Impact of Working Capital Management on Profitability of the Selected Listed FMCG Companies in India

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ARTICLE INFO	ABSTRACT
Keywords: Working Capital Management, Profitability, Fixed Effect Model, Random Effect Model, Hausman Test *Kata kunci*: *Manajemen Modal Kerja,* *Profitabilitas,* *Model Efek Tetap,* *Model Efek Acak,* *Tes Hausman*	Working capital management plays a vital role in the success of businesses because of its effect on profitability and liquidity. The purpose of this study is to examine the relationship and the efficiency of the working capital management strategies of FMCG Company in India. The study used secondary data collected from all the fifteen listed FMCG Company covering the period from 2013-2017. Using panel data analysis, the study finds a significantly positive and negative relationship between profitability and working capital management. Therefore, efficient management of working capital for FMCG Company not only has a positive relationship with profitability but significantly impacts on such firm's profitability.
	SARI PATI
	Manajemen modal kerja memainkan peran penting dalam keberhasilan bisnis karena pengaruhnya terhadap profitabilitas dan likuiditas. Tujuan dari penelitian ini adalah untuk menguji hubungan dan efisiensi strategi manajemen modal kerja perusahaan FMCG di India. Penelitian ini menggunakan data sekunder yang dikumpulkan dari lima belas perusahaan FMCG yang terdaftar pada periode 2013-2017. Dengan menggunakan analisis data panel, penelitian ini menemukan hubungan positif dan negatif yang signifikan antara profitabilitas dan manajemen modal kerja. Oleh karena itu, manajemen modal kerja yang efisien untuk perusahaan FMCG tidak hanya memiliki hubungan positif dengan profitabilitas tetapi secara signifikan berdampak pada profitabilitas perusahaan tersebut.
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INTRODUCTION

In the current perspective of the competitive market short-term assets and liabilities are important components of total assets and need to be analyzed carefully at the side of long-term assets and liabilities. Management of this short-term assets and liabilities are subject to inspect carefully from the time because working capital management plays a vital role for the firm's profitability and risk as well as its value investors all over the world lay their money in a business to get some return on their investment in any form of the business. In small and medium businesses like proprietorship and partnership owners have direct or indirect control over the management of the business so, they themselves are responsible for all the profit and loss. On the other hand in the large multinational companies the management of the company manages the affairs of the company on behalf of owners but owners want management to take such decisions which will give positive gesture to market, increase the value of the firm, develop profitability and maximize holding period return. The importance of working capital management can't be starved of in any organization.

A firm should have adequate level of liquidity because excessive liquidity results into idle funds which do not create any value. On the other hand low level of liquidity might result into the lack of resources to meet financial obligations hence creates financial distress. The central point or the focus of working capital policy is on the liquidity of current assets to meet the short term or current liabilities. Liquidity gives the true idea of firm's position to meet its maturing liabilities. A firm should have sufficient level of liquidity because excessive liquidity results into idle funds which do not create any value. Another point is that low level of liquidity might result into the lack of resources to meet financial obligations hence creates financial distress. Most firms have defined their optimal level of working capital, which will create value for them. For such firms working capital is a part of their financial management

strategy. For instance in order to increase their sales different firms uses different credit policies. Strict credit policy will result in the decrease in the sale therefore companies prefer to have such a policy which facilitates the customers and the objectives of the firm. Furthermore such a credit is inexpensive source of finance for the customers rather than borrowing money from any financial institution thus it increases the sale. This credit sale system needs more investment in the account receivables. Some company offers some kind of discount on early payments, which helps to convert account receivables into cash. On the other hand in order to fulfill high sales company need to have sufficient supply and an optimal level of inventory. Since company has invested some money in the account receivables it prefers to buy raw material on the credit terms which match the credit period of account receivables. By following such credit policies companies can create demand and have sufficient supply to meet the demand, it will increase their profitability, but at the same time the level of current assets and current liabilities will increase.

