Impact of Working Capital Management on Firm's Profitability: Evidence From Listed Insurance Companies in Colombo Stock Exchange

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Abstract

Working capital management is considered a crucial element in determining the profitability of business firms. Working capital management practices favorably affect the firm's profitability. In recent years, many insurance companies in Sri Lanka encountered many working capital issues due to the decrease in profitability and increase of insurance claims. According to the working capital literature, only a handful of studies were carried out to examine the impact of working capital management on profitability regarding insurance companies in Sri Lanka. This study investigates the impact of working capital on the profitability of insurance companies. The study sample covers all the insurance companies listed on the Colombo Stock Exchange for five years, from 2015 to 2019. The companies' working capital is measured by average collection period, average payment period, and current ratio, while return on assets, return on equity, and the profit margin were used to measure their profitability. The Pearson correlation analysis was used to find the association between working capital and profitability. Three random effect panel regression models were used to find the impact of the working capital measures on profitability measures. The results show that the average payment period and debt ratio have negative impacts on return on assets, the average collection period has a positive impact on return on equity, and the current ratio has a positive impact on profit margin. Findings suggest that the firms can adopt a conservative working capital strategy while paying greater attention to the average collection period and current ratio because they favorably affect the profitability of the insurance companies listed on the Colombo Stock Exchange.

Keywords: *Colombo Stock Exchange, profitability, return on assets, return on equity, working capital management.*

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1. Introduction

Working capital is considered a crucial element in determining the profitability of business firms. Thus, maintaining optimal working capital practices contributes positively to the firm's profitability (Filbeck & Krueger, 2005). Further, maintaining optimum working capital is an indicator of determining the failure or success of the business firm. Therefore, firms always try to keep sufficient working capital to smooth running of their operations and maximize returns on investments (Ehrhardt & Brigham, 2006).

Ross et al. (2013) state that the primary goal of working capital management is to ensure the smooth functioning of the business operations by maintaining an adequate amount of working capital for the short-term debt obligations. This implies that efficient working capital management is one of the critical elements for the proper functioning of a business firm. Pine, Pepper, and Rogers (2010) investigated that adequate working capital will generate more returns for business firms.

According to Cornwall, Vang, and Hartman (2011), working capital management occurs on two levels. One is ratio analysis to monitor overall trends in working capital and identify areas requiring closer management. Other is the use of various techniques and strategies to manage individual components of working capital.

Filbeck and Krueger (2005) studied the importance of efficient working capital management by analyzing the working capital policies of 32 non-financial industries of the United States of America. According to their research findings, there exist significant differences between industries in working capital practices over time. A research study carried out by Barine (2012) found that there is a significant relation between working capital and profitability in Spanish financial companies. According to Mwangi and Murigu (2015), working capital is one of the main factors that affected the profitability of insurance companies.

Ahmed (2012) discovered a negative relation between Return on Assets (ROA) and Return on Equity (ROE) from the empirical study carried out to investigate the impact of working capital management on performance among 263 non-stock companies listed on the Karachi Stock Exchange in Pakistan. This study further investigated the current assets over total asset had a positive relation with ROA and ROE. According to Leon (2013), working capital has a significant impact on the profitability of the listed companies in Sri Lanka.

In recent years, many insurance companies in Sri Lanka have encountered many issues regarding working capital due to the decrease in profitability and increase of the insurance claims. As a result, many studies have been carried out to find the impact of working capital on firms' profitability. Still, only a few studies were carried out to investigate the impact of working capital on the profitability of insurance companies in Sri Lanka. There is a need for considerable attention on the impact of working capital on a firm's profitability with the econometrics models. Therefore, this study investigates the impact of working capital on firms' profitability of the listed insurance companies on the CSE.

2. Methodology

In this study, working capital was taken as the independent variable and measured using the three most commonly used working capital indicators such as Average Collection Period (ACP), Average Payment Period (APP) and Current Ratio (CR). The dependent variable of this study was the firm's profitability, and it was measured using Return on Assets (ROA), Return on Equity (ROE) and Profit Margin (PM). In addition to the independent and dependent variables, this study used the Debt Ratio (DR) as a control variable. The functional form of the variables is provided in equation (1).

$$P_{it} = \beta_0 + \beta_1 ACP_{it} + \beta_2 APP_{it} + \beta_3 CR_{it} - \beta_4 DR_{it} + \mathcal{E}_{it} \text{ --------------- (1)}$$

In equation (1), *P* denotes a vector of performance variables such as Return on Assets and Return on Equity which measure the profitability of the listed insurance companies in the *CSE. ACP, APP,* and *CR* denote the working capital measures, while *DR* denotes the control variable used in the research study. Moreover, β_0 is the constant and $\beta_{2\text{-}4}$ denotes the coefficients of the variables. Finally, ε represents the error term.

A balanced panel data set was collected from ten insurance companies for five years from 2015 to 2019. Pearson correlation analysis was used to investigate the relation between working capital and profitability. Three-panel regression analyses were conducted using the model specified in equation (1) to examine the impact of working capital measures on profitability measures. The Hausman test was applied to choose between the random-effect model and fixed-effect models.

