

Impact of Working Capital Management on Profitability

Dr.S.Srinivasa Rao, Associate Professor, Dept. of Management Studies, TJPS College, Guntur
Email id: ssr2160@gmail.com

R.Nagalakshmi , Assistant Professor, Dept. of Commerce, TJPS College, Guntur
Email id: chukkanagalakshmi.r@gmail.com.

Abstract: The present article examines the effects of working capital management on the profitability & performance of Glaxo Smith Kline pharmaceutical business, which was listed on the Karachi Stock Exchange from 1996 to 2011

. An examination of dynamic panel data from manufacturing companies is taken. The study was done by using both static models like the ordinary least square (OLS), fixed and random effects as well as dynamic models like the difference generalized method of moments (GMM) and system generalized method of moments (SGMM). The findings indicate that while the cash conversion cycle (CCC) has a negative impact on return on assets, the inventory conversion period (ICP) and payment deferral period (PDP) are positively correlated with return on assets.

Keywords: Working Capital, Profitability.

Introduction:

Working capital management is a crucial component of a company's financial affairs that directly influences the company's profitability and liquidity. Profitability and

liquidity are the two opposite sides of the same coin. A company's optimal level of liquidity ensures that it can pay its short-term obligations, and a prosperous enterprise can guarantee effective flow management. Liquidity demonstrates a company's capacity to meet immediate obligations. A company should execute everyday business activities while maximizing its liquidity and profitability. Working Capital Management includes the working capital proportionate balance, components, such as debtors, inventory, and payables, as well as the efficient use of cash in day-to-day activities. Minimizing the need for working capital while generating the greatest amount of income is the goal of effective working capital balance optimization (Ganesan, 2007). The profitability of the company and its working capital efficiency are strongly correlated. The profitability of a corporation can be thought of as its capacity to generate profits. By subtracting costs from the revenue earned while producing that income, profit is calculated. Profitability is the promise for a company to remain a going

concern in the world of business, so we can use profitability as a measure of a company's financial performance. Effective working capital management is very important due to its significant effect on a company's profitability and the fact that it increases profitability. Profitability can be used as a gauge of a company's financial performance because it represents a company's ability to continue operating in the business sector. Because it has a big impact on a company's profitability and because it boosts profitability, effective working capital management is crucial. However, underinvestment in working capital can also cause liquidity issues for management. The performance of the company and profitability also significantly depend on the financial managers' capacity to successfully and efficiently handle their payables, inventories, and receivables. By analyzing the ways pharmaceutical businesses manage their

Definitions of Key Terms :

Return on assets:- Return on assets (ROA) is a ratio that compares a company's average total assets over the course of a financial year to its yearly net income. It details the effectiveness and development of the company's use of its resources to produce income. This ratio measures profitability.

Total yearly net income divided by the average total assets throughout a financial year is the method for calculating return on assets.

Debtors turnover ratio (DTO): This metric reveals how frequently a company collects its accounts receivable. High ratio improves the company's liquidity. It is calculated by dividing net credit sales by the typical amount owed. For things bought on credit, suppliers should be paid promptly, and a low ratio could indicate delayed payments. Although a high ratio of on-time payments is preferred, the corporation should always use the suppliers' available credit. It is derived by dividing the average account payables by the net credit purchase.

Inventory turnover ratio (ITO): From industry to industry, the inventory turnover ratio might differ dramatically. Low ratios indicate slow moving or out-of-date stockpiles, whereas high ratios indicate fast-moving inventories. Maintaining an excessive amount of inventory can also lead to a low ratio. By keeping superfluous inventories, money that could be used for other profitable businesses is cleaned up. Sales divided by inventory is the formula for computing inventory turnover ratio.

Current Ratio:- The current ratio measures the proportion of a company's current assets to its current liabilities. It is the most popular technique for determining a company's liquidity and assesses its capacity to pay down short-term debts. Therefore, current assets divided by current liabilities in a specific financial year is the formula for calculating the current ratio.