The total investment in working capital will increase which can disturb the balance between cash inflow and cash outflow. So, companies need to have a strategy, which will help them to make the cash conversion cycle efficient. Many researchers use cash conversion cycle as a tool to measure the effectiveness and aggressiveness of working capital policy. Cash conversion cycle is a time span from the disbursement of cash to supplier till the receipt of payment from the customer. Large time span increase the profitability by increasing the level of sale but at the same time it needs larger investment in working capital. The effect of this increased profitability can disappear if the cost of higher investment in working capital surpasses its benefits. Thus, the main objective of working capital policy is to maintain such a level of cash inflow and cash outflow which will create the balance between each component of working capital. Without such a balance it is impossible

to move or bring business operation on a right track. Furthermore it required consistent and continuous monitoring of component of working capital in order to achieve such a balance but if finance executives failed to monitor and manage it well then they use most of their time to fetch unfavorable level of short-term assets and liabilities to the favorable or optimal level. Researchers all over the world alert on this issue and discuss it in detail in the perspective of many countries. Researchers from developing countries consider working capital as a life blood of any organization and so that most of the research on the topic had been carried out in the developing countries. As we belong to a country where researchers consider the working capital as the most important factor that decide the profitability. By keeping this thing in our mind, it will focus on the Fast Moving Consumer Goods (FMCG) companies and will try to find out the relationship between profitability and working capital policy.

Literature Review

Some important relevant studies are mentioned which have been reviewed before the following study are taken up. Afeef (2011) prepare an empirical relationship between Working Capital Management and Profitability for Small and Medium-sized firms listed in Karachi Stock Exchange. Management on Profitability of SMEs listed in Karachi Stock Exchange. Researcher recommended that working capital indicators impact on profitability of firms under study. Ahmed et al. (2017) scan the impact of different components of working capital management on profitability of the Bangladeshi textile companies. The researchers reveals that statistically significant relationship between working capital management and profitability of the Bangladeshi textile companies and also current ratio and current liabilities to total asset has most significant impact on profitability of textile companies in Bangladesh. Akoto et al. (2013) inspect the relationship between working capital management practices and profitability of listed manufacturing firms in

Ghana. The study noticed a significantly negative relationship between profitability and debtors collection periods but cash conversion cycle, current asset ratio, firm size, and current asset turnover positively influence the profitability.

Arshad and Gondal (2013) look at the impact of the relationship between working capital management and profitability of Pakistan cement sector. For this study, researcher concludes that the significant negative relationship between working capital management on profitability of the firms. Azeez et al. (2016) evaluates the effect of working capital on the profitability of listed Nigerian conglomerate companies. The panel data analysis reveals that the relationship between return on equity with debtors collection period, cash conversion cycle, inventory turnover ratio is significant statistically. Iqbal et al. (2014) analyzes the relationship between working capital and profitability. The research reveals negative relationship between net profit and debtor's collection period, inventory turnover period, creditors turnover period and cash conversion cycle for a sample of Pakistani firms listed on Karachi stock exchange.

Another observation is that inventory shows the positive relationship with working capital management has a positive effect on firm's probability. Kalaivani and Jothi (2017) investigate the relationship between working capital management components and performance of the firms by using dynamic panel data analysis. The researcher reveals debtor turnover ratio, inventory turnover ratio are significant impact on profitability. Kandpal and Kavidayal (2013) scrutinize the correlation between liquidity, profitability and return on investments of ONGC. Researchers conclude that working capital management is essential as it might have a direct impact on profitability and liquidity. Kasozi (2017) look at the trends in working capital management and its impact on the financial performance of listed manufacturing firms on the Johannesburg Securities Exchange. The researcher exposed that

the debtors collection period and the creditors payment period are negative and statistically significant for profitability, implying that firms which efficiently manage their debtors and those that pay their creditors on time perform better than those that do not. Napompech (2012) scrutinize the property of working capital management on profitability.

The investigation discovered a negative relationship between the gross profits and inventory turnover ratio and debtors collection periods and pointed that the industry characteristics have an impact on gross operating profits. Palombini and Nakamura (2011) examining the key factors of working capital management by exploring the internal variables of a 2,976 Brazilian public companies from 2001 to 2008 and reveals that debt level, size and growth rate can affect the working capital management of companies. Quang (2017) investigate an opposite impact of inventory turnover ratio and debtors turnover ratio, current ratio and debt on equity. Researcher advocate that airlines need to rationalize supplies of aircraft spare parts inventory increased the ability to recover cash from debtors and strengthen relationships with suppliers in order to improve efficiency of working capital management to improve business efficiency. Rehman and Anjum (2013) examines the impact that the running assets management on the profitability of Pakistan cement sector. The analysis comments that there is inverse and positive association between working capital management and profitability in cement industry of Pakistan.

