

**AN EXPERIMENTAL ANALYSIS ON EFFICIENCY OF THE
MANAGEMENT OF WORKING CAPITAL: A CASE STUDY OF
PAKISTAN PHARMACEUTICALS INDUSTRY**

¹Dr. Sadaf Mustafa, ²Farheen Zehra Rizvi, ³Syed Salman Ali, ⁴Rizwan Malik

¹Assistant Professor, Department Of Commerce, University Of Karachi, Pakistan

^{2,3,4}M. Phil Scholar, Department Of Commerce, University Of Karachi, Pakistan

ABSTRACT

Working capital management play a paramount role for the performance of the companies. The study of this paper empirically scrutinize the effect of working capital management on performance of pharmaceutical firms, listed in Pakistan stock exchange. We have used secondary data for analysis which has been taken from firm's annual financial report and state bank of Pakistan (SBP) for the year of 2012-2016. We have taken profitability which is return on assets (ROA) as a dependent variable while the Cash Conversion Cycle (CCC), Inventory Conversion Period (ICP), Average Cash Collection Period (ACP) has been taken as the independent variables. The result revealed the positive and significant relationship between dependent and independents variables.

Keywords: Working Capital, Profitability (ROA), pharmaceutical companies, KSE

INTRODUCTION

Today, we are living in a very challenging environment and there is a vast competition all over the world. Working capital is a critical part or portion for the success of any organization. Most of the business firm have terminated because of the bad working capital and credit management(hassan, 2017). Working capital, capital structure and capital budgeting are the indispensable elements for the venture financial plans. Capital structure and capital are the part of investment decision, whereas working capital management belongs to the financial management decision(Sultan, Takmil, & Wasim, 2017).

Working capital management is the managing of short term assets and short term obligations and it involves managing receivable, inventories, payables and cash. The objective of working capital management is to boost the liquidity and profitability and maximize the value of stockholder. Working capital management has a potential to control its current assets and current liabilities

effectively and efficiently and also increase its return on assets and reduces its payable from its liabilities (makori & jagongo, 2013). Increased ACP shows that the struggle of collection is very bad and also the payment of customers not in time and its effect profitability also (Wild & Bernstein, 1998).

Profitability and liquidity are the two sides of one coin. Liquidity means how your assets can be easily converted into cash and profitability can be defined as the company's potential to earn profit and financial gains (agha, 2014). The problem arises when a firm wants to achieve its goal begin to make profit but its liquidity is not sufficient so it can be catastrophic for the firm. Hence, the preservation to keep balance between the profitability and liquidity are considered to be an essential. Famous authors said that the riskier the investment, there is more probability of financial gain from investment (Sultan, Takmil, & Wasim, 2017).

Therefore, this research study scrutinize how the elements of working capital management such as average conversion period (ACP), cash conversion cycle (CCC), inventory conversion period (ICP) affect the efficiency (profitability) of pharmaceutical firms listed in KSE in Pakistan.

LITERATURE REVIEW

Working capital is the crucial topic for the research study. Many researchers have been studied in different facts and miscellaneous environment some important related reviews of the literature are as follows:

Working capital is a life of the company because its components are used on the daily basis of the business operation and the components are closely related to the profitability of the company and its stock holders` values company also increase their value through working capital maintenance. Now working capital management get to be an enormous problem in organization because many financial managers efforts to recognized how to run it in effective manner(singh & kaur, 2017)

According to (azam & haider, 2011) the effect of working capital on non-financial institution listed in KSE. The result indicates that firm can maximize their value through decreasing the working capital component.

According to (quayyum, 2011) the relation among WCM and profitability. The objective of the research is to increase the profitability through the high level of working capital.

(agha, 2014) has explored that there is a crucial effect of current ratio on profitability (ROA), whereas affirmative and critical effect on receivable turnover, inventory turnover on return on assets

(Sultan, Takmil, & Wasim, 2017) found that there is a positive and significant relation between stock conversion periods and profitableness and gearing ratio and it is also statistically important and he used regression test for this analysis.

(barot, 2012) investigated payables and profitability and analyzed a positive relationship between them whereas he explored a negative relationship between profitability and receivables. It has been resulted that the firms can be increased their profitability through the effectual and well-planned management of payables, receivables and stocks.

According to (bagchi & khamrui, 2012) The function of working capital management is to sustain the payables, examine the receivables, arranging the optimal level of cash and also maintain the inventory in a perfect manner. They explored the relation among working capital management and company's profitability and found that outstanding payments and net operating cycle (CCC) are negatively related with the performance of the company.

(bieniasz & golas, 2011) had explained that account receivable is a paramount part of every organization because it is directly related to the sales. Effectual management of account receivable is important because it increases cash flows, financial health and liability.

(Pike & Neale, 2009) defined that working capital is split into two categories which include current assets and current liabilities. Current liabilities are used for the short period loan whereas current assets are used for the settlement of current obligations. And if firm preserve high level of inventory consequently the profitability of that firm reduces and due to this firm bear high cost including storage, insurance and risk also.

(shah, arif, & sohu, 2018) empirically surveyed the effect of working capital management on profitability of chemical and pharmaceutical firm which are listed in Pakistan stock exchange. They used secondary data for research and used descriptive statistic, correlation and regression model. The study indicates that there is a positive relationship between working capital components and profitability and negative and insignificant relation with day sales outstanding.

