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ANALYSIS OF WORKING CAPITAL EFFICIENCY – A COMPARATIVE STUDY OF SELECTED FMCG AND AUTOMOBILE COMPANIES IN INDIA

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Abstract : Working capital management primarily involves the management of four aspects, receivables, payables, inventory and cash. Investment in working capital has a direct effect on profitability and short-term solvency. Working capital management should ensure proper tradeoff between liquidity and profitability. The present study is an effort to understand the working capital efficiency of selected listed Indian FMCG and Automobile companies. The study employed working capital ratios and efficiency indices. Descriptive research design was undertaken to achieve the study objective. A sample of five listed FMCG and five listed automobile companies was chosen for the research and considered 2020-2024 as study period. The analysis revealed that Godrej in FMCG segment and Tata Motors in automobile segment was scored comparatively better in managing working capital efficiently. The comparison between the sectors showed that automobile sector outperformed FMCG sector in management of working capital during the study period.

IndexTerms **- Operating Cycle, Performance Index, Utilisation Index, Working Capital Efficiency, Working Capital Management, Working Capital Ratios**

I. INTRODUCTION

Liquidity management is one of the key functions of a finance manager. Working capital management primarily involves the management of four aspects, receivables, payables, inventory and cash. Investment in working capital has a direct effect on profitability and short-term solvency. The relationship between working capital requirement and sales growth is direct and positive. Higher the sales require higher investment in current assets to support production requirement. Working capital management should ensure proper tradeoff between liquidity and profitability.

Trade cycle is the vital aspect of working capital management. The relationship between trade cycle and Economic Value Added (EVA) is negative. Longer the trade cycle, lower the economic value added (EVA) and vice versa (Bhatia.P et al., 2024). Quick inventory turnover, speedy collection of receivables and delayed supplier payments contributes positively to firm performance. Managing working capital efficiently results in improved operating performance of business enterprise.

Excessive or inadequate investment in current assets endangers the survival of a company. The working capital requirement of a firm is sensitive to various factors such as nature of business, production policy, operating cycle of business, cost structure to name a few. In a study by Azeem, M. M., & Marsap, A. (2015), it was found that working capital requirements was negatively related to operating cycle, return on assets, amount of debt in capital structure, company size and level of economic activity whereas cashflows from operating activities and sales growth were found to have positive influence on working capital requirements.

The present study has chosen companies from FMCG and Automobile industries as management of working capital is critical in these firms for maximizing shareholders' wealth.

II. LITERATURE REVIEW

This section delineates the studies conducted on linkages between working capital management efficiency and firm performance.

Sofia Johan et a. (2024) performed an analytical study with the objective of examining the relationship between cash conversion cycle (CCC) and firm performance using the dataset from BRICS spanning 2009-19. The study adopted regression technique and found that there exists inverse relationship between the duration of cash conversion cycle and firm performance across all BRICS countries.

Thiago Alvarez, Luca Sensini & Maria Vazquez (2021) undertook a study to test nexus of working capital management and profitability in emerging economy, Argentina. The study took 194 SME manufacturing firms as sample and the time period from 2014-16. The results of fixed effect regression demonstrated the positive relationship between the study variables.

Seth, H., et al. (2020) examined the working capital management efficiency of 563 Indian manufacturing exporting firms using 10 years data ranging from 2008-2018. The results of panel regression demonstrated significant relation between cash conversion cycle (CCC) and leverage, profitability and asset turnover.

Anton, S. G., & Afloarei Nucu, A. E. (2020) investigated the impact of working capital management on Polish listed firms' profitability. The study was conducted on 719 sample firms over the period of 2007-2016. The results of the quantitative study reported that the relationship between working capital management and profitability was inverted U shaped indicating the relationship between the study variables continues positively up to certain point (break-even point) – optimum level, post that the relationship turns negative.

I Hossain, J Alam et al. (2019) analyzed the relationship between liquidity and profitability of cement companies listed in Dhaka Stock Exchange, Bangladesh. The findings revealed that there exists strong and positive relationship between liquidity and profitability. Further, the study also showed that cash conversion cycle has strong negative correlation with profitability ratios of sample companies.

Farrah Wahieda Kasiran et. al (2016) undertook a study to analyze the working capital efficiency of 24 randomly selected Small and Medium Enterprises (SME) firms in Malaysia during 2010-13. The study adopted the Working capital management efficiency index (WCMEI) developed by Bhattacharya in 1997. The analysis revealed that SME firms demonstrated poor efficiency in managing working capital during 2010-13.

III. RESEARCH GAP

There exist numerous studies on examining the relationship between working capital management and profitability. However, only few studies concentrated on analysing the working capital efficiency, particularly in FMCG and automobile sector. Hence the present study is undertaken to find the efficiency of FMCG and automobile firms in managing its working capital.

