not less than 0.05 ( $0.433 > 0.05$ ) and it is represent that there is no significant relationship between inventory conversion period and return on asset. But inventory conversion period and return on equity has a significant relationship. ( $0.04 < 0.05$ ). There is a negative relationship between Inventory Conversion Period and profitability. This supports the studies of (Egbide, 2009; Falope and Ajilore, 2009 and Raheman, 2010) who found that there is a negative relationship between inventory conversion period and profitability. Reason for that food, beverage and tobacco companies have large percentage of their raw materials and finished good as perishables will lead to low profitability. And also there is a Weak Negative correlation between the average collection period and return on asset (-0.022), and return on equity (-0.233). Significant level is not less than 0.05 ( $0.831 > 0.05$ ) and it is represent that there is no significant relationship between average collection period and return on asset. But inventory conversion period and return on equity has a significant relationship. ( $0.02 < 0.05$ )Mekonnen (2011) shows that there is statistically significant negative relationship between profitability and average collection period. This result suggests that firms can improve their profitability by reducing the number of day's accounts receivable outstanding.

Likewise results of the Pearson correlation shown in the table 04 there is a Weak Positive correlation between average payment period and return on asset, and return on equity (0.136,0.039). Significant levels are not less than 0.05 ( $0.179 > 0.05$ ,  $0.7 > 0.05$ ) and it is represent that there is no significant relationship between average payment period and return on asset and also return on equity.Mathuva (2010) in the study “the influence of working capital management components on corporate profitability: a survey on Kenyan listed firms” shows that average payment period has a positive relationship with profitability. The positive relationship suggests that an increase in the number of day's accounts payable by 1 day is associated with an increase in profitability. According to that there is a weak negative relationship between inventory conversion period, average collection period and profitability (according to the two profitability ratios). But average payment period and profitability has a weak positive relationship.

Table 04 Correlations between working capital management and profitability

			Return on asset	Return on equity
Inventory conversion period		Pearson Correlation	-0.079	-0.206*
		Sig. (2-tailed)	.433	.040
Average collection period		Pearson Correlation	-0.022	-0.233*
		Sig. (2-tailed)	.831	.020
Average payment period		Pearson Correlation	.136	.039
		Sig. (2-tailed)	.179	.700

## Conclusion and Recommendation

Objective of the study; find out the relationship between inventory conversion period, average collection period, average payment period and profitability. According to the correlation analysis findings in this study it identifies that there is weak negative relationship between inventory conversion period, average collection period, and profitability denominated by ROA and ROE of a company. But there is weak positive relationship between average payment period (APP) and profitability denominated by ROA and ROE of a company. Relationship between APP and ROA and also APP and ROE has an insignificant relationship. Above results can be supported by the way, the beverage, food and tobacco companies do not maintain large amount of account receivables and inventories except account payable, it can be seen through their statement of financial position, the researchers also note that beverage, food and tobacco products are very fast moving product due to this reason the companies do not need to maintain a huge amount of accounts receivables and inventories. The study recommends that the longer the accounts payable, the better the profitability this could be due to good name created by suppliers and suppliers will not interrupt supplies to the firm which in turn leads to smooth operation during the year and ends up with better profitability.

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