Thakur and Mukit (2017) probing the impact of working capital financing on profitability from the perspective of a developing country Bangladesh. The researchers looks a negative impact of working capital financing policy on return on assets. Valipour et al. (2012) examine profitability, operating cash flow, company size, sale growth, current ratio, quick ratio and debt ratio of 83 firms listed in Tehran Stock Exchange for the

period of 2001 to 2010. The study reveals that profitability, operating cash flow, company size, sale growth and debt ratio affect the company's working capital management. Vural et al. (2012) look into the relationship between working capital management components and performance of the firms. The results exhibit that firms can increase profitability measured by gross profit by curbing debtors collection periods and cash conversion cycle and also noticed that leverage as a control variable has a significant negative relationship with firm value.

Objectives of the Study
The main objective of the study is
i) To assess and evaluate the efficiency of the working capital management strategies that FMCG Company was employing.
ii) To establish the relationship between working capital management and business profitability for FMCG company.

Hypotheses of the Study
In conformity with the above stated objectives, the following testable null hypotheses have been formulated:

H_1: There is no significant relationship Return on Investment (ROI) with different working capital management variables.

H_2: There is no significant relationship Return on Assets (ROA) with different working capital management variables.

H_3: There is no significant relationship Return on Equity (ROE) with different working capital management variables.

Research Design
Research design means a way to systematically solve the research problem. It comprises a series of steps that are taken together to provide a roadmap for carrying out a research project.

Sample size and selection: The empirical work is based on a study of impact of working capital management on profitability in the FMCG

companies in India. For the purpose of analyzing the contribution of the selected area, the study has been made on those FMCG Company which are listed in the National Stock Exchange (NSE). Hence, the sample size is fifteen and the study period is from 2013 to 2017. The name of the fifteen selected companies is given below:

1. Hindustan Unilever Ltd.
2. ITC
3. Nestlé India
4. Dabur India Ltd
5. Asian Paints (India)
6. Britannia Industries Ltd.
7. Marico Industries Ltd.
8. Colgate-Palmolive (India) Ltd.
9. Gillette India Ltd.
10. Godfrey Phillips
11. Johnson & Johnson
12. Wipro
13. Godrej Consumer Products Ltd
14. Emami
15. Pidilite Industries

Data Type: The entire study is based on the secondary/quantitative data collected from the Accord database.

METHODS

Based on the objectives of the study, the researcher applied the correlation and panel data regression analysis. For this study 3 dependent variables is taken namely ROI, ROA and ROE and 13 independent variables taken namely Current Ratio, Quick Ratio, Debt Equity Ratio, Gross Profit Ratio, Net Profit Ratio, Inventory Turnover Ratio, Debtors Turnover Ratio, Fixed Assets Turnover Ratio, Total Assets Turnover Ratio, Working Capital Turnover Ratio, Dividend Payout Ratio, Cash Conversion Cycle And Firm Size.

RESULTS AND DISCUSSIONS

The findings of the study are presented in Tale1.

Table 1. Correlation Matrix

		Current Ratio	Quick Ratio	Debt Equity Ratio	Gross Profit Ratio	Net Profit Ratio	Inventory Turnover Ratio	Debtors Turnover Ratio	Fixed Assets Turnover Ratio	Total Assets Turnover Ratio	Working Capital Turnover Ratio	Dividend Per Share	Cash Conversion Cycle	Firm Size
Current Ratio	Pearson Correlation	1												
	Sig. (2-tailed)													
	N	75												
Quick Ratio	Pearson Correlation	.673**	1											
	Sig. (2-tailed)	0												
	N	75	75											
Debt Equity Ratio	Pearson Correlation	-0.157	-0.006	1										
	Sig. (2-tailed)	0.177	0.961											
	N	75	75	75										
Gross Profit Ratio	Pearson Correlation	0.059	0.099	-.268*	1									
	Sig. (2-tailed)	0.613	0.399	0.02										
	N	75	75	75	75									