Literature Review :

Abbasali Pouraghajan and Milad Emamgholipourarchi:- Empirical research on the effects of working capital management on profitability and market appraisal of companies listed on the Tehran Stock Exchange was conducted by Abbasali Pouraghajan and Milad Emamgholipourarchi. With this goal in mind, they examined a sample of businesses from 2010 to 2014 that were listed on the Tehran Stock Exchange. Furthermore, they measured these two parameters using a variety of variables. According to the research's anticipated findings, there is a strong correlation between a company's profitability and its capacity to manage its working capital effectively. The study's findings also indicate that management can increase the profitability of the company by

reducing the cash conversion cycle and the ratio of total debt to total assets.

Kulkanya Napompech:- The effect of working capital management on profitability was examined by Kulkanya Napompech. This study's main goal was to examine how working capital management affects profitability. A panel sample of 255 companies listed on the Stock Exchange of Thailand between 2007 and 2009 was used to calculate the regression analysis. As a result, operating earnings and inventories were found to be inversely related. Both the conversion time and the collection period for receivables. However, extending the payables deferral period has little impact on profitability. The results also showed that the gross operating profit is influenced by the features of the industry.

Ravi Varma & Yogesh Varun:- Working capital management and business profitability: An examination of dynamic panel data from manufacturing companies [6] Using both static models like the ordinary least square (OLS), fixed and random effects as well as dynamic models like the difference generalized method of moments (GMM) and system generalized method of moments (SGMM), this study examines the effects of working capital management on the

profitability performance of manufacturing firms from 2007 to 2018. The findings indicate that while the cash conversion cycle (CCC) has a negative impact on return on assets, the inventory conversion period (ICP) and payment deferral period (PDP) are positively correlated with return on assets.

Mobeen Ur Rehman and Naveed Anjum :-

In this essay, the working capital and profitability of the Indian IT company (TCS) are primarily analyzed. This study demonstrates a negative correlation between the inventory turnover ratio and return on assets, both when excluding and considering revaluation, demonstrating that the firm's return on assets should increase as inventory turnover increases. Additionally, the analysis demonstrates a bad correlation between the debtor turnover ratio and return on capital employed.

Sarbapria Rai:- The author studied the effects of working capital management on profitability using 311 Indian manufacturing firms over a 14-year period, from 1996 to 2010, and included the debtors turnover ratio, inventory turnover ratio, debt ratio, and many other ratios for measuring the working capital and return on assets. As a result, according to this study, there is a positive relationship between working capital

management and the profitability of the company.

Objectives of the Study:

The major objective of the present study is to empirically investigate how working capital management affects profitability. To check whether working capital management (DTO,CTO,ITO,CR) have any meaningful relationship to profitability (ROA).

Sources of Data Collection:

The author gathered secondary data from Glaxo Smith Kline pharmaceutical business, which was listed on the Karachi Stock Exchange from 1996 to 2011, to examine the relationship between the above two variables. The variables of account receivable turnover, creditors turnover, inventory turnover, and current ratio were used as working capital management criteria in the study, while the variable of return on assets ratio was used to determine the profitability of the organization.

Modelling Framework:-

The following best fitted variables have been determined after examining theoretical literature in order to quantify the effect of working capital management on profitability, and the following equation has

been developed to examine the relationship between working capital management and profitability:

$ROA = \beta_0 + \beta_1 CTO + \beta_2 DTO + \beta_3 ITO + \beta_4 CR + \varepsilon$ Where ROA is the return on assets ratio, CTO is the creditors turnover ratio, DTO is the debtors turnover ratio, ITO is the inventory turnover ratio and CR is the current ratio. Where ROA is dependent and the remaining are independent variables:

