

# IMPACT OF WORKING CAPITAL MANAGEMENT ON STOCK PRICES OF FMCG COMPANIES IN INDIA

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## ABSTRACT

*The objective of the paper is to establish the relationship between various components of working capital management on the stock prices of six FMCG companies in India. Hence the objective of the paper is to analyse the impact of current ratio, inventory turnover ratio, receivable turnover ratio and EPS on stock prices of Nestle, HUL, Marico, Dabur, Gillette, P&G. The time period for analysis is from April 2000 to March 2014. The data on various components of working capital is collected from annual reports of the companies. The data on stock prices is from Bloomberg. The frequency of the data is annual. The Fixed effects panel model was applied to find the impact of various explanatory variables on stock prices. The paper concludes that current ratio, inventory turnover ratio and EPS impact the stock prices and that the impact of receivable turnover ratio is relatively less. There is a negative relationship between current ratio and stock prices. Inventory Turnover Ratio, and EPS has a positive relationship with Stock Price.*

**Key Words:** *Working Capital Management, Current Ratio, Receivables Turnover, Inventory Turnover Ratio, Stock Prices, EPS, Fixed Effects Model.*

## Introduction

Management of working capital is a well-known subject not only from the academic point of view but also from the real world situation. The efficiency with which the working capital is managed in a business firm is of great importance for its overall growth or decline. The significance of working capital rises from industry to industry. A business firm in the capital goods industry may have relatively a lower percentage of the total investment in the current assets than what has to be blocked up in fixed assets. The working capital management may assume a greater importance in consumers' goods industry, trading firms etc. But, whatever may be the size of business it is important to maintain a desirable portion of working capital in the business. It is the 'life blood' of each and every business concern.

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According to Losbichler and Mahmoodi (2012) “*Working capital is one of the most powerful and least understood drivers for supply chain managers to improve a company’s cash flow and profitability*”. Moreover, corporate financial literature have historically focused most upon long-term financial decisions, such as investments, capital structure, dividends or company valuation. Research within short-term financial management and working capital management is limited. Much of the research done before within short-term financial management have analyzed mostly financial ratios as part of working capital management, few studies have discussed working capital policies in specific.

Fewer have been looking at working capital from an investors point of view and whether it is relevant from investment purposes or if it can be ignored. While the firm’s profitability or accounting profit is an important factor in a management’s performance a direct concern for shareholders is wealth maximization and firm value which stock performance shows (Bana, 2012).

An efficient Working capital will report good net working capital which will determine the financial condition of a firm and stock prices will reflect this information and will adjust accordingly. Some component of working capital also supports creditors and investors because working capital generates cash by converting short-term assets. By analysing the working capital investor can determine the financial position and expected future cash flows on the basis of this information they may decide to sell, buy or hold their securities.

The main focus of this paper is to identify the relationship between the variables of the working capital policies with the stock performance to see if there is a casual relationship.

### **Literature Review**

In this section, there are some studies associated to the area of the study that has been investigated earlier by other researchers. Working Capital plays a very important role to maximize shareholder wealth and value (Shin & Soenen,1998). The liquidity and profitability is affected by the effective working capital management and is also a very critical process..(Sathyamoorthi & Wally-Dima, 2008) in their study concluded that companies tend to have modus and traditional approach to working capital management which commend that it is not static but changes with the state of the country’s economy. Their study was based on domestic companies listed on Botswana stock exchange. They also concluded that in times of high volatility companies adopt traditional approach and in time of low volatility companies adopt aggressive approach towards working capital management.

