Relationship between the Financing of Working Capital and Profitability of Some Selected FMCG Companies in India

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Abstract

The present study is an attempt to examine the Relationship between the financing of Working Capital Management and Profitability of some selected FMCG Companies in India. 20 FMCG companies have been selected from those listed in NSE and BSE, of which 10 companies are the highest profit earning companies and 10 companies are running at loss for the period1999-2000 to 2013-2014. The techniques of ratio analysis, mean, standard deviation, coefficient of variation and trend analysis have been applied to analyze the data and Pearson's correlation and panel data regression models were used to establish the relationship between the financing of Working Capital and firm's profitability. The present paper measures the profitability by Return on Investment (ROI) & Return on Assets (ROA). The study shows that Current liability to total assets has negative significant impact on Return on Investment but insignificant impact on return on assets and the profitability is positively insignificant associated with Current assets to total assets. Financial debt ratio is negatively significant with Return on Assets but insignificant with Return on Investment. Market Size has the significant positive impact on profitability. The study found that trade credit is the dominant financing short-term instrument and plays an important role in financing working capital investments.

Keywords: FMCG Companies, Profitability, financing policy

Introduction

Working capital management is an integral component of the overall corporate strategies which aimed to create shareholders value. No business firm can be promoted, established and expanded without adequate financial resources. Success and survival of a business depends on how well its finance function is managed. Financing of working capital has become a very significant area of financial management. Given the changing economic conditions, which is more and more characterized by globalization and increasing competition, the area of working capital financing has assumed added importance as it greatly affects firm's liquidity and profitability (Padachi, 2006). Working capital is financed by a combination of long-term and short-term funds. Long-term sources of funds consist of capital and long-term debt. This portion is the net working capital; that is the excess of current assets over current liabilities. On the other hand, short-term sources of working capital finance consist of trade credit, short-term loans, bank overdraft, provision and other current liabilities used to finance variable working capital needs. Short-term working capital finance can be classified as spontaneously generated sources as trade credit, provisions and accruals and non-spontaneously generated sources as unsecured and secured short-term borrowings and financing instruments. Spontaneous sources are "cost free" and arise from the normal course of business. One of the most important decisions involved in working capital management is how current assets should be financed. The permanent of the required current assets is financed from long term sources and the variable portion is financed from short term sources, is said to be adopting a Hedging working capital policy. The entire estimated current assets should be procured from long term sources and the short term sources should be used only for meeting emergency requirement, is said to be adopting a Conservative working capital policy. The entire estimated requirements of current assets should be financed from short term source and even a part of

the fixed assets may be financed from short term sources, is said to be adopting an aggressive working capital policy. This is more risky, less costly, & more profitable.

FMCG stands for fast moving consumer goods, i.e., the daily items that we need to use in our everyday life. India has a very strong base for producing FMCG goods. The FMCG industry of India is the fourth largest industry in the country. It plays a significant role in shaping a country's economy and development. This sector can drive growth, enhance quality of life, create jobs and support penetration of technology.

Review of Literature

The results from the notable studies that have been carried out are briefly mentioned below:

Padachi (2006), in his article "Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms" for a sample of 58 manufacturing firms for the period 1998-2003 indicated that high investment in inventories and receivables was associated with lower profitability. The study also showed an increasing trend in the short-term component of working capital financing.

Raheman, Afza, Qayyum &Bodla (2010), in their study "Working Capital Management and Corporate Performance of Manufacturing Sector in Pakistan" for a sample of 204 manufacturing firm for the period 1998 to 2007 indicated that the cash conversion cycle, net trade cycle and inventory turnover in days are significantly affecting the performance of the firms and also financial leverage, sales growth and firm size have significant effect on the firm's profitability. The study also showed that firms in Pakistan are following conservative working capital management policy.

Padachi, Howorth, Narasimhan & Durbarry (2010), in their study "Working Capital Structure and Financing Pattern of Mauritian SMEs" for a sample of 111 manufacturing firm for the period of 1998 to 2003 showed that the small to medium-sized Mauritian manufacturing firms have a financing pattern, which is influenced by the asset structure, leverage, profitability, operational efficiency and size of firms and indicated significant structural changes over the study period. The study also showed disproportionate increase in current asset investment in relation to sales resulting in sharp decline in working capital turnover and increasing trend in the short-term component of working capital financing; in particular trade credit and other payables have financed the major part of working capital.

