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A Study on Estimation of Working Capital Management and Its Imapact on Profitability at Tristar Formulation Pvt. Ltd Puducherry

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ABSTRACT:
The study, "Estimation of Working Capital Management and Its Impact on Profitability," delves into the critical relationship between efficient working capital management and profitability in Tristar Formulations Pvt. Ltd., a pharmaceutical company in Puducherry. Working capital management, which involves optimizing current assets and liabilities, is vital for ensuring liquidity, operational efficiency, and financial stability. This research analyzes gross working capital components, trends in the schedule of changes in working capital, and the firm's overall financial performance using tools such as ratio and regression analysis. Key findings highlight the challenges of maintaining liquidity and the significant impact of working capital inefficiencies on profitability metrics like return on assets (ROA) and return on equity (ROE). The study underscores the pharmaceutical industry's unique financial demands, including inventory management and credit control. Recommendations focus on improving working capital cycles, enhancing cost management, and optimizing financial strategies to achieve sustainable growth and profitability for Tristar Formulations Pvt. Ltd.

Keywords: Working Capital Management, Return on equity, Return on asset

1. INTRODUCTION:

Working capital management is a cornerstone of financial management, crucial for optimizing a company's short-term resources and ensuring liquidity and operational efficiency. This study, titled “A Study on Estimation of Working Capital Management and Its Impact on Profitability,” examines how working capital influences the profitability of Tristar Formulations Pvt. Ltd., Puducherry. By analyzing gross working capital, the Schedule of Changes in Working Capital, and using tools like ratio and regression analysis, the research evaluates the firm’s financial performance and identifies areas for improvement. Focusing on the pharmaceutical sector's unique challenges, the study provides actionable insights to optimize financial operations, balance liquidity and profitability, and achieve sustainable growth, offering strategies that strengthen Tristar’s financial position and serve as a reference for similar industries.

1.1 OBJECTIVES OF THE STUDY

- To study the components of gross working capital
- To analyze impact of working capital on profitability

2. REVIEW OF LITERATURE

Rajni Chaudhary (2023): This study found a negative relationship between the cash conversion cycle (CCC) and EBIT, suggesting that longer working capital cycles reduce profitability. It highlights that improving the working capital cycle enhances resource use, leading to higher profitability.

Aldubhani et al. (2021): The study found that shorter collection periods and CCC positively impacted profitability, while longer inventory turnover and accounts payable periods were linked to better financial performance, using regression analysis to measure various working capital components.

Farhan et al. (2021): The study on Indian pharmaceutical firms highlighted that reducing the CCC and efficient working capital management practices improve profitability, with different strategies required for firms of varying sizes.

Sorin Gabriel Anton & Anca Elena Afloarei Nucu (2021): The research revealed a non-linear, inverted U-shaped relationship between WCM and profitability, where optimal working capital management increases profitability, but excessive investment reduces returns.

Mian Sajid Nazir & Talat Afza (2020): This study analyzed aggressive working capital management strategies and found that they boost profitability but can harm liquidity and investor confidence if taken to extremes.

3. RESEARCH METHODOLOGY

3.1 Research Methodology

The research methodology outlines the systematic approach used to gather and analyze data to answer research questions or test hypotheses. This section includes the research design, data collection methods, and analysis procedures, ensuring the reliability and validity of the findings.

3.2 Tools Used for Data Analysis

The data analysis employs several financial tools:

1. **Components of Gross Working Capital**: This includes cash, accounts receivable, inventory, and short-term loans.
2. **Ratio Analysis**: Involves profitability and working capital ratios to assess financial performance.
3. **Regression Analysis**: A statistical tool to examine the relationship between dependent and independent variables.

4. DATA ANALYSIS AND INTERPRETATION

4.1 COMPONENTS OF GROSS WORKING CAPITAL

TABLE 4.1.1

(Rs. In Crore)

CUURENT ASSETS	2019	2020	2021	2022	2023
Inventories	32.27 (36.83%)	39.31 (43.15%)	50.03 (43.23%)	44.68 (41.81%)	50.62 (42.94%)
Trade Receivables	41.36 (47.20%)	43.59 (47.85%)	48.63 (42.01%)	50.10 (46.89%)	47.20 (40.05%)
Cash And Cash Equivalents	6.61 (7.55%)	0.44 (0.48%)	1.51 (1.30%)	0.89 (0.83%)	5.38 (4.56%)
Short Term Loans And Advances	7.36 (8.42%)	7.77 (8.52%)	15.58 (13.41%)	11.16 (10.47%)	14.69 (12.45%)
Total	**87.6**	**91.11**	**115.7**	**106.83**	**117.89**

(Source : Secondary Data)

INFERENCE

The above table infers that trade receivables are the largest part of current assets, though they have varied over the years. Inventories grew steadily except for a small drop in 2022, while cash reserves were unstable but improved slightly in 2023. Short-term loans and advances have steadily increased, becoming more important in the company's assets

4.2 RATIOS ANALYSIS

4.2.1 CURRENT RATIOS

Current ratios = Current Asset / Current Liabilities

TABLE 4.2.1

YEAR	CURRENT ASSET	CURRENT LIABILITIES	CURRENT RATIO
2019	87.6	56.93	1.54
2020	91.1	66.73	1.37
2021	115.7	95.25	1.21
2022	106.84	74.51	1.43
2023	117.87	98.27	1.2

INFERENCE: The above table infers that the company's liquidity is gradually declining, with the current ratio decreasing from 1.54 in Year 1 to 1.20 in Year 5, raising concerns about potential liquidity risks. Despite ratios above 1, the downward trend suggests the need for improved asset management and a review of rising liabilities.

