

Research Article

An Empirical Study of Association between Working Capital Management (WCM) and Profitability: Evidence from Bombay Stock Exchange (BSE) Listed FMCG Companies

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Abstract

WCM is also known as short-term financial management and is focused mainly with CA and CL activities. Due to its high impacts on profitability and liquidity, WCM is important to the success of enterprises. The study's primary objective was to examine at the impact of WCM on Profitability with reference to the BSE Listed FMCG Companies. Panel Data has been collected for Analysis, 71 FMCG listed Companies, 5 years balance sheets data used for analysis. The analysis tracked down a solid negative connection between the proportions of WC management including AR, AP, CCC, FATA, SL and DR with profitability. The findings of an investigation of the association between WCM and profitability on the Bombay Stock Exchange clearly found that the number of days AR, INV, and profitability are mostly negative. As an outcome, we say that managers can increase revenue by reducing the number of days AR and INV.

Keywords: Working Capital, WCM, Profitability, FMCG

I. Introduction

WCM is also known as short-term financial management and is focused mainly with CA and CL activities. WCM is also known as short-term financial management and is focused mainly with CA and CL activities (Richard Kofi Akoto, et, al. 2013). The way WC is managed has a significant impact on a company's profitability. This result shows that there is a specific amount of WC requirements that may optimise returns.(Deloof, 2003) defines WCM entails planning and regulating CA and CL in a way that, on the one hand, decreases the risk of incompetence in meeting required short-term needs and, on the other hand, prevents wasteful investment in these assets. (Bis.org and Eljelly, 2004). WCM is described as an accounting strategy that focuses on maintaining correct CA and CL levels. WCM gives a corporation with adequate liquidity to fulfil its short-term obligations (Raheman & Nasr, 2007). WCM is very important in terms of profitability growth. This is because the firm's activities are difficult to manage without a good WCM. WCM has been a big concern, particularly in developed nations, and as a result, research has been performed in many areas of the world, particularly in developed nations, to explain the link between WCM and profitability (Ntui Ponsian, et.al 2014).

II. Literature Review:

An Empirical Study of Association Between Working Capital Management (WCM) and Profitability: Evidence from Bombay Stock Exchange (BSE) Listed FMCG Companies

Deloof, 2003 the Study on WCM and Profitability with 1009 Belgium NFF firms for the Duration of 1992-1996. Managers may boost profitability by lowering the amount of days on the job, according to the research. AR and INV are active. A Smaller number of profitable firms stand by longer to cover their bills.

Ioannis Lazaridis & Dimitrios Tryfonidis, 2006 investigate Study between the relationship of Profitability and WCM, with 131 From 2001 to 2004, firms were listed in the ASE. The findings of our investigation revealed that there is a real relationship between profitability, as evaluated by GPR, and the CCC. Furthermore, managers may earn revenues for their business by properly controlling the CCC and maintaining each part (AR, AP, INV) best level.

Huynh et. al, 2010 investigate study between From 2006 to 2008, the link between profitability, CCC, and its components for listed enterprises in VSK. According to the findings, there is a considerable negative association between profitability as evaluated by GPR and the CCC. This implies that CCC raises, it lead to decreasing the profitabilit.

Richard Kofi Akoto, et, al.,2013 Research reveals a significant unfavourable link between profitability and AR days, studied by WCM and the profitability of 13 companies in Ghana from 2005 to 2009. However, the business' CCC, CA ratio, size, and CA turnover all have a significant impact on profitability. According to the study, managers may produce value for their investors by generating incentives for their AR to be reduced to 30 days In order to enhance demand for local goods in the short and long term, community policies that safeguard indigenous firms and hinder distributor migration should be established in Ghana.

Jakpar S1 et,al, 2017 With a sample of 164 enterprises included in MBBM from 2007 to 2011, the influence of WCM on the profitability of companies was evaluated. Exact evidence has established that the exogenous variable, ACP, INV and company size, and their endogenous variable - which is company profitability - have a positive link. The findings also demonstrate that the debt ratio (liverages) and the profitability of the company are somewhat reversed, but the company has the capacity to quickly convert WC into cash, since the proxy for the CCC log does not affect profitability.

Kofi Amponsah-Kwatiah & Michael Asiamah, 2020 The impact examines between WCM on profitability in Ghana with From 2015 to 2019, 20 manufacturing enterprises were listed on the NYSE. According to the findings, INV management, AR, AP, CCC, CA, CR, and firm size all have a beneficial impact on ROA and ROE, however leverage has a negative impact.

Research Methodology:

1. Objectives & Hypothesis:

The study focuses on identifying the impact of WCM on Profitability (Dr. Ch Shankar, 2020).

H₁: Considerable relation in between AR & GPR.

H₂: Considerable relation in between AP & GPR.

H₃: Considerable relation in between IN & GPR.

H₄: Considerable relation in between SL & GPR.

H₅: Considerable relation in between DR & GPR.

H₆: Considerable relation in between FATA & GPR.