Alipour (2011), in his article "Working Capital Management and Corporate Profitability: Evidence from Iran" for a sample of 1063 firms in Teheran Stock Exchange for the period 2001 to 2006 showed that there is a significant relation between working capital management and profitability and a negative significant relation between cash conversion cycle, Inventory turnover in days, average collection period and profitability. Also there is a direct significant relation between average payment period and profitability.

Vijaya kumar (2011), in his article "Management of Corporate Liquidity and Profitability: An Empirical Study" for a sample of 20 Indian automobile firms for the period 1996 to 2009 showed a significant negative relationship between profitability and Cash Conversion Cycle (CCC) the study also suggest that the managers can increase profitability of their firms by shortening the cash conversion cycle, accounts receivables period and inventory conversion period and by lengthening the accounts payables period.

Kwenda & Holden (2013), in their article "Working Capital Structure and Financing Pattern of Selected JSE-Listed Firms" for a sample of 92 companies for the period 2001 to 2010 indicated that the listed companies heavily depend on trade credit as the source of short term finance and trade receivables and inventory are their main working capital investment. The study also showed that firms in different economic sectors use different approaches to manage their current assets and change working capital policies in line the state of the economy. The study suggested that the performance of the economy impact on the firms' inventory, payables and receivables management and other various components working capital.

Panigrahi (2014), in his article "Relationship of working capital with liquidity, Profitability and solvency: A case study of ACC limited" for the period 2000-01 to 2009-10 emphasized that ACC ltd was following an aggressive working capital policy to increase profitability. The study also suggested that a negative working capital all the years with a continuous increase in current liabilities certainly increases the risk of bankruptcy.

On the basis of the above literatures, it is found that earlier literature did not focused on relation between financing policy and profitability of the Indian FMCG companies.

Aim of the Study

The objectives of the study are as follows:

1. To assess the relative significance of various sources of financing of working capital.
2. To measure the relation between financing policy and profitability of the selected Indian FMCG companies.

Hypothesis

The following hypotheses have been formulated to find out the relationship between the attitudes towards

1. **H0**: There is no association among the investment of working capital and profitability.
   H1: There is association among the investment of working capital and profitability.
2. **H0**: There is no relation between financing of working capital and profitability
   H1: There relation between financing of working capital and profitability

Database and Methodology

Sources of Data

The study is mainly based on secondary data. Data are collected from the published annual reports of the selected companies and Ace Equity database.

Sample Design

There are 20 FMCG companies selected from listed in NSE and BSE, of which10 companies are highest profit earning and 10 companies running at loss. The companies are selected on the basis of their average profitability.

Period of the Study

The study have been covered a period of fifteen years starting from the financial year 1999-2000 to 2013-2014. In this study balanced panel data consist of 300 observations for 20 companies for fifteen year.

Methodology

In working Capital financing strategy of the selected FMCG companies' analysis, Current Liabilities to Total Assets (CLTA), trade payables to current liabilities, other current liabilities to current liabilities and short term provisions to current liabilities ratio have been considered. Current Assets to total assets (CATA) are used to check investing policy of working capital management. In Leverage analysis, Financial Debt Ratio (FDR) has been analyzed. The Natural logarithm of Sales (LOS) represents the Market Size of the firm. Profitability has been analyzed with the help of Return on assets (ROA), Operating profit ratio and Return on investment (ROI). The financing Risk is calculated by Current liabilities to current assets. I had calculated mean values of different variables to get average, standard deviation and coefficient of variation have used to get fluctuations or variation about the mean values of the financial variables. For identifying the nature of the trend in each of the selected ratios during the period under study linear trend equation was fitted and in order to examine whether the slopes of the trend lines were statistically significant or not t-test was used. The estimated coefficient of the straight line trend equation $Y_t = a + b_t$.

Where, Y_t = the variable whose over time trend is measured;

t = time variable; a= intercept;

b =coefficient of the time variable which measures the slopes of the trend lines;

The statistical significance of the trend coefficient has been tested by the popular t test. The t statistic is shown bellow

$$t = (\hat{b} - b) / S_{\hat{b}}$$

Where $\hat{b}$ = is the OLS estimate of b, the coefficient of time variable and $S_{\hat{b}}$ = standard deviation of the estimated regression coefficient.

To check the presence of multicollinearity, construct a correlation matrix. Pearson correlation coefficients for the variables are used to assess the relation between the financing of working capital and profitability. The relation between the financing of working capital and profitability of FMCG companies is tested by panel data methodology.

