

Effect of Cash Conversion Cycle on Profitability: Listed Plantation Companies in Sri Lanka

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Abstract

Working capital is needed for day-to-day operations of a firm. Cash conversion cycle (CCC) has been considered a useful measure of firm's effective working capital management and especially the cash management. This study was an attempt to examine the effect of cash conversion cycle on profitability in ten listed plantation companies in Sri Lanka between 2008 and 2012. Results revealed that there is negative relationship between return on equity and cash conversion cycle. 48.5 percent variation of ROE explained by CCC. Further Cash conversion cycle also had negative impact on Return on asset. In here 61.6 % explained by CCC. In addition cash conversion cycle had 60.2 % negative impact on net profit. Therefore the effect of cash conversion cycle on total profitability as whole contains significant value.

Key words: Cash conversion cycle and Profitability

Introduction

Working capital management is a very important component of corporate finance because it directly affects the liquidity and profitability of the company. The working capital is known as life giving force for any economic unit and its management is considered among the most important function of corporate management. Due to that, every organization whether, profit oriented or not, irrespective of size and nature of business, requires necessary amount of working of working capital (Achchuthan & Kajanathan, 2013). Working capital management is a simple and straight forward mechanism of ensuring the ability of the firm to fund the difference between the short term assets and short term liabilities (Kajanathan & Achchuthan, 2013). It deals with current assets and current liabilities. There are two basic ways to assess the working capital management of firms. They are

- ❖ balance sheet concept and studying current assets and current liabilities
- ❖ Concept of Cash Conversion Cycle (CCC).

The Cash Conversion cycle measures the number of days between actual cash expenditures on purchase of raw materials and actual cash receipts from the sale of products or services (Eljelly, 2004). Since every corporate organization is extremely concerned about how to sustain and improve profitability, hence they have to keep an eye on the factors affecting the profitability. In this regard, liquidity management having its implications on risks and returns of the corporate organizations cannot be overlooked by these organizations and hence cash conversion cycle being indicator of the liquidity management needs to be explored as to how it may affect the profitability of the corporate units. Today due to changing world's economy, advancement of technology and increased global competition among the companies, every company is striving to enhance their profits and for that companies are putting every effort to bring their cash conversion cycle at optimum level to increase profitability.

Objective of Study

Objective of the study are as follows;

- ❖ To measure the role of cash conversion cycle in explaining the variations in the profitability.
- ❖ To investigate the impact of Working Capital Management on profitability of Sri Lankan hotel.

Literature Review

Velnampy (2005) noted that, each organization is employing a lot of money in various projects. Its success is depending on the ability to generate profitability. Liquidity and profitability both are most important factors for an organization to run the organization. Liquidity management is necessary for all businesses. When a business does not manage its liquidity well, it will have cash shortages and will result in difficulty in paying its obligations. Profitability is against the liquidity, when firm's profitability increases, liquidity will decrease and vice versa. In addition to profitability, liquidity management is vital for ongoing concern. Cash conversion cycle (CCC) is one of the criteria for working capital evaluation .it is the time needed between materials purchasing, production process and funds collection due to selling.

Rathika & Nimalathan evaluated cash conversion cycle (CCC) and profitability of selected listed manufacturing companies during the period from financial year 2006 to 2010. Their results revealed that return on assets (ROA) are negatively correlated.

Velnamby & Kajanathan (2013) analyzed cash position and profitability among listed telecommunication firms in Sri Lanka over a period from 2005 - 2011. The study was carried out by analyzing the two firms' profit measured by return on assets and return on equity as the dependent variable and the cash position as liquidity measure in relation to the sales, total assets and current liabilities as the independent variables. Based on the correlation analysis, there was a significant relationship between cash position ratios and return on equity & assets in the Sri Lanka telecom plc. In contrast; there was no significant relationship between cash position ratios and return on equity & assets in the Dialog telecom plc in the Sri Lankan context. Further, Sri Lanka telecom plc, cash position ratios have the influence or impact on the profitability measures comparing with Dialog telecom plc in the Sri Lankan context.

Ananthasayan, Raveenthiran and Raveeswaran (2011) examined the relationship between working capital management and profitability of listed manufacturing companies in Sri Lanka over the period of time 2003-2007. Thirty manufacturing companies were selected as samples companies to find out the relationship among variables. Their results shown that, there was a significant relationship between profitability and cash conversion cycle.

