



Study on Empirical Relationship between the Working Capital and Profitability of Companies in India

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ABSTRACT

Managing working capital is important to the financial health of a business of any size. The amounts invested in working capital are usually high relative to the total assets employed and therefore must be used efficiently. The management of working capital affects the liquidity and profitability of the company and, therefore, its net worth. The objective of working capital management is, therefore, to maintain a balance between liquidity and profitability in day-to-day management. The main objective of this article is to examine the impact of working capital on the profitability of Indian companies. In this study, we selected a sample of 5 Indian companies listed on the National Stock Exchange (NSE) over a 5-year period from 2015 to 2019. The results of our study differ significantly from the various international studies that have been conducted in different markets. This study was based on secondary data. The paper used statistical tools like correlation, and regression model. This study complements the existing literature by examining the effects of working capital management on profitability in the context of an emerging capital market such as India. We find that of these working capital ratios vary significantly across industries over time.

KEYWORDS: efficiency in the management of working capital, Profitability, Correlation, Regression.

1. INTRODUCTION

Working capital management is an important part of corporate financial management, as it directly affects the profitability of companies. Working capital management includes funds held in current assets (CA) that, in the normal course of business, can be converted to cash in a short period of time without loss of value and without disrupting the organization. Current Liabilities (CL) are those that must be settled in a short period of time in the course of normal business. The way working capital is managed has a significant impact on business profitability. An important part of managing working capital is maintaining liquidity in the day-to-day business to ensure smooth processes and meet obligations. This is not an easy task, as managers must ensure that business operations are efficient and profitable. During this process, there is the potential for current assets and Current Liabilities to become mismatched, which could affect the growth and profitability of the business.

On the other hand, companies with less working capital may experience a lack of funds and have a difficult time keeping the business running smoothly. Efficient working capital management is a fundamental part of the overall business strategy to create shareholder value. As a result, companies seek to maintain optimal levels of working capital that maximize its value. More specifically, investing in working capital involves a trade-off between profitability and risk, as this affects the value of the company. Business decisions that tend to increase profitability led to increased risk and, conversely, decisions that focus on reducing risk led to a decrease in potential profitability. This article examines the relationship between the components of capital in work and company profitability for a sample of 5 companies listed on the National Stock Exchange (NSE) in India for a period of 5 years from 2015 to 2019.

2. REVIEW OF LITERATURE

Many researchers have studied working capital from different perspectives and under different conditions. The following studies were very interesting and useful in our study.

Samiloglu and Demirgunes (2008) examined the association between working capital management and profitability among Istanbul firms and created that sales growth influences firms' profitability optimistically. The empirical results habitually hold up the outlook that liquidity and profitability are unswervingly connected in view of the fact that liquidity is augmented through sales growth. Ben-Caleb (2009) examined the association between the elements of working capital and profitability using a sample of 25 manufacturing firms in Nigeria for the period from 2005 and 2006 period and established that just debtors' collection period was a major negative relationship with profitability. Rahman (2011) examined the influence of working capital management on profitability of Bangladesh textile industries. It was observed that profitability and working capital management position of the textiles industry are not satisfactory. The study also disclosed that correlation survived between working capital management and profitability and working capital management has a positive shock on profitability. Arshad and Gondal (2013) examined the association between working capital management and profitability of 21 listed Pakistan cement companies for the period between 2004 and 2010. They demonstrated that there was a

momentous negative association existed between working capital management and profitability. Bhunia and Khan (2011) examined liquidity management effectiveness of selected Indian steel companies based on secondary data with 230 companies for 9 years period between 2002 and 2010 using statistical techniques. They established a diminutive relationship between the liquidity indicators of liquidity and profitability. *This is the daily investment required to run the business. Therefore, the management of working capital is known as Management of Finance in Short Time* (Malik & Bukhari)

3. OBJECTIVES

Following objectives are taken for the study.

1. The prime objective of the study is to identify the relationship between WCM and Profitability.
2. The secondary objective of the study is to recognise the profitability.

4. Material and Methods

This section is divided into five sub-sections. The first sub-section presents the scope/statement of the problem. The sub-second section discusses the period of the study. In the sub-third section, data sources are discussed. The sub-fourth section illustrates the reliability and validity whereas the last subsection highlights the types of statistical techniques were employed.