Model Specification

The relation between the financing of working capital and profitability is investigated using balanced panel data. The models are as follows:

$$ROA_{it} = \beta_0 + \beta_1 CLTA_{it} + \beta_2 CATA_{it} + \beta_3 FDR_{it} + \beta_4 LOS_{it}$$

$$+ u_{it} \qquad \text{............[model 1]}$$

$$ROI_{it} = \beta_0 + \beta_1 CLTA_{it} + \beta_2 CATA_{it} + \beta_3 FDR_{it} + \beta_4 LOS_{it}$$

$$+ u_{it} \qquad \text{[model 2]}$$

Return on Assets (ROA) and Return on Investment (ROI) are used as a measure of firm's profitability. Current Liabilities to Total Assets (CLTA) is measured working Capital financing strategy of selected companies as an independent variable. Current Assets to total assets (CATA) are used to check investing policy of working capital management. Financial debt ratio (FDR) represents leverage. Natural logarithm of sales (LOS) is representing size and u is the error term.

Estimation Techniques

In panel data estimation three models namely the Pooled OLS regression model, Fixed effects model (FEM) and Random effect model (REM) are estimated for each analysis. In Pooled OLS regression model is neglect the cross section and time series nature of data. FEM allows for Heterogeneity or individuality among 20 companies by allowing having its own intercept value and in REM have a common mean value for the intercept. The choice amongst the three model three statistical test, viz, the Restricted F Test, Breusch-Pagan Lagrange Multiplier Test and Hausman Test are carried out. The Restricted F Test is applied to make a choice between Pooled OLS regression model and FEM. On the other hand, Breusch-Pagan Lagrange Multiplier Test is applied to make a choice between Pooled OLS regression model and REM. The test is based on the null hypothesis that Pooled OLS regression model is appropriate. Rejection of null hypothesis suggests that there are Random effects in the relationship. The Hausman Test is applied to make choice between the FEM and REM the test is based on the null hypothesis that REM is appropriate. The VIF is a widely used measure of the degree of multi-collinearity of an independent variable with the other independent variables in a regression model. It measures the variance of an estimated regression coefficient is increased as a result of collinearity. As a rule of thumb, VIF ≥ 10 is viewed as a sign of severe multi-collinearity. Robust standard error is used to remove the problem of heteroskedasticity in the models.

Findings

In order to study the relation between the financing of working capital and profitability of FMCG companies, I have calculated the financing, profitability ratio and other related ratios which are depicted in the following table

Table I: Descriptive Statistics of Variables

Year	ROI	ROA	CL TA	TP CL	OCL CL	STP CL	FDR	CA TA	LOS	CLCA
2000	20.40	14.37	0.25	0.63	0.22	0.15	0.38	0.49	7.19	0.49
2001	18.17	11.96	0.27	0.67	0.17	0.15	0.42	0.51	7.26	0.51
2002	24.35	16.53	0.27	0.70	0.17	0.14	0.42	0.49	7.32	0.51
2003	23.07	14.98	0.28	0.66	0.17	0.17	0.43	0.52	7.35	0.51
2004	26.17	14.71	0.29	0.69	0.15	0.17	0.47	0.54	7.39	0.51
2005	31.13	18.06	0.30	0.65	0.15	0.20	0.47	0.52	7.46	0.57
2006	36.28	21.16	0.30	0.62	0.17	0.21	0.40	0.53	7.60	0.57
2007	39.29	20.34	0.35	0.56	0.25	0.19	0.43	0.58	7.75	0.58
2008	55.19	20.92	0.35	0.51	0.22	0.27	0.45	0.59	7.88	0.56
2009	47.62	17.59	0.31	0.48	0.26	0.26	0.46	0.54	8.07	0.53
2010	44.23	17.80	0.34	0.53	0.20	0.27	0.49	0.57	8.11	0.55
2011	36.32	17.22	0.41	0.34	0.50	0.17	0.53	0.49	8.27	0.86
2012	30.57	18.11	0.41	0.33	0.50	0.16	0.54	0.51	8.41	0.86
2013	36.95	17.13	0.43	0.35	0.49	0.16	0.51	0.47	8.56	1.26
2014	32.85	19.21	0.44	0.39	0.44	0.16	0.51	0.47	8.66	1.37
MAX	55.19	21.16	0.44	0.70	0.50	0.27	0.54	0.59	8.66	1.37
MIN	18.17	11.96	0.25	0.33	0.15	0.14	0.38	0.47	7.19	0.49
AVG	33.51	17.34	0.33	0.54	0.27	0.19	0.46	0.52	7.94	0.68
SD	10.40	2.57	0.06	0.13	0.14	0.05	0.05	0.04	0.50	0.28
CO-VARIENCE	31.04	14.80	18.88	24.93	50.27	23.98	10.24	7.37	6.29	41.42
Slope of the Trend line	1.39	0.32	0.01	-0.03	0.03	0.00	0.01	0.00	0.11	0.05
t-value	2.698**	2.428**	10.182*	-8.064*	4.892*	1.10	5.804*	-0.15	21.012*	4.57*