Anandasayanan and Subramaniam analyzed effect of working capital management on profitability of firms in Sri Lanka. This study was used panel data of 60 firms, for the period of 2000-2008 that consist of six different economic sectors which are listed in Colombo Stock Exchange. The results of regression analysis provide a strong negative significant relationship between cash conversion cycle and firm profitability. This reveals that reducing cash conversion period results to profitability increase.

Kajanathan and Achchuthan (2013) examined liquidity and capital structure in the Sri Lanka Telecom Plc from the year 2005 to 2011. Their findings revealed that, the decision making on the capital structure is highly depending on the liquidity management of the Sri Lanka Telecom Plc. They made a suggestion that firms should focus on the liquidity management to take the decision on the capital structure which should lead to the firms' value in the long term perspective.

Velnamby and Nimalathan (2009) initiated on association between organizational growth and profitability of virtually all of the Banks' branches of Commercial bank of Ceylon Ltd in Sri Lanka with 10 years accounting period: 1997-2006. Return on Average Assets, Return on Average Share holders are significantly associated with number of advances and number of depositors and sales are correlated with all profitability ratios except ROE and ROI. Further organizational growth has a greater impact on all profitability ratios.

Results of Anandasayanan shown a strong reverse relationship between the measures of working capital management including the number of days account receivable, number of days inventories and cash conversion cycle with profitability.

Wang analyzed the data of Japanese and Taiwanese firms for the period of the 1985-1996. He found that shorter CCC is related with better corporate performance. Many scholars have measured working capital using the cash conversion cycle Deloof (2003) analyzed a sample of Belgian firms and found that firms can raise their performance by shortening the periods for receivables collection and inventory conversion. He also reported an unanticipated negative impact associated with the number of days for accounts payable; poorer firms prolong the time to pay their debts Lazaridis and Tryfonidis (2006) examined a sample of firms listed on the Athens Stock Exchange, Nazir and Afza (2007) investigated a sample of firms listed on the Karachi Stock Exchange, and Abuzayed (2012) looked at a sample of firms listed on the Amman Stock Exchange; they all found that shortening the cash conversion cycle enhances firm performance. Richards & Laughlin (1980) presented the idea of cash conversion cycle as a tool for measuring the liquidity management and performance of a company. Gentry et al. (1990) suggested that cash conversion cycle affects the market value of a firm. Uyar (2009) tried to establish a relationship between CCC, profitability and size of the firm. The focused was on listed companies on Istanbul Stock exchange, he collected the data for 166 companies from seven different industries for the period of one year (2007). He used total asset and net sale as a variable to measure the size and ROE as a variable to measure profitability. ANOVA and Pearson correlation was run to find out the association of CCC with size of the company and CCC with profitability. Not surprisingly there exists a negative relationship between CCC and size of the firm, and CCC and profitability.

Hypothesis

Hypotheses of the study are as follows:

H1: there is a significant association between CCC and ROE

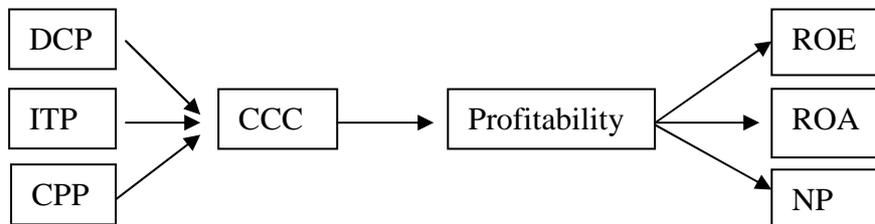
H2: there is a significant association between CCC and ROA

H3: there is a significant association between CCC and NP

Conceptual Frame Work

Conceptual frame work of this study is formulated as below:

Figure: 1



DCP: Debtors Collection Period ROE: Return on Equity
 ITP: Inventory Turnover Period ROA: Return on Assets
 CPP: Creditors Payment Period NP: Net Profit
 CCC: Cash Conversion Cycle

Measurement of Variable

Table: 1

Variables	Measure
Inventory Holding Period	(Average Inventories/Cost of Goods Sold) x 365
Receivables Collection Period	(Average Accounts Receivables/Sales) x 365
Payables Payment Period	(Average Accounts Payables/Cost of Purchases) x 365
Cash Conversion Cycle	Inventory Holding Period + Receivables Collection Period - Payables Payment Period
Return on Assets	Net Profit/Average Total Assets
Return on Equity	Net Profit/Average Total Shareholders' Equity
Net profit	Net Profit / sales

Methodology

Data collection

In this research, secondary data are used to find the Effect of cash conversion cycle on Profitability in ten listed Plantation companies listing in Colombo Stock Exchange Sri Lanka over the period of (2008-2012).