4.1. STATEMENT OF THE PROBLEM

The scope of the study is listed companies in India. one thousand six hundred forty-one companies are listed under National Stock Exchange (NSE). Hence out of which five companies were selected on a random basis. The period of the study was five years from 2015 to 2019 financial year. These companies include (1) ITC ; (2) TATA Steel; (3) TATA Motors; (4) HUL; (5) ACC

4.2 Period of the Study

The period of the study was five years from 2015 to 2019 financial year.

4.3 Data Sources

In order to meet the requirement of the study, data were collected from secondary sources mainly from financial report of the selected companies, which were available on screener.in and Topstockresearch.com.

4.4 Reliability And Validity

The secondary data for the study was extracted from the income statement and the balance sheet of the interested companies because they are quite accurate and reliable. Therefore, these data can be considered reliable for the study. In the necessary checks and cross-checks were carried out while the information and data from secondary sources were scanned.

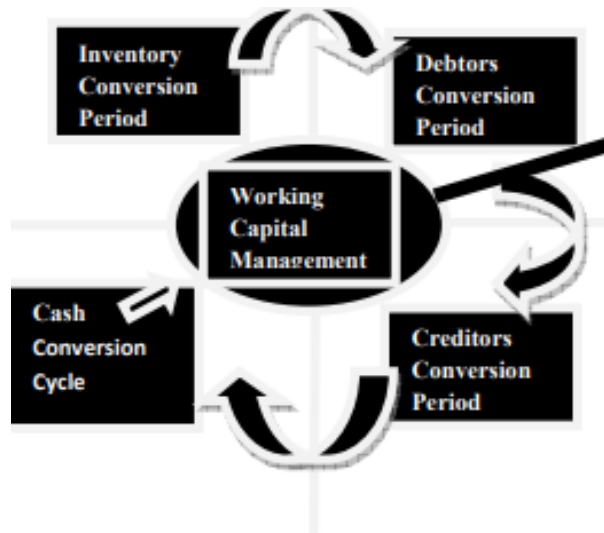
4.5 Types Of Statistical Techniques

we analyse our data by employing correlation and Regression. Based on the regression model ICP; DCP and CCP are considered as the dependent variables whereas EBIT are the independent variables. The detail analysis is carried out with the help of this variables. A well-known statistical package of Microsoft Excel was used in order to analyse the data.

Type of Ratios	Explanations	Calculation
The Inventory Conversion Period (ICP)	ICP is the time required to convert inventory into cash	inventory divided by average sales or cost of sales and multiplied by 365
Debtors' Collection Period (DCP)	In accounting the term Debtor Collection Period indicates the average time taken to collect trade debts	dividing the amount owed by trade debtors by the annual sales on credit and multiplying by 365
Creditors Conversion Period (CCP)	CCP is the length of time the firm is able to defer payments on various resource purchases.	CCP=365/Creditors turnover ratio
Earnings before income and taxes (EBIT)	EBIT (<i>earnings before interest and taxes</i>) is a company's net income before income tax expense and interest expenses are deducted.	Net Income + Interest + Taxes

5. RESEARCH METHODOLOGY

Based on related literature review, the research model is shown, describing how the working capital management and its impact on profitability in listed companies is formed on the basis of this study. The data which is collected are analysed and used as per the requirement of the analysis. The sample size for the study is five firms. The samples are chosen on convenience sampling method, and the data collected for 2015- 2019 period. The study used descriptive statistics, Mean, Standard Deviation, Minimum, Maximum, Correlation, regression.



6. FINDINGS

Findings explain model, relationship between working capital management and profitability and working capital management and its impact on profitability.

7. DATA ANALYSIS AND INTERPRETATION

Data analysis is the process of collecting, converting, cleaning, and modelling data to get the information you need. Results are shared, conclusions are suggested, and decision-making is supported. For data analysis, DCP, CCP, ICP and average EBIT were calculated and put in tabular form, which could be useful for a more detailed analysis and meet the research objectives

7.1 VARIABLES USED FOR STUDY

ICP = Inventory Conversion Period.

DCP = Debtors Conversion Period.

CCP=Creditors Conversion Period.

EBIT=Earnings before interest and taxes.

Where, ICP, DCP, CCP are considered as independent variable and EBIT is considered as dependent variable. The detailed analysis is carried out based on the above-mentioned variables.