Note: * 1% Significance level; ** 5% Significance level; *** 10% Significance level;

From the Table I it is found that the average Return on investment (ROI) of the FMCG Company is 33.51% with a standard deviation 10.40 during the study period. It ranges between 55.19 and 18.17. Moreover, a higher CV percentage i.e. 31.04 is an indication of instability in the profitability of the companies. The straight line trend is fitted to the ROI indicates an increasing trend which is statistically significant at 5 per cent level. It indicates that there is a significant upward trend in profitability.

The average Return on assets (ROA) of the FMCG Company is 17.34% with a standard deviation 2.57 during the study period. It ranges between 21.16 and 11.96. Moreover, a higher CV percentage i.e. 14.8 is an indication of instability in the profitability of the companies. The straight line trend is fitted to the ROA indicates an increasing trend which was statistically significant at 5 per cent level. It indicates that there is a significant upward trend in profitability.

The average current liability to total assets (CLTA) of the FMCG Company is 0.33 with a standard deviation 0.06 during the study period. It ranges between 0.44 and 0.25 and CV percentage is 18.88. The straight line trend is fitted to the CLTA indicated an increasing trend which is statistically significant at 1 per cent level. It indicates that there is a significant upward trend in financing total assets from short term sources. An increase in the ratio of the Current liabilities to Total Assets will lead to an increase in profitability as well as risk. Because a short term source of finance are less expensive then long term sources.

The average trade payable to current liability (TPCL) of the FMCG Company is 0.54 with a standard deviation 0.13 during the study period. The average TPCL is more than short term borrowings & other current liabilities to current liabilities (OCLCL) and short term provisions to current liabilities (STPCL) respectively. In relating the Pecking Order Theory to working capital financing, it seems that trade credit is these firms' first choice of external finance, probably because it is cost free and is available as part of the trade terms. It ranges between 0.33 and 0.70 and CV percentage is 24.93. The straight line trend is fitted to the TPCL indicates a decreasing trend which is statistically significant at 1 per cent level. It indicates that there is a significant downward trend in financing current liabilities from trade payable.

The average short term borrowings & other current liabilities to current liability (OCLCL) of the FMCG Company is 0.27 with a standard deviation 0.14 during the study period. It ranges between 0.15 and 0.50. Moreover, a higher CV percentage i.e. 50.27 is an indication of instability in the other current liabilities of the companies. The straight line trend fitted to the OCLCL indicates an increasing trend which is statistically significant at 1 per cent level. It indicates that there is a significant upward trend in financing current liabilities from other current liabilities. The average short term provision to current liability (STPCL) of the FMCG Company is 0.19 with a standard deviation 0.05 during the study period. It ranges between 0.14 and 0.27 and CV percentage is 23.98. However the straight line trend is fitted to the TPCL for the entire period failed to identify any significant (upward or downward) trend. It reveals` that any noticeable change in financing current

liabilities from short term provision with the passage of time is not found during the study period.

The average financial debt ratio (FDR) of the FMCG Company is 0.46 with a standard deviation 0.05 during the study period. It ranges between 0.38 and 0.54 and CV percentage is 10.24. The straight line trend is fitted to the FDR indicates an increasing trend which is found to be statistically significant at 1 per cent level. It indicates that there is a significant upward trend in financing total assets from debts.

The average current asset to total assets (CATA) of the FMCG Company is 0.52 with a standard deviation 0.045 during the study period. This implies they are holding more current assets than fixed assets. It ranges between 0.47 and 0.59 and CV percentage is 7.37. However the straight line trend is fitted to the CATA for the entire period fails to identify any significant (upward or downward) trend. It reveals that any noticeable change in investing current assets with the passage of time is not found during the study period.