2. Data Collection:

Panel Data has been collected for Analysis, 71 FMCG listed Companies, 5 years balance sheets data used for analysis.

3. Variables:

The variables extracted from previous studies and existing literature. the following variables considered for this study:

- a. Gross Operating Profitability (GPR): GPR may be computed by gross revenues and gross expenses. The total assets minus financial contributions can be divided by Total Assets minus Financial Asses (Adam Hayes, 2021).

$$GPR = (\text{Sales} - \text{Cost of Goods Sold}) / (\text{Total Assets} - \text{Financial Assets})$$

- b. Account Receivables (AR): The formula to calculate AR Turnover is to add the beginning and ending AR to get the average AR for the period and then divide it into the net credit sales for the year.

$$AR = \text{Average of accounts receivable} / \text{Sales} * 365$$

- c. Account Payables (AP): AP turnover is calculated by dividing the total purchases made on credit by the average AP balance for any given period.

$$AP = \text{Average of accounts payable} / \text{Cost of goods sold} * 365$$

- d. INV (IN): Cost of beginning INV to cost of purchases during the period. This is the CoGavailable for sale. Multiply the gross profit % by sales to find the estimated CoGsold. Subtract the CoGavailable for sold from the CoGsold to get the ending INV.

$$INV = \text{Average of inventory} / \text{Cost of goods sold} * 365$$

- e. Sales (SL): Ln is the natural logarithm of the pre-emergency book value of the millions of dollars in assets. Ln(sales) is a natural record of company sales in millions a year before the offer. (Institut numerique, 2012).

- f. Debt Ratio (DR): The debt ratio is often referred to as the debt-to-asset ratio or the debt-to-total-assets ratio. Therefore, the debt ratio formulation is: total debt divided by total assets. The debt ratio is the percentage of total asset quantities due to creditors (as recorded on the balance sheet) (Harold Averkamp, 2020).

$$DR = \text{Total debt} / \text{Total assets}$$

- g. Fixed Assets to Total Assets: The fixed-to-net value ratio is a tool of financial analytics that indicates in% the part of the total FA-binding assets of your organisation. It demonstrates the extent to which firm funds, such as property, plant, and equipment, are frozen in the form of FA. (Chron Contributor, 2020).

$$FATA = \text{Fixed financial assets} / \text{Total assets}$$

III. Data Analysis:

1. Descriptive Analysis:

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
GPR	71	-.2884	1.0999	.210244	.2170051	.047	1.367	.285	4.188	.563

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AR	71	.0574	165.2523	38.855764	33.0799850	1094.285	1.528	.285	2.907	.563
AP	71	2.8222	218.0730	46.401898	36.9049052	1361.972	2.233	.285	7.143	.563
IN	71	-148.8648	156.4138	80.164265	49.3727639	2437.670	-1.506	.285	5.510	.563
CCC	71	-130.5986	219.3115	72.618130	68.9425962	4753.082	-.308	.285	.342	.563
DR	71	.1611	2.6828	.725341	.4785038	.229	1.734	.285	4.257	.563
FATA	71	.0000	.5168	.031445	.0811119	.007	4.014	.285	19.138	.563
SL	71	6.766422	12.246105	8.98122479	1.206611904	1.456	.232	.285	.015	.563
Valid N (listwise)	71									

Intpretation:

The total observations sums N = 71 Companies 5 years data. The GPR average is 0.210 and variance is 0.47. AR mean 38.85 and the variance shows 1094.285 where as AP mean is 46.40 and the SD is 36.90. The average INV is 80.16 where as variance is 2437.67. the debt ratio is 0.725 and the variance is 0.229.

2. Correlations:

Table 2: Correlations

	GPR	AR	AP	IN	CCC	DR	FATA	SL
GPR Pearson Correlation	1	-.353**	-.036	-.055	-.189	-.144	.129	.313**
Sig. (2-tailed)		.003	.769	.651	.114	.230	.283	.008
N	71	71	71	71	71	71	71	71
AR Pearson Correlation	-.353**	1	.108	-.313**	.198	.160	.051	-.352**
Sig. (2-tailed)	.003		.372	.008	.097	.183	.675	.003
N	71	71	71	71	71	71	71	71
AP Pearson Correlation	-.036	.108	1	-.314**	-.708**	.577**	.013	.140
Sig. (2-tailed)	.769	.372		.008	.000	.000	.913	.243
N	71	71	71	71	71	71	71	71
IN Pearson Correlation	-.055	-.313**	-.314**	1	.734**	.012	.031	.215
Sig. (2-tailed)	.651	.008	.008		.000	.919	.800	.072