IV. OBJECTIVES

1. To determine the working capital efficiency of selected Indian FMCG firms
2. To determine the working capital efficiency of selected Indian Automobile Firms
3. To compare the working capital efficiency of Indian FMCG and Automobile firms

V. RESEARCH METHODOLOGY

Descriptive research design was adopted to analyse the working capital efficiency of sample firms. The study relied on secondary data. Financial statements of sample companies were accessed from money control and screener websites. The study also took the help from published research articles for literature review purpose.

5.1Sample Frame

The Study selected sample companies from Indian FMCG and Automobile industry listed in Nifty 100 index.

5.2 Sampling Technique

Convenience sampling technique was adopted to choose the sample for the research.

5.3 Sample Period

Data from the recent 5 years was collected from secondary sources (i.e., from the year 2020 to 2024) as sample.

5.4 Tools & Techniques:

Arithmetic mean and working capital ratios such as current ratio, quick ratio and cash ratios were used to understand the liquidity management. Further to compute the efficiency of working capital management, the study adopted Bhattacharya (1997) proposed Index

Working Capital Efficiency Index (EI_{WCM}) = Performance Index (PI_{WCM}) * Utilisation Index (UI_{WCM})
Where Performance Index (PI_{WCM}) =

$$PI_{WCM} = \frac{I_s \sum_{i=1}^{n} \frac{W_{i(t-1)}}{W_{it}}}{N},$$

Where Is = Sales Index (St/St-1), W=Individual group of current assets and N = number of current asset groups.
Performance index delineates the proportion of investment in current assets in relation to rise in sales. If the proportion of investment in current asserts is greater than rise in sales, then the value of performance index will be less than 1 and vice versa.

Utilisation Index (UI_{WCM}) =

$$\frac{\frac{Total\ Current\ Assets_{t-1}}{Sales_{t-1}}}{\frac{Total\ Current\ Assets_{t}}{Sales_{t}}}$$

Utilisation index indicates what degree the current assets of a firm have been used to generate sales.

VI. DATA ANALYSIS & INTERPRETATION

Working Capital Management – FMCG Companies

Table 6.1: Working Capital Ratios (5Y Average)

Sample Companies	Current Ratio	Quick Ratio	Cash Ratio
ITC	3.22	2.27	0.49
HUL	1.41	1.08	0.45
Dabur	1.51	0.95	0.24
Britannia	1.19	0.89	0.06
Godrej	1.27	0.86	0.17
Average	**1.72**	**1.21**	**0.28**

Source: Researcher computation using data from Money Control

The table above demonstrates the liquidity management of sample FMCG companies. As per standard, companies should maintain current ratio as 2:1, 1:1 for quick ratio and 0.5:1 for cash ratio.

From the above data it can be observed that Dabur in maintaining current ratio, HUL in maintaining quick ratio and ITC in maintaining cash ratio was found comparatively better among the sample FMCG companies. Also, it was found that ITC had high amount of current assets in relation to current liabilities among all the sample FMCG companies indicating high amount of blocked funds, i.e., inefficient resource management.

Table 6.2: Cash Conversion Cycle (5Y Average) in Days

Sample Companies	Days Sales Outstanding	Days Inventory Outstanding	Days Payables Outstanding	Cash Conversion Cycle
ITC	17.8	172.8	67.6	123
HUL	15.6	61.2	150	-73.2
Dabur	26	163.6	181.6	8
Britannia	8.4	47.6	58.2	-2.2
Godrej	36.6	111.6	137.4	10.8
Average	**20.88**	**111.36**	**118.96**	**13.28**

Source: Researcher computation using data from Screener

Cash Conversion Cycle (CCC) also called operating cycle is an important determinant of working capital requirement. Longer the operating cycle higher the working capital requirement for sustaining the business. The analysis in the table revealed that 4 out of 5 sample FMCG companies found to have managed working capital efficiently. Among all the sample companies, ITC had the longer operating cycle during the study period. Britannia was found efficient in managing receivables and inventory. On the other hand, Dabur had delayed longer than other sample FMCGs in making payment to suppliers for the purchases.

Table 6.3: Working Capital Efficiency

Sample Companies	Performance Index	Utilisation Index	Efficiency Index
ITC	0.89	0.97	0.86
HUL	0.90	0.81	0.73
Dabur	0.63	0.80	0.50
Britannia	0.95	1.01	0.96
Godrej	1.75	1.11	1.94
Average	**1.02**	**0.94**	**1.00**

Source: Researcher computation using data from Money Control

The efficiency index of working capital is the product of performance and utilisation indices. Index value greater than 1 indicates efficient performance and less than 1 indicates inefficient performance.

Among all the sample FMCG companies, Godrej was found as best performer and Dabur as most inefficient performer in managing working capital during the financial year 2023-24. Though HUL and Britannia's operating cycle is better managed, due to higher investment in current assets in relation to sales and its under-utilisation resulted in low efficiency score.

