Impact of Working Capital Management on Financial Performance: Evidence from Listed Plantation Companies of Colombo Stock Exchange (CSE) in Sri Lanka.

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Abstract

Working capital management (WCM) is one of the prerequisites for a firm's success, and it is essential to retain the optimum level of working capital for a firm's sustainability. Though empirical evidence exists on the topic, there is uncertainty in determining the optimum level of WCM, especially in the Sri Lankan context.WCM may be different from industry to industry. Therefore, firms have to follow an appropriate WCM approach that is related to the particular industry sector for sustained financial performance. This study attempted to investigate the impact of the WCM on financial performance in plantation companies in Sri Lanka. Data was collected from annual reports of 18 listed plantation companies of Colombo Stock Exchange in 2011/2012. Although the plantation industry plays a significant role in the Sri Lankan economy as a main foreign exchange earner and employment generator, literature relating to the WCM of the plantation industry in Sri Lanka is scarce. Therefore, this study enriches the literature by providing evidence that can be easily applied for the plantation industry in Sri Lanka. The study measures financial performance in terms of Net Profit margin (NPM), Return On Assets (ROA) and Return on Equity (ROE) whereas the WCM is measured in terms of Inventory Turnover Days (ITD), Accounts Receivable Days (ARD) and Cash Conversion Cycle (CCC). Based on multiple regression analysis the results indicate that negative relationship between CCC and ITD with NPM and ROA. Moreover ARD has a significant positive effect on ROA. Hence the study recommends plantation companies to manage their working capital by implementing liberal credit term policy, reducing inventory turnover days and the cash conversion cycle to improve their financial performance and survive in the undetermined business environment.

Key Words: Working Capital Management, Financial Performance, Plantation Companies, Colombo Stock Exchange.

Introduction

Working capital plays predominant role in success and sustainability of a business. No business can run effectively without a sufficient quantity of working capital. Thus it is crucial to maintain efficient (WCM) practices to retain right level of working capital. The objective of WCM is to maintain the optimum balance of each of the working capital components for smooth running of a firm (Filbeck and Krueger, 2005). Business viability relies on the ability to effectively manage receivables, inventory, and payables. Efficient WCM can ensure the success of the firm while inefficient management may lead to the bankruptcy of the firm . Hence, effective management of working capital can mean the difference between the success and failure of a business (Belton, 2006.).

Practices of WCM are varies for different industries, Firms have to adopt an appropriate WCM approach which is favorable to particular industrial sector (Ganesan, 2007). Sri Lankan plantation sector is a paramount segment in the economy that contrtibutes significantly to foreign exchange earning and employment generation. Therefore, in this study plantation industry was taken in consideration and examined the impact of WCM on Financial Performance.Ultimately this paper attempt to fill the gap in the finance literature as there were none of studies addressed WCM practices in the plantion industry.

Materials and Methods

The study used secondary data collected from the annual financial statements of 18 listed plantation companies in recent financial year of 2011/2012.Multiple regression analysis techniques were used to examine the impact of WCM components including inventory management, receivable management and cash management on the financial performance in this paper. Explanatory variables of the research include Accounts receivables days (ARD), Inventory turnover days (ITD), Cash conversion cycle (CCC) and Current ratio (CR) while Net profit margin (NPM) ,Return on assets (ROA) and Return on equity (ROE) and were used for evaluate financial performance as dependant variables. Moreover, Firm size (FS) was used as control variable in this study.
This study uses two regression models:

Model 1: $NPM = a + \beta_0 ARD_{it} + \beta_1 ITD_{it} + \beta_2 CCC_{it} + \beta_3 CR_{it} + \beta_4 FS_{it} + \varepsilon$

Model 2: $ROA = a + \beta_0 ARD_{it} + \beta_1 ITD_{it} + \beta_2 CCC_{it} + \beta_3 CR_{it} + \beta_4 FS_{it} + \varepsilon$

Model 3: $ROE = a + \beta_0 ARD_{it} + \beta_1 ITD_{it} + \beta_2 CCC_{it} + \beta_3 CR_{it} + \beta_4 FS_{it} + \varepsilon$

Results, Discussion & Conclusion

The objectives of this study is to investigate the casual relationship between WCM and financial performance. For this purpose, three models were developed to examine the combined influence of independent variables on NPM ,ROA and ROE respectively by using multiple regression technique.