The Market Size is measured by Natural logarithm of sale (LOS). A greater volume is more favorable. The average LOS is 7.94 with a standard deviation 0.50 during the study period. It ranges between 7.19and 8.66 and CV percentage is 6.29. The straight line trend is fitted to the LOS indicates an increasing trend which is statistically significant at 1 per cent level. It indicates that there is a significant upward trend in gross sales.

Financing Risk (RK)

Firms are said to follow an aggressive approach when the current assets are financed only by short-term sources and a conservative approach when current assets are financed by both short-term and long-term sources. Current liabilities to current assets can be calculated through the following formula:

RK = Current liabilities / current assets

The above formula helps to know about the financing of the current assets through short term funds. Based on the above formula, following inferences can be drawn:

1. Value of RK is zero or less would mean that the firm is using a conservative policy and the profitability would be low.
2. Value of RK is 1 or close to 1 would mean that the firm is using an aggressive policy and normally the profitability would be high.

The average Financing Risk of the selected samples during the study period is 0.68 with a standard deviation 0.28 during the study period. It indicates that only 38 percent current assets financed from long term sources. It ranges between 0.49 and 1.37. Moreover, a higher CV percentage i.e. 41.42 is an indication of instability in financing current asset from short term sources. The straight line trend is fitted to the Financing Risk indicated an increasing trend which is statistically significant at 1 per cent level. It indicates that the selected companies are approaching to aggressive policy from matching policy.

Correlation Analysis

Pearson correlation coefficients for the variables are used to assess the relation between the

financing of working capital and profitability. Profitability is measured by Return on assets (ROA) and Return on investments (ROI).

Table II
Pearson Correlation Coefficient between Variables

	ROI	ROA	CLTA	CATA	FDR	LOS
ROI	1.0000					
	300					
ROA	0.9533	1.0000				
	300	300				
	0.0000					
CLTA	-0.7342	-0.5837	1.0000			
	300	300	300			
	0.0000	0.0000				
CATA	0.4587	0.3793	0.4843	1.0000		
	300	300	300	300		
	0.0000	0.0000	0.0000			
FDR	-0.5093	-0.5398	-0.2003	-0.3626	1.0000	
	300	300	300	300	300	
	0.0000	0.0000	0.0005	0.0000		
LOS	0.7804	0.8074	0.5823	0.3027	-0.4600	1.0000
	300	300	300	300	300	300
	0.0000	0.0000	0.0000	0.0000	0.0000	

From the Table II it is found that ROA and ROI are significantly negatively relate to Current Liabilities to Total Assets (CLTA) and positively relate to Current Assets to total assets (CATA).The negative relationship between profitability and CLTA indicates that the greater financing from current liabilities decrease the profitability. The positive relationship between profitability and CATA indicates greater investments in current assets increase the profitability. The negative significant relationship between profitability and FDR, which means increase in the financial leverage leads to decrease in the profitability of the firms. ROA and ROI are significantly positively related to size of the firm (LOS), is measured by natural logarithm of sales. It implies that the larger firms report higher profits compared to smaller firms. From the Table II it is found that the correlation coefficients for all the independent variables are less than 0.8 implying that the study data does not exhibit severe multicollinearity.

Regression Analysis
The Effect of the Financing of Working Capital on Return on Assets (ROA)

Appendix II shows the regression results for the effect of the financing of working capital on Return on assets (ROA). The F statistics of the pooled regression model and fixed effect model are statistically significant and also the Wald-statistic of the random-effect model is statistically significant.

In all cases, all the VIFs appear in Appendix II and are less than 10. Hence, collinearity does not seem to be a problem in the regression models.

In order to select the appropriate model Pooled OLS regression model, fixed effects model (FEM) and Random effect model (REM) are carried out. From Appendix III, it is found that test statistics in Restricted F Test, Breusch-Pagan Lagrange Multiplier Test are statistically significant, whereas Hausman Test is not statistically significant. Hence the regression results of the REM are used for statistical inference and further analysis of the individual coefficients. The robust standard error is used in the model.