Working Capital Management – Automobile Companies

Table 6.4: Working Capital Ratios (5Y Average)

Sample Companies	Current Ratio	Quick Ratio	Cash Ratio
Tata Motors	0.94	0.69	0.26
Mahindra & Mahindra	1.30	1.09	0.18
Maruti Suzuki	0.87	0.65	0.10
Hero Moto Corp	1.74	1.47	0.08
Baja Auto	1.88	1.63	0.12
Average	**1.35**	**1.10**	**0.15**

Source: Researcher computation using data from Money Control

The analysis reveals that Bajaj Auto in maintaining current ratio, Mahindra & Mahindra in maintaining quick ratio and Tata motors in maintaining cash ratio was found comparatively better among the sample Automobile companies during the study period.

Table 6.5: Cash Conversion Cycle (5Y Average) in Days

Sample Companies	Days Sales Outstanding	Days Inventory Outstanding	Days Payables Outstanding	Cash Conversion Cycle
Tata Motors	16.4	73.2	143	-53.4
Mahindra & Mahindra	26.2	88.6	130.6	-15.8
Maruti Suzuki	9.4	21.2	59.6	-29
Hero Moto Corp	25.4	26.4	75	-23.2
Baja Auto	21.8	21	63.4	-20.6
Average	**19.84**	**46.08**	**94.32**	**-28.4**

Source: Researcher computation using data from Screener

Maruti Suzuki was found to have managed receivables and inventory efficiently comparatively better than other sample automobile companies. On the other hand, Mahindra & Mahindra managed payables better than other sample firms. However, it was found that all the sample automobile firms had negative operating cycle during the study period indicating efficient management of working capital.

Table 6.6: Working Capital Efficiency

Sample Companies	Performance Index	Utilisation Index	Efficiency Index
Tata Motors	3.47	1.14	3.96
Mahindra & Mahindra	1.09	1.07	1.16
Maruti Suzuki	0.62	0.61	0.38
Hero Moto Corp	0.99	1.01	1.00
Baja Auto	0.84	1.00	0.84
Average	**1.40**	**0.97**	**1.47**

Source: Researcher computation using data from Money Control

Among all the sample Automobile companies, Tata Motors was found as best performer and Maruti Suzuki as most inefficient performer in managing working capital during the financial year 2023-24. Besides maintained negative operating cycle on an average during the last 5 years, Maruti Suzuki recorded least working efficiency score in 2023-24. This is due to investment in current assets was higher than increase in sales and its underutilization in generating sales.

Comparative Analysis

Table 6.7: Working Capital Ratios (5Y Average)

Sample	Current Ratio	Quick Ratio	Cash Ratio
Automobile Sample Average	1.35	1.10	0.15
FMCG Sample Average	1.72	1.21	0.28

Source: Researcher Computation

Based on the comparative analysis, it can be noticed in the above table that FMCG sector was performed better in maintaining current ratio and cash ratio. Whereas automobile sector performed better in managing quick ratio.

Table 6.8: Cash Conversion Cycle (5Y Average) in Days

Sample Companies	Days Sales Outstanding	Days Inventory Outstanding	Days Payables Outstanding	Cash Conversion Cycle
Automobile Sample Average	19.84	46.08	94.32	-28.4
FMCG Sample Average	20.88	111.36	118.96	13.28

Source: Researcher Computation

In receivables management, on an average both the sectors performed similarly. Whereas with respect to management of inventory and payables, FMCG sector was found comparatively poor during the study period.

Table 6.9: Working Capital Efficiency

Sample Companies	Performance Index	Utilisation Index	Efficiency Index
Automobile Sample Average	1.40	0.97	1.47
FMCG Sample Average	1.02	0.94	1.00

Source: Researcher Computation

In management of current assets, the comparative analysis of both the sectors revealed that automobile sector outperformed FMCG sector in performance and efficiency indices. However, there is no significant difference between FMCG and automobile sectors in utilising current assets in generating sales.

VII. FINDINGS OF THE STUDY

1. Among the sample FMCG companies, except ITC, all other sample FMCG companies have better managed its operating cycle during the study period.
2. With respect to working capital efficiency, Godrej displayed top efficiency and Dabur displayed least efficiency among the sample FMCG companies during the financial year 2023-24.
3. All the sample Automobile companies have demonstrated better management of its operating cycle during the last five years.
4. With the working capital efficiency indices values greater than 1, Tata motors has managed its working capital efficiently in generating sales. On the other hand, Maruti Suzuki with comparatively less index values displayed poor efficiency in managing its current assets during the study period.
5. From the comparatively analysis of automobile and FMCG companies, it was found that automobile sector performed better than FMCG sector.

VIII. CONCLUSION

The efficiency index of working capital management depends on investment in current assets in relation to sales and its utilisation. Based on the analysis of sample FMCG and Automobile companies, the study concludes that majority of sample companies managed shorter or negative operating cycle, however failed in attaining efficiency. The major reason is due to higher investment in current assets in relation to sales and its underutilization in generating sales. The comparative analysis showed that automobile sector scored better in working capital efficiency than FMCG sector.

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