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Research Article

THE INFLUENCE OF EFFICIENT MANAGEMENT OF WORKING CAPITAL ON THE PROFITABILITY OF INDIAN PHARMACEUTICAL COMPANIES: A CASE STUDY

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A B S T R A C T

Effective working capital management is integral to our business, especially within the pharmaceutical industry. The present study aims to evaluate the impact of efficient working capital Management on profitability of selected ten pharmaceutical Companies. For this purpose, the researchers' have focused on top ten Indian pharmaceutical companies. Secondary data were collected from the annual report of the selected companies, covering the fiscal year 2013-14 to 2022-23. The study reveal that Working capital ratio has a negative impact on company's profitability. It means that excess maintain working capital leads to lower profitability of companies.

INTRODUCTION

Working capital management is vital component for financial management, given it impacts on a company's day-to-day operations and overall financial health. It involves the effective management of short-term assets and liabilities to ensure smooth and continual business operations. Working capital represents the difference between a company's current assets and current liabilities, reflecting the resources available for meeting short-term task and funding ongoing operational needs. Efficient working capital management is essential for maintaining liquidity, supporting growth initiatives, and minimizing financial risks.

Effective management of working capital is essential for ensuring unhindered flow of operation and maintaining sound financial health across all sectors. Particularly in industries such as pharmaceuticals, where substantial time and financial investment is required for research & development, and Products manufacturing.

After India became independent in 1947, the pharmaceutical industry changed a lot. It went from being small to becoming a big player in the world. The government made new rules, technology got better, and the market changed, all supporting the industry to flourish. The post-independence period in India witnessed significant step in various sectors, including the pharmaceutical industry. With the establishment of the country's independence in 1947, the pharmaceutical sector face a transformation, marked by the growth of local pharmaceutical companies and a focus on self-reliance in drug manufacturing.

During this era, working capital management played a crucial role in shaping the track of the Indian pharmaceutical industry. As companies expanded their operations to meet the growing demand for healthcare products, effective management of working capital became imperative for sustaining operations and growth. In this context, the present study aims to investigate the relationship between the working capital ratio and the profitability of selected pharmaceutical companies in India.

REVIEW OF LITERATURE

Hidayat, I., & Dewi, F. O. S. (2023). The main purpose of this study is to analyze the impact of liquidity, leverage, and working capital turnover on profitability in coal mining companies listed on the Indonesia Stock Exchange from the period of 2017 to 2020. The study reveals that working capital turnover have a significant effect on profitability.

Dash, S. R., Sethi, M., & Swain, R. K. (2023). The purpose of this paper is to examine the impact of working capital management (WCM) on profitability under different financial conditions. From the study the researcher observed that an inverted U-shaped relationship between working capital and profitability in all financial conditions and working capital policy.

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Nasser A. Alsulayhim (2019) in their study on "The Relationship between Working Capital Management and Profitability" examined the relation between working capital management (WCM) and the profitability of non-financial companies listed on the Stock Exchange of Saudi Arabia. The results of this study showed a statistically significant negative relationship betweenRCP and profitability.

Kaharuddin and Mazlan (2018) highlight the significance of working capital management on profitability for Bumiputera-controlled companies in Malaysia. Their findings underscore the importance of optimizing cash conversion cycles and improving asset management efficiency to enhance financial performance. They also advocate for policy and regulatory interventions to address existing challenges and maximize profitability in these firms.

Kasiran, F. W., Mohamad, N. A., & Chin, O. (2016) analyzed working capital management efficiency in 24 SMEs in Malaysia using data from 2010-2013. They employed three indexes (PIWCM, UIWCM, EIWCM) and found the companies were less efficient in managing working capital during the period.

Malik, Z. U., & Iqbal, A. (2012) examined the impact of working capital management on profitability in Pakistan's sugar industry (1999-2009). They found that longer accounts receivable, accounts payable, and inventory days correlated negatively with net operating profit, indicating inefficient working capital management.

Arshad, Z., & Gondal, M. Y. (2013) Arshad & Gondal (2013) examined the impact of working capital management on profitability in Pakistan's cement industry, using quantitative methods anddata from 21 listed companies from 2004 to 2010. They found a significant negative correlation between working capital management and firm profitability.

Gill, A., Biger, N., & Mathur, N. (2010). Investigate the relationship between working capital management and profitability of in United States. The researcher takes 88 American firms as a sample listed on New York Stock Exchange for a period of three years, from the year 2005 to 2007. From the study the researcher observed that statistically significant relationship between the cash conversion cycle and profitability, measured through gross operating profit.

Dong, H. P., & Su, J. T. (2010). In this study the researcher tries to investigates the relationship between the working capital management and profitability in Vietnam. For conducting this study,the research had collected secondary data from Vietnam stock exchange for the period of 2006 to 2008. The study reveals that there is a strong negative relationship between profitability, measured through gross operating profit, and the cash conversion cycle.