The ε is the error term. In the above equation, β_1 is expected to be negative but the researcher is not very sure about it, so it has to be determined ($CTO \leq ?$), β_2 , β_3 , β_4 are expected to be positive ($\beta_2 DTO \geq 0$, $\beta_3 ITO \geq 0$, $\beta_4 CR \geq 0$). All data was obtained from annual report of Glaxo smith Kline pharmaceutical company, sample size is 16 i.e. from 1996 to 2011. Following is the hypothesis which has to be tested in this study.

$$H_0 \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$$

$$H_1 \beta_1 + \beta_2 + \beta_3 + \beta_4 \neq 0$$

Analysis of Data: The statistical significance was verified by the Coefficient, Standard Error Test, T-statistics, Adjusted R-squared, F-statistic, Prob.(Fstatistic) and the Durbin-Watson statistics.

To examine the data, the following analysis was done. The descriptive statistics of the data is:

Table1. Sample: - 2018-22					
	R O A	D T O	C T O	I T O	C R
Me an	3 5 .9 5 6 2 5	53 .6 87 50	1 5 .4 3 7 5 0	4. 98 18 75	3. 2 6 2 5 0 0
Me dia n	3 5 .0 5 0 0 0	51 .5 00 00	1 4 .0 0 0 0 0	5. 00 00 00	3. 5 0 0 0 0 0
Ma xim um	5 9 .9 0 0 0 0	77 .0 00 00	2 3 .0 0 0 0 0	7. 80 00 00	4. 6 0 0 0 0 0
Mi nim um	2 4 .2 0 0 0 0	43 .0 00 00	5 .0 0 0 0 0 0	3. 80 00 00	2. 1 0 0 0 0 0
Std . De v.	1 0 .3 3 0 0 2	10 .4 86 30	4 .4 4 8 6 5 5 4	1. 07 97 79	0. 9 1 5 6 9 6
Ske wn ess	0 .6 9 0 6 7	0. 73 22 89	- 0 .2 5 2 0	1. 10 85 55	- 0. 1 2 3 7 6

	2		7		7
--	---	--	---	--	---

	ROA	DTO	CTO	ITO	CR
ROA	1.0000	0.9894	0.6387	0.9651	0.8714
DTO	0.9894	1.0000	0.6230	0.9524	0.8498
CTO	0.6387	0.6230	1.0000	0.4749	0.5599
ITO	0.9651	0.9524	0.4749	1.0000	0.8400
CR	0.8714	0.8498	0.5599	0.8400	1.0000

Kurtosis	2.696294	2.432848	3.233210	3.917211	1.33716
Jarque-Bera	1.333567	1.644333	0.255365	3.837903	1.7777
Probability	0.513357	0.439456	0.292413	0.14961	0.44199
Sum	57.53003	859.0000	24.7000	79.7100	52.0000
Sum	166	1649	30	174	12.

Sq. Dev.	0.0639	.438	1.9375	8884	57750
Observations	16	16	16	16	16

Table-1 Explaining the descriptive statistics which covers The Mean, Median, Standard Deviation and other results.

Table2:- The Correlation Matrix:

The above data shows that there is a strong positive relationship between return on assets (dependent variable), debtors turnover, and inventory turnover ratios (independent variables). Additionally, the above number shows that there is a moderate relationship between creditors turnover and dependent.

Dependent Variable: ROA				
Method: Least Squares				
Date: 05/23/13 Time: 13:53				
Sample : 1996 2011				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CTO	0.228	0.096	2.369	0.03
DTO	0.540	0.118	4.578	0.00
ITO	3.317	1.049	3.161	0.091
CR	0.652	0.618	1.054	0.314
C	-.153	1.565	-.973	0.00
R-squared	0.991	Mean dependent var		35.956
Adjusted R-squared	0.988	S.D. dependent var		10.330
S.E. of regression	1.111	Akaike info criterion		3.30
Sum squared resid	13.59	Schwarz criterion		3.54
Log likelihood	-.2140	Hannan-Quinn criter.		3.31
F-statistic	321.01	Durbin-Watson stat		1.54
Prob(F-statistic)	0.00			

Results of Regression. The equation's regression findings are as follows

Findings of the Study:

The econometric test applied through E-views shows that statistically significant relationship exists between the dependent variable and independent variables from the model. The above regression results showed that CTO, DTO and ITO have a positive significant impact on ROA, but there was no significant impact of CR on ROA. Also, the adjusted r-squared shows that the above mentioned independent variables effect the dependent variable by 98.8 percent.