(LIN, LIU, & CHU 2005) used the Spraaakman (1979) growth model on Tramp shipping industry of Taiwan and concluded in their study that earning per share can be used as a tool by managers of a firm to increase their profit and achieve higher stock prices and this will report a good net working capital. (Mathew et al. 2010) indicates that companies which tend to have greater capacity for internal financing and has greater capital market access have conservative approach towards policies regarding working capital management. It means for efficient production and rapid sales firms have to rely on internal financing sources .A good net working capital is and indicator for availability of liquidity which may affect stock prices positively or negatively. (Hill, Kelly, & Highfield, 2010) investigated the factors that influence working capital behaviour and find a weak and negative correlation between working capital requirements and market share. Proper management of receivables and payables lead to a cash flow stream. (Peterson & Rajan, 1997) found out in their study that receivables of a firm has a direct relation with capital market access and firm profitability and Emery(1987) suggested that it will a profitable move to increase inventory in time if sales of the firm increases on the other hand the management of a firm and its working capital has directly affects the size of inventory this means that cash generation process is affected by inventory as it is one of the major component of working capital which makes the firm able to meet its debts as its time to maturity closes.(Awad & Al-Ewesat,2012) examined the relationship between working capital and stock prices by using Regression Analysis and Granger Causality test also concluded that Current Ratio and Earning per Shares are positively correlated to stock price and inventory turnover whereas there is a negative relationship between receivable turnover and stock prices. (Nobanee et al. 2009) in his study indicated that if working capital management efficiency is measured accurately and the optimal levels of receivables, payables and inventory are analysed and identified accordingly. So these financial ratio related to working capital can be used to determine efficiency and can be used to measure the relationship among working capital components and stock prices.

### **Objective and Research Methodology**

The objective of the paper is to establish the relationship between various components of working capital management on the stock prices of six FMCG companies in India. Hence the objective of the paper is to analyse the impact of current ratio, inventory turnover ratio, receivable turnover ratio and EPS on stock prices of Nestle, HUL, Marico, Dabur, Gillette, P&G.

## Methodology

In the model price is taken as dependent variable and major components of working capital are taken as independent variable that are:

### Independent Variable

#### 1. Current Ratio:

This measures the company's ability to pay its short term obligations. It gives an idea to the company about its payables and debts. The higher this ratio the more capable the company will be able to pay its obligations.

#### 2. Receivables Turn over:

This is an activity ratio which indicates that how a firm uses its asset efficiently. The higher this ratio indicates that the company will have lower amount of uncollected sum of receivables from its operations.

#### 3. Inventory Turnover:

This is an efficiency ratio which indicates how a firm sells and replaces its inventory over a period. The higher this ratio will indicates strong sales and ineffective buying.

#### 4. Earnings per share:

This ratio indicates a firm profitability of a firm. A negative earnings per share indicates more expenses than revenue.

### Data

Six FMCG companies namely Nestle, HUL, Marico, Dabur, Gillette, P&G were selected. The time period for analysis is from April 2000 to March 2014. The data on various components of working capital is collected from annual reports of the companies. The data on stock prices is from Bloomberg. The frequency of the data is annual. The following table 1 gives the construction of the explanatory variables.

**Table 1**

Independent Variable	Code	Calculation
Current Ratio	CR	Current assets/ current liabilities
Receivables turnover	RT	Net sales/ (average account receivables)
Inventory turnover	IT	COGS/ (average inventories)
EPS	EPS	Net income/ outstanding shares

## Research Methodology

### Fixed Effect Models

Panel data can help reduce omitted variable problems. Fixed effects models allow the intercept in the regression model to differ cross-sectionally but not over time, while all of the slope estimates are fixed both cross-sectionally and over time. This approach is evidently more parsimonious than a SUR (where each cross-sectional unit would have different slopes as well), but it still requires the estimation of  $(N + k)$  parameters. We can use the unobserved factors affecting the dependent variable as consisting of two types: constant and vary over time.

The equation for the fixed effects model becomes:

$$Y_{it} = \alpha_i + \beta_1 X_{it} + u_{it} \quad [\text{eq.1}]$$

Where

- $\alpha_i$  ( $i=1 \dots n$ ) is the unknown intercept for each entity (  $n$  entity-specific intercepts).
- $Y_{it}$  is the Dependent variable (DV) where  $i$  = entity and  $t$  = time.
- $X_{it}$  represents one Independent Variable (IV),
- $\beta_1$  is the coefficient for that IV,
- $u_{it}$  is the error term

Fixed Effect Model explores the relationship between predictor and outcome variables within an entity (company, etc.). Each entity has its own individual characteristics that may or may not influence the predictor variables. When using Fixed Effect Model we assume that something within the individual may impact or bias the predictor or outcome variables and

we need to control for this. This is the rationale behind the assumption of the correlation between entity's error term and predictor variables. Fixed Effect Model removes the effect of those time-invariant characteristics so we can assess the net effect of the predictors on the outcome variable. Another important assumption of the Fixed Effect Model is that those time-invariant characteristics are unique to the individual and should not be correlated with other individual characteristics. Each entity is different therefore the entity's error term and the constant (which captures individual characteristics) should not be correlated with the others.