N		71	71	71	71	71	71	71	71
CCC	Pearson Correlation	-.189	.198	-.708**	.734**	1	-.223	.039	-.090
	Sig. (2-tailed)	.114	.097	.000	.000		.061	.746	.454
	N	71	71	71	71	71	71	71	71
DR	Pearson Correlation	-.144	.160	.577**	.012	-.223	1	.023	.219
	Sig. (2-tailed)	.230	.183	.000	.919	.061		.850	.067
	N	71	71	71	71	71	71	71	71
FATA	Pearson Correlation	.129	.051	.013	.031	.039	.023	1	.121
	Sig. (2-tailed)	.283	.675	.913	.800	.746	.850		.316
	N	71	71	71	71	71	71	71	71
SL	Pearson Correlation	.313**	-.352**	.140	.215	-.090	.219	.121	1
	Sig. (2-tailed)	.008	.003	.243	.072	.454	.067	.316	
	N	71	71	71	71	71	71	71	71

** .2-tailed Correlation significant at 0.01 level.

Intpretation:

GPR shows a negative relationship with AR, AP,IN, CCC and DR, and it has a positive correlationship with FATA and SL. AR shows a positive relationships with AP, IN, CCC and FATA. AP shows a high correlationship with CCC. IN shows a high positive correlationship with CCC. FATA shows a less positive corelation with other variables.

3. Regression:

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	SL, CCC, FATA, DR, AR, AP ^b	.	Enter

a. Dependent Variable: GPR

b. Tolerance = .000 limit reached.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. Change	

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1	.492 ^a	.242	.171	.1975520	.242	3.411	6	64	.006	2.172
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a. Predictors: (Constant), SL, CCC, FATA, DR, AR, AP

b. Dependent Variable: GPR

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.799	6	.133	3.411	.006 ^b
	Residual	2.498	64	.039		
	Total	3.296	70			

a. Dependent Variable: GPR

b. Predictors: (Constant), SL, CCC, FATA, DR, AR, AP

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions						
				(Constant)	AR	AP	CCC	DR	FATA	SL
1	1	4.811	1.000	.00	.01	.00	.00	.01	.01	.00
	2	.850	2.379	.00	.00	.02	.02	.01	.74	.00
	3	.778	2.487	.00	.01	.03	.11	.01	.23	.00
	4	.336	3.781	.00	.67	.00	.01	.01	.00	.00
	5	.162	5.448	.01	.01	.02	.05	.70	.00	.01
	6	.056	9.271	.02	.12	.93	.80	.23	.00	.02
	7	.007	26.723	.97	.18	.00	.00	.04	.02	.96

a. Dependent Variable: GPR

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.029	.208		-.140	.889		
	AR	-.001	.001	-.159	-1.210	.231	.687	1.456
	AP	-.001	.001	-.200	-.977	.332	.283	3.538

CCC	-.001	.001	-.310	-1.750	.085	.377	2.649
DR	-.061	.065	-.135	-.942	.350	.576	1.736
FATA	.327	.295	.122	1.108	.272	.973	1.027
SL	.049	.022	.272	2.191	.032	.768	1.302

a. Dependent Variable: GPR

Intepretation:

The CCC is used popular to determine effectiveness of WCM. From the aftereffect of the regression, running shows that there is a negative correlation among's CCC and GPR. This implies increase or decrease in CCC fundamentally influences the profitability of the firm. R2 change is 17.1%.The coefficient of the F measurement is 3.411. The coefficient is - 0.310 by p-value 0.085.

“The regression model verified for multicollinearity. VIF or explanatory tolerances are used to determine if predictors are closely associated with the remainder of the predictors. If your forecaster is correlated VIF examines the variance of the projected retrogression rate rise (Dimitrios 2006). Lazaridis, Ioannis & Tryfonidis. Muticollinearity is typically used as the biggest VIF incorporating all predictors. All of the foretellers have an inflation factor of 1-3.5, which fully shows that the predictors in the regression models do not have multicollinearity (D.C. Montgomery and E.A. Peck (1982).

IV. Findings, Conclusions and Suggestions:

This paper support for existing literatures such as Deloof(2003), Ioannis Lazaridis & Dimitrios Tryfonidis (2006), Huynh Phuong Dong & Jyh-tay Su (2010) , Richard Kofi Akoto, et, al. (2013) and who tracked down a solid negative connection between the proportions of WCM including AR, AP, CCC, FATA, SL and DR with profitability.

The negative correlation between AR-measured profitability and CCC-measured WCM efficiency demonstrates that when CCC is longer, profitability is smaller. This study indicates that managers can increase shareholder value by lowering the CCC to a tolerable level.

The results of a research of the relationship between WCM and profitability on the BSE also show that there is a negative relationship between the number of days AR, the number of days INV, and profitability. As a result, we contend that managers increase profitability by reducing the number of days AR and INV.

Furthermore, our analysis suggests that profitable enterprises are waiting for retentive to pay their expenses. However, compared to other earlier research on the association between WCM and profitability, the duration of the present study is brief. The sample does not reflect the population profoundly, thus. Furthermore, the research only refers to internal elements but does not examine outside influences the degree of economic activity as a stupid industry. For future studies these constraints might be overcome by a gander.

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An Empirical Study of Association Between Working Capital Management (WCM) and Profitability:
Evidence from Bombay Stock Exchange (BSE) Listed FMCG Companies

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