		1	2	3	4	5	6	7	8	9	10	11	12	13
Net Profit Ratio	Pearson Correlation	0.121	.240*	-.356**	.826**	1								
	Sig. (2-tailed)	0.302	0.038	0.002	0									
	N	75	75	75	75	75								
Inventory Turnover Ratio	Pearson Correlation	.298**	.727**	0.083	0.174	.232*	1							
	Sig. (2-tailed)	0.009	0	0.481	0.136	0.045								
	N	75	75	75	75	75	75							
Debtors Turnover Ratio	Pearson Correlation	-.478**	-.363**	0.022	-0.15	-0.179	-0.162	1						
	Sig. (2-tailed)	0	0.001	0.849	0.212	0.125	0.165							
	N	75	75	75	75	75	75	75						
Fixed Assets Turnover Ratio	Pearson Correlation	0.042	0.053	-0.046	-0.02	-0.131	0.057	-0.032	1					
	Sig. (2-tailed)	0.723	0.649	0.695	0.839	0.262	0.626	0.787						
	N	75	75	75	75	75	75	75	75					
Total Assets Turnover Ratio	Pearson Correlation	-.418**	-.312**	0.014	-0.15	-.318**	-0.125	.311**	.404**	1				
	Sig. (2-tailed)	0	0.007	0.902	0.207	0.005	0.285	0.007	0					
	N	75	75	75	75	75	75	75	75	75				
Working Capital Turnover Ratio	Pearson Correlation	.681**	.801**	-0.056	.320**	.366**	.658**	-.378**	-0.126	-.417**	1			
	Sig. (2-tailed)	0	0	0.631	0.005	0.001	0	0.001	0.28	0				
	N	75	75	75	75	75	75	75	75	75	75			
Dividend Per Share	Pearson Correlation	-.261*	-0.196	-0.021	-0.1	-0.15	-0.096	.551**	-.278*	0.095	-0.172	1		
	Sig. (2-tailed)	0.024	0.092	0.857	0.416	0.199	0.413	0	0.016	0.418	0.141			
	N	75	75	75	75	75	75	75	75	75	75	75		
Cash Conversion Cycle	Pearson Correlation	.686**	.522**	0.114	0.038	0.094	.459**	-.555**	-0.064	-.445**	.725**	-.352**	1	
	Sig. (2-tailed)	0	0	0.331	0.747	0.42	0	0	0.585	0	0	0.002		
	N	75	75	75	75	75	75	75	75	75	75	75	75	
Firm Size	Pearson Correlation	-0.038	0.19	-.256*	.609**	.564**	.451**	0.019	-0.026	0.122	.373**	0.009	0.024	1
	Sig. (2-tailed)	0.749	0.103	0.027	0	0	0	0.871	0.825	0.298	0.001	0.937	0.839	
	N	75	75	75	75	75	75	75	75	75	75	75	75	75

Source: Compiled by Author
** Correlation is significant at the 0.01 level (2-tailed).
 * Correlation is significant at the 0.05 level (2-tailed).
From the above correlation matrix shows that there is no multi-colinearity in independent variables as all the coefficient value is less than the 0.80.

Table 2. Regression Results: Dependent variable –Return on Investment (ROI)