Table III Model 1 (ROA as a Measure of Firm's Profitability)

Independent Variables	Coefficient	Robust Standard Error	z Stat	p - value
CLTA	-8.070079	5.570155	-1.45	0.147
CATA	1.031648	9.379087	0.11	0.912
FDR	-13.79329**	5.394957	-2.56	0.011
LOS	3.865261*	1.41981	2.72	0.006
Intercept	-2.897033	8.823356	-0.33	0.743
Total Panel (Balanced) Observations	300			
Wald x^2 statistics	36.99			
Adjusted R2- Within	12.99%			
Adjusted R2- Between	54.58%			
Adjusted R2- Overall	46.68%			

*Note: * 1% Significance level; ** 5% Significance level; *** 10% Significance level;*

$$ROA_{it} = \beta_0 + \beta_1 CLTA_{it} + \beta_2 CATA_{it} + \beta_3 FDR_{it} + \beta_4 LOS_{it} + u_{it}$$

ROA_{it} = (**-2.897033**) + (**-8.070079**)** CLTA $_{it}$ + (**1.031648**) CATA $_{it}$ + (**-13.79329**)*** FDR $_{it}$ +

(**3.865261**)* LOS $_{it}$ + u_{it}

Since Wald χ^2 test is significant at 1% probability level, therefore model 2 is well fitted. From Table III it is observed that when return on assets (ROA) is used as the dependent variable, the z statics of the variable, Current Liabilities to Total Assets (CLTA) negatively relates to return on assets but not significant effect on return on assets. CATA is measured as investing policy of the firm. It shows insignificant positive relationship with profitability. It implies that return on assets do not differ significantly across the FMCG companies depending on their Current Assets to total assets. The variable, financial debt ratio (FDR) has significant negatively effect on return on assets. Which implies decreasing the financial debt ratio will generate more profit for the firm. The variable, Market size (LOS) has positively and statistically significant on return on assets. Market Size is positive highly significant with profitability, which implies that larger Market Sizes seem to favor the profitability, therefore larger firms more profitable.

The Effect of the Financing of Working Capital on Return on Investment (ROI)

Appendix IV shows the regression results for the effect of the financing of working capital on Return on investment (ROI). The F statistics of the pooled regression model and fixed effect model are statistically significant and also the Wald-statistic of the random-effect model is statistically significant.

In all cases, all the VIFs appeared in Appendix IV and are less than 10. Hence, collinearity does not seem to be a problem in the regression models.

In order to select the appropriate model Pooled OLS regression model, fixed effects model (FEM) and Random effect model (REM) are carried out. From Appendix V, it is found that test statistics in Restricted F Test, Breusch-Pagan Lagrange Multiplier Test are statistically significant, whereas Hausman Test is not statistically significant. Hence the regression results of the REM are used for statistical inference and further analysis of the individual coefficients. The robust standard error is used in the model.

Table IV: Model 2 (ROI as a Measure of firm's profitability)

Independent Variables	Coefficient	Robust Standard Error	z Stat	p - value
CLTA	-93.78665*	33.66627	-2.79	0.005
CATA	13.50486	18.59373	0.73	0.468
FDR	-19.47185	13.73896	-1.42	0.156
LOS	5.902725*	1.548329	3.81	0.000
Intercept	-31.3812***	18.9949	-1.65	0.099
Total Panel (Balanced) Observations	300			
Wald x^2 statistics	54.46*			
Adjusted R2- Within	22.01%			
Adjusted R2- Between	80.99%			
Adjusted R2- Overall	55.50%			

*Note: * 1% Significance level; ** 5% Significance level; *** 10% Significance level;*

$$ROI_{it} = \beta_0 + \beta_1 CLTA_{it} + \beta_2 CATA_{it} + \beta_3 FDR_{it} + \beta_4 LOS_{it} + u_{it}$$

ROI_{it} = (**-31.3812**)*** + (**-93.78665**)* CLTA $_{it}$ + (**13.50486**) CATA $_{it}$ + (**-19.47185**) FDR $_{it}$ +

(**5.902725**)* LOS $_{it}$ + u_{it}

Since Wald χ^2 test is significant at 1% probability level, therefore model 2 is well fitted. From Table IV it is observed that when return on investment (ROI) is used as the dependent variable, the Z statics of the variable, Current Liabilities to Total Assets (CLTA) significantly negatively relates to return on investment. The negative relationship between profitability and CLTA indicates that the greater financing from current liabilities decrease the profitability. This implies that firms should follow the conservative financing policy of working capital. CATA is measures as investing policy of the firm. It

shows insignificant positive relationship with profitability. The variable, financial debt ratio (FDR) has negatively but not significant effect on return on investment under random effect model. Which implies decreasing the financial debt ratio will generate more profit for the firm. It implies that return on assets do not differ significantly across the FMCG companies depending on their Current Assets to total assets and financial debt ratio. The variable, Market size (LOS) has positively and statistically significant on return on investment. Market Size is positive highly significant with profitability, which implies that larger Market Sizes seem to favor the profitability, therefore larger firms more profitable.