4.2.2 WORKING CAPITAL TURNOVER RATIO

Working capital turnover ratio = Revenue from operation / working capital

TABLE 4.2.2

YEAR	REVENUE FROM OPERATION	WORKING CAPITAL	WORKING CAPITAL TRUNOVER RATIO
2019	198.74	19.62	10.13
2020	279.2	32.32	8.64
2021	329.82	20.44	16.14
2022	349.86	24.38	14.35
2023	352.97	30.67	11.51

INFERENCE: The above table infers that the company has generally maintained strong operational efficiency in generating revenue from working capital, with the working capital turnover ratio consistently above 10. Despite fluctuations, the ratio's peak in 2021 and overall performance indicate effective resource utilization, though there was a slight decrease in efficiency in 2023.

4.2.3 GROSS PROFIT MARGIN

Gross Profit Margin = (Revenue−COGS/ Revenue)×100

TABLE 4.2.3

YEAR	REVENUE	COST OF GOODS SOLD	GROSS PROFIT	GROSS PROFIT MARGIN
2019	198.74	132	66.74	33.58%
2020	279.2	185.22	93.98	33.67%
2021	329.82	223.02	106.8	32.39%
2022	349.86	229.95	119.91	34.28%
2023	352.97	236.2	116.77	33.08%

INFERENCE: The above table infers that while the company has experienced steady revenue growth and rising gross profit, the slight decline in gross profit margin in 2023 suggests potential challenges in controlling production costs or pricing strategies. This trend warrants attention to ensure continued profitability.

4.3 REGRESSION

HO: There is no impact of working capital on profitability
H1: There is impact of working capital on profitability

TABLE 4.3.1
THE TABLE SHOWING REGRESSION

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.541[a]	.292	.056	.181
a. Predictors: (Constant), WCR				

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.168	.369		-.456	.679
	WORKING CAPTIAL TRUNOVER RATIOS	.033	.030	.541	1.113	.347
a. Dependent Variable: ROE						

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.544[a]	.296	.061	.1029120
a. Predictors: (Constant), WCR				

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.123	.209		-.586	.599
	WORKING CAPTIAL TRUNOVER RATIOS	.019	.017	.544	1.123	.343

a. Dependent Variable: ROA

INFERENCE: The regression analysis inferences that , the null hypothesis (H_0: There is no impact of working capital on profitability) is accepted, as the p-values for working capital turnover in both models predicting ROE and ROA are greater than 0.05, indicating that the relationship between working capital turnover and profitability is not statistically significant. Although the coefficients for working capital turnover are positive, suggesting a potential positive association, the lack of statistical significance means that this relationship is not reliable. Therefore, the alternative hypothesis (H_1: There is an impact of working capital on profitability) is rejected. The low R-squared values further suggest that working capital turnover alone explains only a small portion of the variation in profitability, implying that other factors are more influential.

5. FINDINGS

- The current ratio dropped from 1.54 in 2019 to 1.20 in 2023, with quick ratios consistently below 1, indicating liquidity challenges and reliance on inventory.
- Net working capital declined significantly due to rising short-term borrowings, increasing financial risks and operational funding struggles.
- Profit margins and returns fell sharply, with net profit margin at 0.10% in 2023 and ROA dropping from 27.97% to 0.28%, reflecting poor cost control and inefficiencies.
- Slower inventory and receivables turnover in 2023 pointed to unsold goods and delayed payments, while declining payable turnover strained supplier relationships.
- Regression analysis revealed poor working capital management negatively impacted profitability, highlighting its critical role in financial performance**.**

6. SUGGESSTION

1. Improve liquidity by reducing short-term liabilities, maintaining optimal cash balances, and tightening control over inventory and receivables using forecasting tools.
2. Enhance profitability by addressing cost inefficiencies, optimizing pricing strategies, renegotiating supplier contracts, and implementing lean management practices.
3. Strengthen financial performance by prioritizing high-return investments, divesting underperforming assets, and shortening the cash conversion cycle through accelerated collections and streamlined payments.
4. Build stronger supplier relationships by avoiding payment delays, negotiating better credit terms, and fostering open communication to ensure operational continuity.
5. Reduce reliance on short-term borrowings by exploring alternatives like invoice financing or long-term loans, while revisiting financial strategies to enhance shareholder returns.

CONCLUSION

From the study, I conclude that Tristar Formulation has shown recovery in key financial areas, particularly in the net profit ratio for 2023-2024, indicating potential for growth with the right strategies in place. The company has also managed to conserve cash by not paying dividends in the past two years, which reflects a focus on long-term financial stability. However, the rising debt-equity ratio suggests an increasing reliance on debt financing, which elevates financial risk and requires a reassessment of its capital structure. Additionally, the decline in profitability ratios, such as the net profit ratio and operating profit ratio, signals

operational inefficiencies and rising costs that need to be addressed for sustainable growth. Moving forward, improving liquidity and optimizing working capital management will be crucial to ensuring the company can meet its short-term obligations. With focused efforts on cost control and better asset utilization, Tristar has the potential to regain financial strength and profitability in the future.

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