



## An Empirical Study on Effects of Working Capital on Profitability (With Special Reference to Associated Cement Companies Limited)

### KEYWORDS

Profitability, Working Capital, Effects of Working Capital, Turnover Ratios.

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**ABSTRACT** *The heart of corporate finance literature is long term investment, capital structure and different valuation methods. They have been focus of intention for many researchers in the past. In short it is mainly concern with the long term financial planning or decisions. On the other hand it is believed that financial decisions of short term assets and short term liabilities management also influence the stock price. These financial decisions are vital because they demonstrate the financial stability of the firm and market develops perception about the firm accordingly. In order to find new ways of value creation, most of the empirical studies focused on inventory management and account receivables management but working capital management has a broader view. The present piece of research analyse the impact of working capital on profitability of Associated Cement Companies Limited.*

### Preamble and previous studies about working capital Management

Working Capital Management refers to all management decisions and actions that ordinarily influence the size and effectiveness of the working capital. It is concerned with the most effective choice of working capital sources and the determination of appropriate levels of the current assets and their use. It focuses attention to the managing of current assets, current liabilities and the relationships that exist between them. It has been widely accepted that the profitability of a business concern likely depends upon the manner in which its working capital is managed. Both excessive and inadequate working capital is harmful for a firm. Excessive working capital leads to unremunerative use of scarce funds. On the other hand, inadequate working capital usually interrupts the normal operations of a business and impairs profitability

A firm's investment in current assets such as cash, bank deposits, short-term securities, accounts receivable and inventories is called as "(gross) working capital". And the "net working capital", more descriptive term in the context of working capital management, refers to the current assets less current liabilities, for instance accounts payable and other short-term liabilities. To put it differently, net working capital is the surplus of current assets over the short-term liabilities and represents the liquidity margin available to meet the cash demands in order to maintain the daily operations and benefit from the profitable investment opportunities (Schilling, 1996; Yadav, Kamath and Manjrekar, 2009; Padachi et al., 2008). Therefore it is possible to say that working capital can be regarded as lifeblood of the firm and its efficient management can ensure the success and the sustainability of the firm while its inefficient management may lead the firm to bankruptcy (Padachi et al., 2008).

In this framework working capital management represents the decisions about the working capital and short-term financing and involves managing the relationship between a firm's current assets and current liabilities. Yet one of the main purposes of working capital management is to provide sufficient liquidity to sustain firm's operations and to have to meet its obligations (Eljelly, 2004). Especially in today's global recessionary environment, all firms regardless of their size and industry need to acquire positive cash flow and liquidity (Stewart, 2009). On the other hand, the way that working capital is managed has also noteworthy effects on the firm's profitability (Deloof, 2003). For a firm's trading activities, working capital can be considered as a spontaneous fund. And the amount of funds tied up to current assets can exceed that of fixed assets in many firms (Sathyamoorthi and

Wally- Dima, 2008). In this context, funds committed to working capital can be seen as hidden sources that can be used for improving firm's profitability (ALShubiri, 2011). Hence it is the fact that working capital management involves a tradeoff between profitability and risk. According to the theory of risk and return, investments with higher risk may create higher return. Thus a firm with high liquidity of working capital will have low risk to meet its obligation and low profitability at the same time (Garcia-Teruel and Martinez-Solano, 2007; Zariyawati et al., 2009).

Shin and Sonen (1998) investigated the relationship between net trade cycle (working capital) and the profitability on the sample that including 58985 firms for 1975 to 1994. They found that a strong negative association exists between the firms net trade cycle and its profitability. The explanation of this association, reducing the firm net trade cycle to a reasonable is one way to create shareholder value and should be a major concern for financial executives. Deloof (2003) found a significant negative relation between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms. These results suggested that managers can create value for their shareholders by reducing the number of day's accounts receivable and inventories to a reasonable minimum.

Padachi (2006) examined the trends in working capital management and its impact on firms' performance. The results proved that high investments in inventories and receivables are associated with lower profitability.