Conclusion

The present study is an attempt to examine the relation between the financing of working capital and profitability of some selected FMCG companies in India. In working Capital financing strategy of the selected FMCG companies' analysis, Current Liabilities to Total Assets (CLTA), trade payables to current liabilities (TPCL), other current liabilities to current liabilities (OCLCL) and short term provisions to current liabilities ratio (STPCL) have been considered. Current Assets to total assets (CATA) are used to check investing policy of working capital management. In Leverage analysis, Financial Debt Ratio (FDR) has been analyzed. The Natural logarithm of Sales (LOS) represents the Market Size of the firm. Profitability has been analyzed with the help of Return on assets (ROA) and Return on investment (ROI). The financing Risk is calculated by Current liabilities to current assets. The trend equations are used to estimate the growth rates of different variables. From the study it is found that the return on investment and return on asset is significantly increased during the study period. The average return on investment is higher than return on assets, but it is highly fluctuated during the study period. The current liability to total asset, short term borrowings & other current liabilities to current liability, financial debt ratio, Natural logarithm of sale and Current liability to current assets are significantly increased during the study period. The average trade payable to current liability is more than short term borrowings & other current liabilities to current liability and short term provision to current liability respectively. In relating the Pecking Order Theory to working capital financing, it seems that trade credit is these firms' first choice of external finance, probably because it is cost free and is available as part of the trade terms. But the trade payable to current liability is significantly decreased during the study period. Any noticeable change in short term provision to current liability and current asset to total assets with the passage of time is not found during the study period and they are holding more average current assets than fixed assets. The study shows that trade credit is the dominant financing short-term instrument and plays an important role in financing working capital investments and the selected companies are following in financing to aggressive policy from matching policy.

Pearson correlation coefficients for the variables are used to assess the relation between the financing of working capital and profitability. From the study it is found that ROA and ROI are significantly positively related to Current Assets to total assets (CATA) and natural logarithm of sales (LOS) and negatively related to financial debt ratio (FDR) Current Liabilities to Total Assets (CLTA).

The present paper uses two alternative models for measuring the profitability viz. Return on Assets (ROA) and Return on Investment (ROI). The study have been covered a period of fifteen years starting from the financial year 1999-2000 to 2013-2014. In this study balanced panel data consist of 300 observations for 20 companies for fifteen year. The study shows that when Return on investment is used as dependent variable, the fluctuation in profitability is negatively and statistically significant Current Liabilities to Total Assets (CLTA). The negative relationship between profitability and CLTA indicates that the greater financing from current liabilities decrease the profitability. This implies that firms should follow the conservative financing policy of working capital. But when Return on asset is used, the profitability does not differ significantly across the companies depending on Current Liabilities to Total Assets. The current assets to total assets under Return on Assets as well as under Return on Investment have a positive but not statistically significant impact on fluctuation in profitability. It implies that variation in profitability do not differ significantly across the companies depending on their current assets to total assets. When Return on assets is used as dependent variable; the fluctuation in profitability is negatively and statistically significant by financial debt ratio (FDR). This means that if total debt is decreased than profitability is increased. But when Return on investment is used, the variation of profitability does not differ significantly across the companies depending on financial debt ratio. Market Size is positive highly significant with profitability, which implies that larger Market Sizes seem to favor the profitability, therefore larger firms more profitable.

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Appendix 1
Variables Definition

ROI	Return on investment is EBIT/Sales
ROA	Return on total assets is EBIT/Total Assets
CATA	Current Assets to Total Assets
CLTA	Current Liabilities to Total Assets
TPCL	Trade Payables to Current Liabilities
OCLCL	Short term borrowings & other current liabilities to current liabilities
STP CL	Short term provisions to current liabilities
FDR	Financial debt ratio is Total Debt/Total Assets
LOS	LOS is the natural logarithm of sales (Proxy for size)
CLCA	Current liabilities to current assets

Appendix II
Regression Results for the Effect of The Financing of Working Capital on Return on Assets (ROA)