Table 1: Results of Regression Analysis

	Model 1			**Model 2**			**Model 3**		
	F=102.23, P=.000 $R^{2=}$. 97,			F=42.67, P=.000 $R^{2=}$.94 ,			F=13.83, P=.000 $R^{2=}$.85 ,		
	β	***t-value***	***sig***	***β***	***t-value***	***sig***	***β***	***t-value***	***sig***
Constant	15.126			11.19			2.252		
ARD	.060	1.120	.285	.406***	4.832	.000	.006	0.083	.935
IND	-.199**	-2.46	.030	-.340**	-2.703	.019	-.020	.170	.868
CCC	-.259***	-19.5	.000	-.276***	-13.34	.000	0.032	1.689	.117
CR	6.624***	8.098	.000	5.68***	.4.451	.001	6.328***	5.348	.000
FS	-.136**	-2.53	.026	-.072	-.859	.407	-.128	-1.660	.123

Notes: The symbols (***), (**) and (*) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 1; shows regression coefficients and their statistical significance, namely Model 1, Model 2 and Model 3. Results of all models were found statistically significant. Model 1 accounted for approximately 97% of the variation of NPM (F=102.23, P<.000) and 94% of variation of ROA is explained in Model 2 (F=42.67, P<.000). and independent variables of Model 3 captured 85% variation in ROE (F=13.83, P<.000)

NPM is regressed against the five independent variables and the regression equation is:

$NPM = 15.126 + 060ARD_{it} - .199ITD_{it} - .259CCC_{it} + 6.624CR_{it} - .136FS_{it} + \varepsilon$

The regression equation suggests, that IND and CCC have a negative impact with NPM and statistically significant at 5% and 1% level respectively. It reveals that shortening the inventory turn over days will increase the profitability of the firms. And reduction in the length of CCC will provides positive contribution to company's NPM.

In the second regression, ROA is regressed against the five independent variables in the same group. The regression equation is:

$ROA = 2.252+ .406\,ARD_{it} -.340ITD_{1it} +.0.032CCC_{it} +5.68CR_{it} -.072FS_{it} + \varepsilon$

It is observed that all the variables have the same relationships or behavior with ROA as with NPM, except the ARD and FS.The result indicate ARD was positive and statistically significant at 1% level in explaining ROA .This indicates that short ARD was correlated with lower profitability.

$ROE = 15.126+ .006ARD_{it} -.020ITD_{it} -.259CCC_{it} +6.328-.128FS_{it} + \varepsilon$

Moving to the third regression equation, all selected working capital measures were not statistically except the CR. The current ratio which is a traditional measure of liquidity also has a significant positive relationship in all models .This is an indication that more investment in current assets (conservative policy) might also increase financial performance. When control variable is considered, firm size has a negative significant effect on NPM.This reveals that, when amount of total assets improved; it would inversely impact on financial performance of firms.

Conclusion

The study revealed that ARD have a positive significant association whereas ITD and CCC have an inverse significant relation on financial performance. Thus, these findings indicate that working capital management is exceptionally influences on financial performance in plantation companies in Sri Lanka. This is supported by empirical studies of Rahman (2007) and Deloof (2002). Hence , the study recommends the plantation companies to manage their working capital efficiently in order to increase their financial performance. According to the results of this study, this could be achieved by improving the inventory control process, implementing liberal credit term policy and by delaying payments to suppliers. This study may be helpful to both policy makers and government for devise strategies and guide managers to make sound decisions regarding the working capital in the uncertain business environment. Future research could be addressed investigating the sector wise relationship between working capital management and firms' performance in Sri Lanka.

References

Belton, K.(2006). Working capital is yours working hard enough? *corporate sector review*

Deloof, D. (2003). “Does Working Capital Management affect Profitability of Belgian Firms”? *Journal of Business Finance and Accounting,* Vol 30 No 3 & 4 pp. 573 – 587.

Filbeck, G. and Krueger, T. M. (2005). An analysis of working capital management results across industries, *American Journal of Business*, Vol. 20, Issue 2, pp. 11-18.

Ganesan,V.(2007).An analysis of working capital management efficiency in telecommunication equipment. *Industry rivier Academic Journal*, 3, No. 2, Fall.

Raheman , A. and Nasr, M.(2007). Working capital management and profitability – case of Pakistani firms. *International*