### Research Design

The present study is focused on understanding the impact of efficient working capital management on the profitability of the companies. Hence, it's a case of purposive sampling requiring an in-depth analysis of each selected company. This has lead to selection of one company, namely ACC Cement. The study covers a period of 10 years (2003-2012) and the data were collected from primary and secondary sources. Data are extracted from the annual reports of these firms. The data so collected is analyzed by applying various research tools which include accounting tools like Ratio Analysis, correlation and regression analysis. Pearson Correlation and Multiple Linear Regression are used in this research to study the relationship between variables. Pearson Correlation is use to understand the relationship of variables with each other whereas the general purpose of using multiple linear regression is to know more about the relationship between many independent variable or predictor variables and a dependent or criterion variable. The variables used in this

study based on previous researches about the relationship between working capital management and profitability.

**Problem Statement**

H0: The objective of this study is to examine does working capital management affect the firm profitability?

**Research Model**

Person Correlation is used to calculate the relationship between the different variables use in this research. Working capital components are inventory, receivables and payables. To find the effect of working capital management on profitability on Acc cement companies' regression model is developed using empirical framework used by Padachi (2006) and Deloof (2003).

**Multiple Linear Regression of ACC Cement**

The results have been drawn by applying multiple linear regression on the data.

Following equation will be used for the regression.

$$Y = \alpha + \beta_1 * X_1 + \beta_2 * X_2 + \dots + \beta_n * X_n \dots\dots\dots (a)$$

In this equation Y is dependence variable. is an estimated value of Y when all the other variables are zero.  $\beta$  tell us the change in estimated Y. X is the independent variables (Kohler, 1994, P.586). By running the regression analysis on the data we will find the value of  $\alpha$  and  $\beta$ . The  $\beta$  value of each independent variable will explain the relationship between that independent variable and dependent variable.

**Table -5- Coefficients**

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-37.131	4.96		-7.485	0.002
Current Assets Turnover Ratio	-1.414	0.484	-0.313	-2.921	0.043
Fixed Assets Turnover Ratio	-2.976	1.511	-0.185	-1.969	0.12
Total Assets Turnover Ratio	1.65	3.241	0.044	0.509	0.637
Working Capital Turnover Ratio	58.092	4.537	1.144	12.803	0
Inventory Turnover Ratio	-3.65	1.989	-0.14	-1.835	0.14

Source: Annual Report

The value of beta explain the change in the dependent variable with the per unit change in independent variable. It also explains the nature and strength of the relationship between dependent variable and independent variable (Malhotra, 2004, p.513). Regarding separate regression for each independent variable to investigation the impacts on firms' profitability. The following equation has been formed

$$\text{Net profit} = - 37.131 - 1.414 \text{ Current Assets Turnover Ratio} - 2.976 \text{ Fixed Assets Turnover Ratio} + 1.65 \text{ Total Assets Turnover Ratio} + 58.092 \text{ Working Capital Turnover Ratio} - 3.65 \text{ Inventory Turnover Ratio.}$$

**Table-3- Multiple Linear Regression of ACC Cement**

Model	R	R Square	Adjusted R Square
1	.993a	0.985	0.967

a. Predictors : ( Constant), Inventory Turnover Ratio, Working Capital Turnover Ratio, Total Assets Turnover Ratio, Fixed Assets Turnover Ratio, Current Assets Turnover Ratio  
b. Dependent Variable: Net Profit

Source: Annual Report

The model has adjusted R-squared of 0.967 that means approximately 96.7 % of the variance in the dependent variable Net Profit was accounted for by the model.

The dependent variable of the research was Net Profit therefore; the Coefficients table was required to be analyzed and interpreted. The important points of the results have been discussed below.

**Table -4- ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	340.263	5	68.053	53.925	.001a
	Residual	5.048	4	1.262		
	Total	345.311	9			

Source: Annual Report

The significance value of the F statistic (53.925) is less than 0.05, which means that the variation explained by the model is not due to chance and model is fit for analysis.

**Conclusion**

To conclude, the regression model used for the study is highly explained the overall model signifying the study variables that affect the study output. Therefore, this is consistence with the view of Weston and Brigham (1977, P. 690) minimizing components of working capital will increase profitability. Regarding the study hypotheses the researcher concluded the following points. For the hypothesis (H0) that talks about efficient working capital management is significantly affects profitability of firms and positively related is the one to be accepted. Because, the finding in the analysis section supported this hypothesis that, managing Inventory Turnover Ratio, Working Capital Turnover Ratio, Total Assets Turnover Ratio, Fixed Assets Turnover Ratio, Current Assets Turnover Ratio and the profitability will increases.

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