YEAR	ICP	DCP	CCP	EBIT
2015	568	86	456.6	60142.89
2016	607.6	96.6	563.2	47289.94
2017	611.2	93.6	583.2	69935.11
2018	597.6	102.2	623.2	71363.11
2019	517.6	100	535.6	27132.14

The above table shows us about the average of five selected firms for the period of five years that is from FY2015 to FY2019 from the above data further analysis is done.

7.2 TECHNIQUES USED FOR DATA ANALYSIS

Y = the variable that you are trying to predict (dependent variable).

X = the variable that you are using to predict Y (independent variable).

a = the intercept.

b = the slope.

u = the regression residual.

For the research paper, we came across the use of multiple regression, so multiple regression, is a statistical technique that uses several explanatory variables to predict the outcome of a response variable. The goal of multiple linear regression is to model the linear relationship between the independent variables and dependent variables. In essence, multiple regression is the extension of ordinary least-squares (OLS) regression because it involves more than one variable. The below table shows the analysis.

Regression Statistics	Value
Multiple R	0.869745768
R Square	0.756457701
Adjusted R Square	0.025830804
Standard Error	18153.63812
Observations	5

Interpretation:

The table above showed the value of EBIT (R square = 0.756457701). In this model, the value of R2 indicates that 75.65 % of the observed variability of EBIT can be explained by the different activities of WCM, namely ICP; DCP. The modified R square is 0.025830804 with a standard error of 18153.63812.

Analysis of Variance (ANOVA)

	DF	SS	MS	F	Significance F
Regression	3	1023617247	341205749	1.035354302	0.601815121
Residual	1	329554576.9	329554576.9		
Total	4	1353171824			

INTERPRETATION:

The above table shows the result about ANOVA where the value of F is 1.035354302 and the value of Significant F is 0.601815121 where the value of significant F is lesser then the value of F that is Significant F < F.

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	229111.4018	498519.4417	0.459583685	0.725747335	-6105178.69	6563401.493	-6105178.69	6563401.493
ICP	35.86585145	581.3921158	0.061689608	0.960776882	7423.153107	7351.421404	7423.153107	7351.421404
DCP	4188.864311	5232.766969	0.800506565	0.570249984	70677.47275	62299.74413	70677.47275	62299.74413
CCP	448.382058	604.922414	0.741222424	0.59392587	7237.885984	8134.6501	7237.885984	8134.6501

Interpretation:

The table shows the standard error ranging from 581.392 to 498519.44, t values range from -0.06168 to 0.74122, P values ranging from 0.57024 to 0.96077.

8.DISCUSSION

The collected data was examined using Microsoft Excel software. Descriptive statistics were first applied and an analysis of the mean, standard error, median, standard deviation, sample variance, kurtosis, skewness, range, minimum, maximum was performed and then the correlation was applied to evaluate the relationship between the dependent variables and independent. After these multiple regressions, the density of the relationships was tested and the regression also shows this density of the variables. We believe that the approach used in this study can help companies to obtain useful information on the relative contribution of each of the elements to the management of profitability.

9.CONCLUSION

Most Indian companies have large sums of money invested in working capital. Therefore, the way in which working capital is managed is expected to have a significant impact on the profitability of these companies. Managing working capital is an important part of financial management decisions in any business. The company's ability to operate for longer periods of time depends on the proper compromise between managing short-term and long-term fund investments (working capital). Companies can achieve optimal management of working capital by making a trade-off between profitability and liquidity. The main objective of this research work is to examine the relationship between the efficiency of working capital management and the profitability of a company. Therefore, a sample of five companies was selected for a period of five years from 2015-2019. The data comes from various websites such as Money Control, Top Stock Research, and Screener. Descriptive statistics, correlation analysis, and the panel regression model were used to estimate and analyse the data. Furthermore, based on the previous analysis, we can conclude that these results may be reinforced as companies manage their working capital more efficiently. Current asset management means "managing current assets and liabilities and financing these current assets". If these companies properly manage their cash, accounts receivable and inventories, it will ultimately increase the profitability of these companies. We can also conclude that these results can be amplified as companies manage their working capital more efficiently. If these companies properly manage their cash, accounts receivable, payable and inventory, it will ultimately increase the profitability of these companies.

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