Research model

In this study used Ali Uyar's (2009) model. According to the hypotheses development we can develop this research model are as below;

$$\begin{aligned}
 \text{ROE} &= \alpha + \beta \text{ccc} + \varepsilon & (1) \\
 \text{ROA} &= \alpha + \beta \text{ccc} + \varepsilon & (2) \\
 \text{NP} &= \alpha + \beta \text{ccc} + \varepsilon & (3)
 \end{aligned}$$

Data analysis and Discussion

Here, correlation analysis is used to find out the relationship between cash conversion cycle and profitability and regression analysis are used in what extend cash conversion cycle impact on profitability.

Correlation analysis

Table 2 Correlations

		CCC	ROA	ROE	NP
CCC	Pearson Correlation	1	-.785**	-.697*	-.776**
	Sig. (2-tailed)	10	.007	.025	.008
	N		10	10	10
ROA	Pearson Correlation		1	.947**	.997**
	Sig. (2-tailed)		10	.000	.000
	N			10	10
ROE	Pearson Correlation			1	.958**
	Sig. (2-tailed)			10	.000
	N				10
NP	Pearson Correlation			.	1
	Sig. (2-tailed)				10
	N				

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

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

Table 2 shows the Pearson's correlation coefficient and it indicates how cash conversion cycle correlated with profitability ratios. As per the table 2, cash conversion cycle has strong negative relationship between ROE, ROA and NP ($r = -.785^{**}$, $r = -.697^*$ and $r = -.776^{**}$) at 0.01 and 0.05 significant levels

Regression analysis

Table 3 Regression analysis between ROE and CCC

Model		Unstandardized Coefficients		t	f	R ²	Sig.
		B	Std. Error				
1	(Constant)	.279	.066	4.243			.003
	CCC	-.007	.002	-2.747	7.554	.485	.025

a. Dependent Variable: ROE

The results given in the table 3 above depicted that empirically significant negative relationship existed between cash conversion cycle and return on equity. the negative value of beta (-.007) was significant ($p < .05$). Further 48.5% of cash conversion cycle impact on return on equity.

In order to test the hypothesis, considering the p value is less than 5%. Hypothesis 1 stated that there a significant association between CCC and ROE. it was accepted by regression analysis.

Table 4 Regression analysis between ROA and CCC

Model		Unstandardized Coefficients		t	f	R ²	Sig.
		B	Std. Error				
1	(Constant)	.211	.047	4.492			.002
	CCC	-.006	.002	-3.581	12.821	.616	.007

a. Dependent Variable: ROA

Above table 4 explore that negative relationship between cash conversion cycle and return on assets. From the table, we find that our estimated line can be $ROE = .211 + .002$ cash conversion cycle. 61.6 percent of variation in

return on assets explained by cash conversion cycle. The negative value of beta (-.006) was at significant ($p < .01$). This result was consistent with Nimlathasan's study.

In order to test the hypothesis, considering the p value is less than 1%. hypothesis 2 stated that there a significant association between CCC and ROA. It was accepted.

Table 5 Regression analysis between NP and CCC

Model		Unstandardized Coefficients		t	f	R ²	Sig.
		B	Std. Error				
1	(Constant)	.257	.057	4.476			.002
	CCC	-.008	.002	-3.481	12.116	.602	.008

a. Dependent Variable: NP

The results given in the table 5 exhibited that empirically significant relationship existed between net profit and cash conversion cycle. The negative value of beta (-.008) was significant at the level of 99.91% confidence level further t value of (-3.481) explore that the relationship was empirically reliable.

In order to test the hypothesis, considering p valve is less than 10% ($p < .01$). Further 60.2 percent of variation net profit explained by cash conversion cycle. Hypothesis 3 stated there a significant association between CCC and NP. Therefore it was accepted.

Conclusion

This paper analyzed the effect of cash conversion cycle on profitability in ten listed plantation companies in Sri Lanka between 2008 and 2012. Results revealed that there is negative relationship between return on equity and cash conversion cycle. 48.5 percent variation of ROE explained by CCC. Further Cash conversion cycle also had negative impact on Return on asset. In here 61.6 % explained by CCC. In addition cash conversion cycle had 60.2 % negative impact on net profit.

Therefore the effect of cash conversion cycle on total profitability as whole contains significant value.

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