The study's findings indicate that working capital management significantly affects a company's profitability. Therefore, managers can increase the profitability of their companies by reducing the inventory turnover, the ratio of accounts receivable, and the percentage of creditors, but there is no discernible impact of changing the current ratio's value on profitability. The results show that the organization can boost its profitability through effective working capital management. The pharmaceutical industry will gain from this study by

managing their working capital effectively, which will increase their profitability.

Conclusion:

As the above results shows that there is a positive relationship between debtors turnover (DTO) and return on assets(ROA), between inventory turnover(ITO) and ROA and between creditors turnover (CTO) and ROA, but there is no significant relationship between Current ratio and ROA, so the null hypothesis has been rejected. Hence, the interpretation of results is that by increasing debtors turnover and inventory turnover and by decreasing creditors turnover ratios, the company can increase its profitability but there is no significant effect of increasing or decreasing the current ratio on profitability. Therefore, the results of the research indicate that through proper working capital management, the company can increase its profitability. This above study will benefit and contribute to the body of knowledge by identifying how Pharmaceutical companies manage their working capital in the most effective and efficient manner in order to multiply profitability of the business.

Scope for Further Research:

There is a need for further research in the area of describing the variables effecting

profitability because there might be some more variable effecting the profitability of the business.

References:

- 1) Dr. Sarbapriya Ray,2011, Evaluating the Impact of Working Capital Management Components on Corporate Profitability: Evidence from Indian Manufacturing Firms, International Journal of Economic Practices and Theories (IJEPT) ISSN: 2247 – 7225 (online).
- 2) Ganesan.(2007):- “An Analysis of Working Capital Management Efficiency in Telecommunication Equipment Industry”, Rivier Academic Journal, Vol. 3, No. 2, pp 13.
- 3) Shin, H. H. and Soenen, L. (1998). “Efficiency of Working Capital and Corporate Profitability”, Financial Practice and Education, Vol. 8, No. 2, pp. 37-45.
- 4) Ravi Varma & Sharma (2018):- The effect of working capital management on profitability with references to cement companies. A Case study of Acc Cement. Journal of Indian Accounting Associations issue no:-5 ISSN-0972-1479.
- 5) Aktas N, Croci E, Petmezas D (2015) Is working capital management value

enhancing? Evidence from firm performance and investments, *Journal of Corporate Finance*, 30:98-113.

6) Deloof M (2003) Does working capital management affect profitability of Belgian firms? *Journal of Business Finance & Accounting*, 30 (4):573-587.

7) Chen J, Sensini L (2014) Net working capital, Cash flow and Performance of SMEs: an exploratory study. *Small and Medium Size Enterprises: Governance, Management and Performance*, 296-315, Malta Univ. Press.

8) Mannetta EW, Jordan JK, Zhang W (2020) Working capital management and performance: an empirical study, *ACMRC*, 137-155.

9) Howorth C, Westhead P (2003) The focus of working capital management in UK small firms, *Management Accounting Research*, 14 (2):94-111.

10) Peel MJ, Wilson N, Howorth CA (2000) late payment and credit management in the small firm sector: some empirical evidence, *International Small Business Journal*, 18 (2):17-37.

11) Boisjolya RP, Conine Jr TE, Mc Donald IV MB (2020) Working capital management: Financial and valuation impacts, *Journal of Business Research*, 108:1- 8.

12) Prempeh K, Peprah-Amankona E (2018) Does working capital management affect Profitability of Ghanaian manufacturing firms?, *Journal of Advanced Studies in Finance*, 22-33