Praveena, S., & Mahendran, K. (2013). This research based on to check the efficiency of working capital management in sugar sector in India. The used three indices to check the effectiveness of the companies that is Performance index, Utilization index and Efficiency index, for the period of 2007 to 2012. The study reveals that sugar sector was performing well in this period.

RESEARCH GAP

After reading all the literature that I have mentioned above, it is found that not much more comprehensive study was done on Indian Pharmaceuticals industry. This research will contribute valuable information not only for companies and but also for stakeholders. Current research can help to guide the future studies.

OBJECTIVES OF THE STUDY

The primary objective of this study is to assess the relationship between working capital management and profitability of selected companies in Indian Pharmaceuticals Industries.

RESEARCH HYPOTHESIS

Ho: There is no significant impact of working capital ratio on profitability.Ha: There is significant impact of working capital ratio on profitability.

RESEARCH METHODOLOGY

Sample Size: Top ten pharmaceuticals' companies as per market capitalization that represent theIndian Pharmaceuticals industry.

Sample Period: Ten years data were collected from the 2013-14 to 2022-23.

Source of Data: The data used for this study is from secondary source on working capital andprofitability, to analyze their relationship.

Table 1: Correlation Analysis

column1	working capital ratio	profitability
working capital ratio	1	
Profitability	-0.640250465	1

Interpretation:

Table 1, Shows the correlation between the Working Capital Ratio and Profitability. The Working Capital Ratio measures a company's short-term financial health, while Profitability reflects its ability to generate earnings.

The correlation coefficient between the Working Capital Ratio and Profitability is -0.640, indicating a moderate negative relationship between these two financial metrics. In simpler terms, as the Working Capital Ratio increases, Profitability tends to decrease, and vice versa. This suggests that there is a noteworthy connection between a company's short-term financial position and its overall profitability. This insight can be valuable for researchers and decision-makers of the companies in understanding the interplay between liquidity and earnings in a business context.

Interpretation: Table 2

- The regression analysis shows that the independent variable, Working Capital Ratio, has a significant impact on the dependent variable, Profitability, based on the p-value and t- statistic.
- The coefficient for Working Capital Ratio is -8.076, with a t-statistic of -8.26 and a very low p-value (7.43E-13). This suggests that the Working Capital Ratio has a highly significant negative effect on Profitability.
- The negative coefficient implies that, on average, as the Working Capital Ratio increases by one unit, Profitability decreases by approximately 8.076 units.

- The results indicate that the Working Capital Ratio is a statistically significant predictor ofProfitability. The negative coefficient suggests that an increase in the Working Capital Ratio is associated with a significant decrease in Profitability. Both the intercept and the coefficient for Working Capital Ratio have very low p-values, reinforcing the statistical significance of these findings.

Table 2 Regression Analysis and Hypothesis Testing

Regress ion Statistics	**Column1**	**Column2**	**Column3**	**Column4**	**Column5**	**Column6**	**Column7**	**Column8**
Multiple R	0.642674601							
R Square	0.413030643							
Adjusted R Square								
	0.406979412							
Standard Error								
	1.392326698							
Observations	99							

ANOVA							
df	SS		MS			F	Significance F
1	132.3185946		132.3185946		68.25564541		7.43E-13
97	188.0416426		1.938573635				
	98	320.3602372					

Regression Residual Total	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept			19.988979			4.151835		
	3.776831081	0.188945667	57	3.61E-36	3.401826244	92	3.4018262	4.151835918
			- 8.2616974			- 6.136085		
			9			5		
0.080162457	- 8.076260816	0.977554652		7.43E-13	- 10.01643615		- 10.016436	-6.13608548

Table 3 Descriptive statistics

Working Capital Ratio	**Column1**	**Profitability**	**Column2**
Mean	2.7203253	Mean	0.1293783
Standard Error	0.1800482	Standard Error	0.0143233
Median	2.1866894	Median	0.1336348
Mode	2.5655711	Mode	#N/A
Standard Deviation	1.800482	Standard Deviation	0.1432334
Sample Variance	3.2417355	Sample Variance	0.0205158
Kurtosis	7.4588432	Kurtosis	31.39569
Skewness	2.4844449	Skewness	-4.1623559
Range	10.258245	Range	1.4219174
Minimum	0.7098444	Minimum	-0.940786
Maximum	10.968089	Maximum	0.4811314
Sum	272.03253	Sum	12.937825
Count	100	Count	100

CONCLUSION

The analysis confirms a statistically significant relationship between the working capital ratio and profitability in the selected pharmaceutical companies in India. Approximately 41.30% of the variation in profitability can be attributed to changes in the working capital ratio. The negative coefficient suggests that maintaining a higher working capital ratio may negatively impact profitability, emphasizing the need for efficient working capital management. Findings contribute valuable insights for financial decision-makers in the pharmaceutical sector, aiding in optimizing working capital for enhanced profitability.

RECOMMENDATIONS AND FUTURE RESEARCH

- Financial managers should consider balancing working capital efficiency and profitability to ensure optimal financial performance.
- Further research could explore industry-specific factors influencing the relationship and validate

findings across a larger sample or different time periods.

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