Regression Results: Dependent Variable ROA									
Pooled OLS Model				**Fixed Effects Model**			**Random Effects Model**		
Variable	Coefficient	t-Stat	VIF	Variable	Coefficient	t-Stat	Variable	Coefficient	z-Stat
Intercept	-8.930151	-1.80[***]	---	Intercept	-0.2166026	-0.04	Intercept	-2.897033	-0.50
CLTA	-23.17066	4.77[*]	1.49	CLTA	-6.893233	2.01[**]	CLTA	-8.070079	2.38[**]
CATA	-11.60922	-1.91[***]	1.40	CATA	2.345194	0.51	CATA	1.031648	0.23
FDR	-14.12257	-3.78[*]	1.39	FDR	-13.08561	-3.65[*]	FDR	-13.79329	-3.97[*]
LOS	5.148316	9.63[*]	1.58	LOS	3.319787	4.10[*]	LOS	3.865261	5.35[*]
F-Statistic	70.65[*]			F-Statistic	10.35[*]		Wald χ^2	61.74[*]	
R^2	0.4893			R^2-Within	0.1305		R^2-Within	0.1299	
Adj. R^2	0.4823			R^2-Between	0.5389		R^2-Between	0.5458	
				R^2-Overall	0.4606		R^2-Overall	0.4668	
No. of Obs.	300			No. of Obs.	300		No. of Obs.	300	

*Note: * 1% Significance level; ** 5% Significance level; *** 10% Significance level;*

Appendix III
Tests for Selection of Appropriate Model

Tests for Selection of Appropriate Model (ROA)			
Purpose	Null Hypothesis	Test	Test Statistic
Selection between Pooled Regression Model and Fixed Effects Model	All $u_i = 0$	Restricted F Test	$F_{(19,276)}=33.17^*$
Selection between Pooled Regression Model and Random Effects Model	Var (u) = 0	Breusch-Pagan Lagrange Multiplier Test	$\chi^2_{(1)} = 848.44^*$
Selection between Fixed Effects Model and Random Effects Model	Difference in coefficients is not systematic	Hausman Test	$\chi^2_{(4)} = 18.54$

*Note: * 1% Significance level; ** 5% Significance level; *** 10% Significance level;*

Appendix IV
Regression Results for The Effect of The Financing of Working Capital on Return on Investment (ROI)

Regression Results: Dependent Variable ROI								
Pooled OLS Model				Fixed Effects Model			Random Effects Model	
Variable	Coefficient	t-Stat	VIF	Variable	Coefficient	t-Stat	Variable	Coefficient	z-Stat
Intercept	-22.87659	-2.29**	---	Intercept	-28.45311	-1.74***	Intercept	-31.3812	-2.44**
CLTA	-111.6216	11.40*	1.49	CLTA	-84.16303	7.76	CLTA	-93.78665	9.25*
CATA	7.764262	0.64	1.40	CATA	17.51948	1.20	CATA	13.50486	1.01
FDR	-31.4629	-4.18*	1.39	FDR	-8.904577	-0.79	FDR	-19.47185	-2.05**
LOS	4.930824	4.57*	1.58	LOS	4.793525	1.87***	LOS	5.902725	3.73*
F-Statistic	93.58*			F-Statistic	19.68*		Wald χ^2	156.44*	
R^2	0.5593			R^2-Within	0.2220		R^2-Within	0.2201	
Adj. R^2	0.5533			R^2-Between	0.8029		R^2-Between	0.8099	
				R^2-Overall	0.5482		R^2-Overall	0.5550	
No. of Obs.	300			No. of Obs.	300		No. of Obs.	300	

*Note: * 1% Significance level; ** 5% Significance level;*

Appendix V
Tests for Selection of Appropriate Model

Tests for Selection of Appropriate Model (ROI)			
Purpose	Null Hypothesis	Test	Test Statistic
Selection between Pooled Regression Model and Fixed Effects Model	All $u_i = 0$	Restricted F Test	$F_{(19,276)}=4.90^*$
Selection between Pooled Regression Model and Random Effects Model	Var (u) = 0	Breusch-Pagan Lagrange Multiplier Test	$\chi^2_{(1)} = 64.08^*$
Selection between Fixed Effects Model and Random Effects Model	Difference in coefficients is not systematic	Hausman Test	$\chi^2_{(4)} = 7.98$

*Note: *   1 % Significance level; ** 5% Significance level;*