According to (Watson & Head, 2010) stock conversion period is the period of stock convertibility into cash. Another component of working capital is debt collection period is defined as the period of cash collection from its customers. It is also an important component of working capital which provides the efficiency of company.

(Mohamad & Saad, 2010) Scrutinized that the effect of working capital management on the performance of Malaysia listed companies. The findings indicates the conclusive relation among the ratio of current assets to total assets and a negative relationship between CCC, current ratio and current liabilities to total assets ratio.

PURPOSE OF THE STUDY

The purpose of this research is to explore the relationship among working capital management and efficiency of pharmaceutical companies, listed in Pakistan Stock Exchange. To examined the research on this objective following relationship are as follows:

1. To examine the association among firms' profitability and ICP.
2. To examine the association among firms' profitability and ACP.
3. To examine the association among firms' profitability and CCC.

RESEARCH METHODOLOGY

This study based on the published data of annual financial reports of pharmaceutical companies, collected from the state bank of Pakistan (SBP).We have collected data from 2012 to 2016. We have used Descriptive Statistics, Analysis Of Multiple Regression, Coefficient of Correlation, t-test, f-test, and analysis of variance (ANOVA), to estimate the profitability and working capital of pharmaceutical industry.

Variables clarification

In this research, we take as a dependent variable the Return on Asset (ROA) and (ICP), (ACP) and the (CCC) are used as independent variables for testing the hypothesis.

Hypothesis

- H₁. ICP has positive relationship with ROA
- H₂: ACP has positive relationship with ROA.
- H₃: CCC Period has positive relationship with ROA.

Table No.1: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Dev.
Return On Assets	6.80	11.11	9.2040	2.06219
Average Collection Period	24.58	32.23	28.4837	3.30223
Inventory Conversion Period	74.92	100.12	84.9726	10.14012
Cash Conversion Cycle	99.50	132.35	113.4563	13.03922

The table-1 shows the outline of descriptive statistics which shows the ROA with minimum 6.80 and maximum 11.11 with means 9.20 and SD 2.06 which show the significancy. Average Collection Period shows minimum 24.58 and maximum 32.23 with mean 28.48 and SD 3.30 which is not satisfactory. Inventory Conversion Period minimum 74.92 and maximum 100.12 with mean 84.97 and SD 10.14. Cash Conversion Cycle minimum 99.50 and maximum 132.35 with means 113.45 and SD 13.03 which is not satisfactory.

Pearson Correlation Analysis

The analysis of correlation show the relation between two or more variables. In this study Dependent and independent variables showed the significant relationship.

Table No. 2: Coefficients^a

Model	Unstand. Coefficients		Standard. Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	23.410	9.122		2.566	.237
ACP	.940	.459	1.505	2.046	.289
ICP	-.222	.294	-.771	-.754	.589
CCC	-.198	.209	-1.255	-.948	.517

a. Dependent Variable: Return On Assets

Table no. 2 showed the B₁23.410 means, if we eliminate all independent variables so the company will earned 23.410 profit. Secondly ACP have more impact on the profitability of the pharmaceutical companies than ICP and CCC which showed the negative relation on profitability.

Regression Analysis

Regression analysis which describe the whole position of the pharmaceutical companies of Karachi, Pakistan. The relation between ROA and ACP showed that companies have sufficient cash amount to buy more stocks for sales. While CCC and ICC are not significant. So the regression analysis tell us that mentioned independent variables have positive effect on the profitability of the pharmaceutical industry of Karachi, Pakistan.

Table No. 3: ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15.447	3	5.149	3.292	.380 ^a
	Residual	1.564	1	1.564		
	Total	17.011	4			

a. Predictors: (Constant), CCC, ACP, ICP

b. Dependent Variable: ROA

The Table No.3 indicated the models of ANOVA and analysis of regression which showed the amount of 5 Years explanations of the Pharmaceutical industry of Karachi, Pakistan. The overall result showed by Prob. > F = 3.292, which suggests the appropriation of model.

Table NO. 4: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
dimension0	.953 ^a	.908	.632	1.25055

a. Predictors: (Constant), CCC, ACP, ICP

b. Dependent Variable: ROA

R² showed that independent variables make the 90.8% variation in ROA, whereas the remaining 9.2% is explained by those factors which are not determined here. The adjusted R² is 63.2% less than R² and is rated as 63.2%. The regression model showed the amount of 5% significant level.

ACP is the amount of days it takes to receive the account receivable from the customers, the lower average collection period is better than a high average collection. In this study average collection period showed the lower collection period which showed that Pharmaceutical industry is collecting its account receivable faster.

ICP showed that how many days a company inventory sold. In this study inventory conversion period showed the higher conversion period which means that Pharmaceutical industry take time to convert its inventory into sales.

CCC explained the duration of time, that how many days would be taken to convert resources into cash flow. According to this study the length of time of CCC of pharmaceutical industry of

Karachi, Pakistan is more which showed that the ability of the mentioned industry to manage its short term assets and liabilities to generate cash for the company is not good.

CONCLUSION

It is concluded that the relationship between the profitability of the assets and all the other mentioned variables that affect the company's profitability in the pharmaceutical industry of Karachi, Pakistan, through the analysis of regression we find the significant relationship of mentioned dependent and independent variables.

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