Independent Variables	Fixed Effect Model Coefficient (p value)	Random Effect Model Coefficient (p value)	Selected model (Hausman test)
Current Ratio	5.61948 (0.502)	18.50548 (0.030)	
Quick Ratio	6.29879 (0.465)	-6.48427 (0.340)	
Debt Equity Ratio	-26.83007 (0.004)	-5.08513 (0.620)	
Gross Profit Ratio	1.63080 (0.000)	-0.10481 (0.745)	
Net Profit Ratio	1.83381 (0.002)	1.79197 (0.000)	
Inventory Turnover Ratio	-0.00932 (0.920)	-0.05208 (0.556)	
Debtors Turnover Ratio	-0.00190 (0.988)	-0.22514 (0.000)	Chi-square = 7.73
Fixed Assets Turnover Ratio	1.24863 (0.417)	0.36505 (0.603)	p value (0.8606)
Total Assets Turnover Ratio	11.56184 (0.000)	14.28442 (0.000)	Random Effect
Working Capital Turnover Ratio	0.06657 (0.624)	0.31192 (0.050)	Model
Dividend Payout Ratio	0.02076 (0.850)	0.40780 (0.000)	
Cash Conversion Cycle	-0.06489 (0.339)	-0.22028 (0.013)	
Firm Size	-63.54740 (0.000)	12.55353 (0.004)	
R square	0.2079	0.9236	
F/Chi-square	13.47* (0.000)	737.46* (0.000)	

Source: Compiled by Author

From the Table 2 above, it has been observe that Hausman test prefers the random effect model to the fixed effect model as the p value (0.8606) of the chi-square (7.73) lies above the significance level of 0.05. The value chi-square of the random effect model is 737.46 with p value of 0.000. The model is good fit as the respective p value falls under the significance level of 0.05. In this model, independent variable Return on Investment explains around 92.36% movement of the dependent variables. The coefficients of the random effect model reveal that for change in Net Profit Ratio, Total Assets Turnover Ratio, Dividend Payout Ratio, Firm Size, Current Ratio and Working Capital Turnover Ratio the independent variable Return on Investment positively changes at 1% and 5% level of significance respectively. On the other hand, Debtors Turnover Ratio and Cash Conversion Cycle negatively related with return on investment also statistically significant even at 1% level of significance.

From the Table 3 below, it has been observe that Hausman test prefers the fixed effect model to the random effect model as the p value (0.000) of the chi-square (96.21) lies below the significance level of 0.05. The F-value of the fixed effect model is 4.03 with p value of 0.000. The model is good fit as the respective p value falls under the significance level of 0.05. In this model, independent variable Return on Assets explains around 26.34% movement of the dependent variables. The coefficients of the fixed effect model reveal that for change in Dividend Payout Ratio, Net Profit Ratio, Working Capital Turnover Ratio and Gross Profit Ratio the independent variable Return on Assets positively changes at 1%, 1%, 5%, 10% level of significance respectively.

Table 3. Regression Results: Dependent variable –Return on Assets (ROA)

Independent Variables	Fixed Effect Model Coefficient (p value)	Random Effect Model Coefficient (p value)	Selected model (Hausman test)
Current Ratio	22.25298 (0.859)	-27.67218 (0.799)	
Quick Ratio	29.26326 (0.820)	-165.1034 (0.061)	
Debt Equity Ratio	142.0536 (0.286)	-84.56281 (0.519)	
Gross Profit Ratio	11.02179 (0.068)	5.09547 (0.228)	
Net Profit Ratio	26.60125 (0.008)	-15.44604 (0.015)	
Inventory Turnover Ratio	0.07883 (0.955)	1.33723 (0.232)	
Debtors Turnover Ratio	2.14352 (0.269)	-0.55945 (0.487)	
Fixed Assets Turnover Ratio	-37.07258 (0.111)	0.60649 (0.951)	Chi-square = 96.21 p value (0.000) Fixed Effect Model
Total Assets Turnover Ratio	-4.64015 (0.805)	-14.48507 (0.211)	
Working Capital Turnover Ratio	4.32683 (0.037)	0.60449 (0.767)	
Dividend Payout Ratio	10.31324 (0.000)	7.54871 (0.000)	
Cash Conversion Cycle	-0.32720 (0.776)	2.22971 (0.047)	
Firm Size	213.4366 (0.370)	-4.31948 (0.942)	
R square	0.2634	0.5549	
F/Chi-square	4.03* (0.000)	67.32* (0.000)	

Source: Compiled by Author

Table 4. Regression Results: Dependent variable –Return on Equity (ROE)