Another way to see the fixed effects model is by using binary variables. So the equation for the fixed effects model becomes:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \dots + \beta_k X_{k,it} + \gamma_2 E_2 + \dots + \gamma_n E_n + u_{it} \quad [\text{eq.2}]$$

Where

- $Y_{it}$  is the dependent variable (DV) where  $i$  = entity and  $t$  = time.
- $X_{k,it}$  represents independent variables (IV),
- $\beta_k$  is the coefficient for the IVs,
- $u_{it}$  is the error term
- $E_n$  is the entity  $n$ . Since they are binary (dummies) you have  $n-1$  entities included in the model.
- $\gamma_2$  Is the coefficient for the binary repressors (entities)

The fixed effect model which is used in this paper is based on equation 2. Hence the following equation is used in this paper:

$$\text{Stock\_Price} = c(1) + c(2) * \text{Current\_Ratio} + c(3) * \text{Receivables\_Turnover} + c(4) * \text{Inventory\_Turnover} + c(5) * \text{EPS} + c(6) * D2 + c(7) * D3 + c(8) * D4 + c(9) * D5 + c(10) * D6 \quad [\text{eq.3}]$$

Where

$C(i)$ : coefficients of variables

$D2, D3, D4, D5, D6$  are companies dummies for HUL, PG, Gillete, Marico and Dabur respectively.

### Analysis and Interpretation

To get the result of equation 3 above E-views software is used. The result of the Fixed effects OLS regression equation are shown in table 2 below.

TABLE 2

Variable	Coefficient	Prob.
C(1)	-711.9337	0.0995
C(2)	-459.2686	0.0002
C(3)	1.172791	0.8420
C(4)	57.47089	0.0561
C(5)	40.45117	0.0000
C(6)	629.0560	0.0479
C(7)	209.7358	0.5838
C(8)	1738.100	0.0001
C(9)	870.3796	0.0109
C(10)	880.6939	0.0179
R-squared	0.898313	
Adjusted R-squared	0.885946	
F-statistic	72.63628	
Prob(F-statistic)	0.000000	
Hannan-Quinn criter.	14.80436	
Durbin-Watson stat	0.844668	

Theoretically, if the connection between working capital and stock prices exists then indigenous policies regarding working capital should be adopted to achieve higher stock price. The managers of a firm and investors can predict the behavior of this relationship by utilizing a firm current ratio (CR), receivables turnover (RT), inventory turnover (IT), Earning per ratio (EPS) with stock prices (PI).

The overall fit of the model is good which is clear from the value of adjusted R square which is 88.59. current ratio (CR), inventory turnover (IT), Earning per ratio (EPS) turns out to be significant and receivables turnover (RT) is not significant at 10% level of significance as it is clear from the p value.

As far as companies dummies (differential dummies) are concerned in the case of P&G the price is not impacted by various components of working capital. In the case of Nestle, HUL, Marico, Dabur and Gillette various components of working capital effects the value of the share.

## Conclusion and Recommendations

The paper concludes that the current ratio, inventory turnover and EPS impacts the stock prices of Nestle, HUL, Marico, Dabur, P&G and Gillette. Receivables turnover does not impact stock prices.

There is a negative relationship between current ratio and stock price of the company. High current ratio signifies that more liquid assets are there to finance the current liabilities, hence more funds are blocked in the working capital management. From the financial markets perspective this is not a sound financial management. Particularly when the short term interest rate in India is high. It does not make much sense to hold so much of liquidity by the company.

The relationship between inventory turnover, EPS and stock prices both are positive. High inventory turnover means less investment in inventory. Hence less funds are blocked in the inventory management. Though the companies' working capital management has significant impact on the bottom line and efficiency of operations, the most important factor considered by investors is the profitability, which is reflected in the EPS component.

One can safely concluded that various components of working capital management impacts the stock prices of various FMCG companies.

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