3. Results and Discussion

Table 1 presents the results of the Pearson correlation analysis to establish the association between working capital and profitability measures. Based on the results presented in Table 1, the ACP and DR are negatively associated with the ROA ($p < .05$). The ACP is positively associated with the ROE ($p < .05$). On the other hand, CR is positively associated with the PM ($p < .05$). These findings are consistent with the study carried out by Rehman and Anjum (2013).

Table 1: Correlation Matrix

Variable	ACP	APP	CR	DR	ROA	ROE	PM
ACP	1.000						
APP	0.173	1.000					
CR	0.065	-0.205	1.000				
DR	-0.347	0.181	0.045	1.000			
ROA	-0.157*	-0.376	0.378	-0.012*	1.000		
ROE	0.259*	-0.256	0.094	0.356	0.078	1.000	
PM	-0.339	-0.115	0.127*	-0.048	0.138	-0.048	1.000

Note: * indicates statistical significance at 5% level of significance.

According to the Levin Lin Chu test results, *p*-values of all the variables are stationary at levels ($p < .05$). The Hausman tests conducted for the three-panel regression models revealed that the random-effect model best suits the data set. The results of three random effect panel regression models for each of the measures of profitability are presented in Table 2. All the three models used in this study are statistically significant at a 5 percent level.

Table 2: Results of Random Effect Panel Regression Models

Var.	Return on Assets (ROA) - Model 1	Return on Equity (ROE) - Model 2	Profit Margin (PM) Model 3
C	0.289	0.129	0.074
ACP	0.113	0.000*	0.869
APP	-0.001*	-0.662	0.121
CR	0.111	0.989	0.001*
DR	-0.016*	-0.061	-0.075

Note: * indicates statistical significance at 5 percent level of significance.

According to Model 1, there are negative impacts of APP and DR on profitability. These findings are consistent with the investigation carried out by Shin and Soenen (1998). On the other hand, the results reported concerning Model 2 show that ACP has a positive impact on profitability, which is consistent with the investigation carried out by Mathuva (2010). Further, supporting the findings of Mathuva (2010) as illustrated in Model 3, there is a positive impact of ACP on profitability.

4. Conclusion

This study investigated the impact of working capital management on the profitability of listed insurance companies on the CSE. The results show that APP and DR have negative impacts, while ACP and CR positively impact the profitability of the Sri Lankan insurance companies listed on the CSE. These findings imply that a conservative working capital strategy is more appropriate for the insurance companies while paying greater attention to the management of ACP and CR as they favorably affect the companies' profitability.

This study considers all the insurance companies listed on the CSE for five years from 2015 to 2019. Future research can further investigate the impact of working capital on profitability by increasing the sample period and size by developing research into another non-finance industry or developing the investigation beyond the country level. Further, many of the studies applied quantitative research methods to determine the impact of working capital on profitability. Future research may use qualitative methods such as interviewing the managers of the relevant business firms. This would help develop knowledge related to the firms working capital and help maintain the optimal working capital within the organization to increase the firm's value.

References

Ahmed, I. (2012). Impact of working capital management on performance of listed non-financial companies of Pakistan. Retrieved from http://www.umt.edu.pk/icobm2012/pdf/2C-55P.pdf.

Barine, M.N. (2012). Working Capital Management Efficiency and Corporate Profitability: Evidence from Quoted Firms in Nigeria. *Journal of Applied Finance & Banking*, *2*(2), 1-8.

Cornwall, J., Vang, D. O., & Hartman, J. M. (2011). *Entrepreneurial financial management: An applied approach.* London: M. E. Sharpe Publishing.

Ehrhardt, M. C., & Brigham, E. F. (2006). *Corporate finance: A focused approach*. Mason, OH: Thomson South-Western.

Filbeck, G. and Krueger, T.M. (*2005*). An Analysis of Working Capital Management Results Across Industries. *American Journal of Business, 20*(2)*,* 11-20.

Leon, J. S. A. (2013). The impact of Working Capital Management on Profitability of the Listed Firms in Sri Lanka. *Global Journal of Management Perspective, 2*(6), 98-102.

Mathuva, D. (2010). The influence of Working Capital Management Components on Corporate Profitability: A Survey on Kenyan Listed Firms. *Research Journal of Business Management*, *4*(1), 1-11.

Mwangi, M., & Murigu, J. (2015). The Determinants of Financial Performance in

General Insurance Companies in Kenya. *European Scientific Journal*, *11*(1): 288-297.

Pine, P. J., Pepper, D., & Rogers, M. (2010). Do you want to keep your customers forever? *Harvard Business Review*, *5*, 110-118.

Rehman, M. U. & Anjum, N. (2013). Determination of the Impact of Working Capital Management on Profitability: An Empirical Study from the Cement Sector in Pakistan. *Asian Economic and Financial Review, 3*(3), 319-332.

Ross, S., Westerfield, R., & Jordan, P. (2013). *Loose Leaf for Essential Corporate Finance*. New Jersey: McGraw Hill.

Shin, H., H. & Soenen, L. (1998). The Efficiency of Working Capital Management in the Profitability of Hindalco Industries Limited. *ICFAI University Journal of Financial Economics*, *6*(4), 62-72.