Independent Variables	Fixed Effect Model Coefficient (p value)	Random Effect Model Coefficient (p value)	Selected model (Hausman test)
Current Ratio	12.87293 (0.117)	19.10287 (0.012)	
Quick Ratio	1.24646 (0.881)	-8.05399 (0.186)	
Debt Equity Ratio	7.49173 (0.383)	21.0395 (0.022)	
Gross Profit Ratio	0.31883 (0.409)	-0.62518 (0.031)	
Net Profit Ratio	3.19416 (0.000)	2.43488 (0.000)	
Inventory Turnover Ratio	0.01377 (0.878)	-0.01139 (0.886)	
Debtors Turnover Ratio	0.12823 (0.307)	-0.16367 (0.001)	
Fixed Assets Turnover Ratio	1.92707 (0.199)	0.61496 (0.328)	Chi-square = 155.51 p value (0.000) Fixed Effect Model
Total Assets Turnover Ratio	10.37538 (0.000)	11.70344 (0.000)	
Working Capital Turnover Ratio	-0.00398 (0.976)	0.27286 (0.055)	
Dividend Payout Ratio	-0.11543 (0.282)	0.29783 (0.001)	
Cash Conversion Cycle	-0.05451 (0.465)	-0.18370 (0.020)	
Firm Size	-52.27081 (0.001)	7.74037 (0.048)	
R square	0.2134	0.8985	
F/Chi-square	15.87* (0.000)	540.22* (0.000)	

Source: Compiled by Author

From the Table 4 above, it has been observe that Hausman test prefers the fixed effect model to the random effect model as the p value (0.000) of the chi-square (155.51) lies below the significance level of 0.05. The F-value of the fixed effect model is 15.87 with p value of 0.000. The model is good fit as the respective p value falls under the significance level of 0.05. In this model, independent variable Return on Equity explains around 21.34% movement of the dependent variables. The coefficients of the fixed effect model reveal that for change in Net Profit Ratio and Total Assets Turnover Ratio the independent variable Return on Equity positively changes at 1% level of significance. On the other hand, Firm Size negatively related with Return on Equity also statistically significant even at 1% level of significance.

MANAGERIAL IMPLICATIONS

Management of Working Capital is one of the most important functions of corporate management. Every organization whether public or private, profit oriented or not, irrespective of its size and nature of business, needs adequate amount of working capital. Working capital management is a managerial accounting strategy focusing on maintaining efficient levels of both components of working capital, current assets and current liabilities, in respect to each other. It ensures a company has sufficient cash flow in order to meet its short-term debt obligations and operating expenses. Implementing an effective working capital management system is an excellent way for many companies to improve their earnings. The two main aspects of working capital management are ratio analysis and management of individual components of working capital. A few key performance ratios of a working capital management system are the working capital ratio, inventory turnover and the collection ratio. Ratio analysis will lead management to identify areas of focus such as inventory management, cash management, accounts receivable and payable management.

CONCLUSION

The FMCG Company plays a vital role of India's economy. That is to be found to become one of the worlds the majority striking FMCG markets for both producers and consumers. The present study aimed to contribute to the understanding of short-term financial decisions by investigating the key factors of working capital management. The empirical results show that the relationship between world leading firms Net Profit Ratio is positive significant effect on Return on Investment, Return on Assets and Return on Equity of the sector's profitability. This result is strengthened by the panel regressions which confirm statistically impacts on the FMCG companies profitability. Out of thirteen independent variables introduced Total Assets Turnover Ratio, Dividend Payout Ratio, Cash Conversion Cycle, Firm Size, Gross Profit Ratio, Current Ratio and Working Capital Turnover Ratio variables are significant. This displays that the regression equation framed is a worthy suitable. Therefore, efficient management of working capital for FMCG Company not only has a positive relationship with profitability but significantly impacts on such firm's profitability.

Limitation of the study

i)   The study is based on secondary data.

ii) The study is limited to only one sector that is FMCG Company of India.

iii) Among different FMCG Company listed, the study is carried out only 15 selected FMCG Company.

iv) Sample size is limited due to the nature of the industry and data availability.

Suggestion for Future Research

There are several research areas for further re-search purpose. One of research area is to focus on the financing or working capital and how to corporations can optimize the capital mix to en-sure maximal liquidity. Another topic we can do survey is to study non listed companies as well other sectors of companies. Also details study about the specific topic working capital manage-ment could add more value. ■

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