REVIEW ARTICLE

Management Insight, Vol. XVIII , No. 1; 2022 Print ISSN: 0973-936X; Online ISSN: 2456-0936

Effect of Working Capital Management on Profitability: A Study of Indian Paint Industry

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Abstract

Working Capital Management is an important element of firms' financial policy and represents the balance of current assets and current liabilities. It has a crucial impact on the working, solvency and profitability of the firm. Various studies have also contributed towards this theory that effective working capital management has positive impact in increasing firm's value. A firm must plan effectively to maintain a healthy trade-off between liquidity and profitability. The current paper endeavors to look at the effect of working capital administration on the profitability of the Indian paint industry. For the study, 6 companies of Indian paint industry have been selected covering a period of 10 years from 2011 – 2020. To develop a relationship model between working capital management and profitability, four independent variables were used: current ratio, quick ratio, debtor turnover ratio, and inventory turnover ratio, with Return on Equity as the measure of profitability acting as a dependent variable. Panel data regression and pooled Ordinary Least Square regression were used in this study. Working capital management has a significant impact on the profitability of the Indian paint industry, according to the findings of the study.

Keywords: Working Capital, Return on Equity, Panel Data Regression, Current Assets, Current Liabilities, Profitability.

Management Insight (2022). DOI: https://doi.org/10.21844/mijia.18.1.10

Introduction

Business is always setup with an idea of expanding it. Those firms who fail to do so ultimately perish. Business also plays a crucial role in the formation and growth of society and the nation as a whole. Hence, effective management is required in managing the resources of business. A major effort is needed in managing the current assets of the firm like inventories, cash and receivables. Any mismanagement can negatively impact a company's profitability, thus it's critical for any company to keep its working capital at a healthy level. (Mahato & Jagannathan, 2016). Working Capital Management is an area which requires maintaining a balance between profitability and liquidity. It encompasses settling on the size and composition of current assets, as well as the way of financing those assets. The higher is the ratio of current assets in the total assets of the firm, the lesser is the risk of running out of funds to meet out any short term obligations or exigencies. However, this cannot be taken as the rest situation as the investment in current assets generates very less return and will have serious implications over profitability. In the process of working capital management, a firm may encounter an asset liability mismatch situation, which may be beneficial from profitability point of view in short run, may be due to less investment in current assets, but this may create a risk of insolvency in long term (Padachi, 2006). On the other hand, due to excessive investment in current assets, a firm is unable to take advantage of other investment possibilities which might diminish the total rate of return to shareholders, thereby reducing their wealth. Hence, the firm should try to manage this trade-off between liquidity and profitability to ensure smooth working (Raheman & Nasr, 2007). Many studies have been conducted on various areas of working capital management, with the conclusion that good working capital management is required to increase shareholder wealth. (Shin & Soenen, 1998) and profitability and liquidity are the

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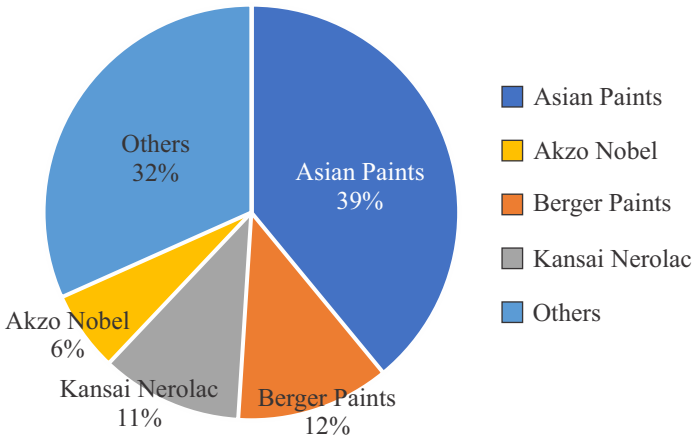
Email: shishirgujrati@gmail.com
How to cite this article: Gujrati S.K., Yadav S. (2022). Effect of Working Capital Management on Profitability: A Study of Indian Paint Industry, Management Insight, 18(1) 83-94
Source of support: Nil
Conflict of interest: None
Received: 03.05.2022; **Accepted:** 29.05.2022; **Published:** 14.06.2022

ultimate objectives of working capital management (Smith et. al, 1997). However, the undertaken industry has not been under much consideration and much literature is not available regarding the relationship between the profitability and working capital management in the Indian paint industry. Thus, the current study has been attempted to fill in the research gap existing and to provide useful insights into the profitability of Indian paint industry.

About the Industry

Humans have been surrounded by colours since the dawn of time, when they lived in caves, until now, when they live in contemporary homes. These colours have their own language and speak up regarding the tradition, culture and religion of a person. The Indian paint industry was initiated with the establishment of first paint company by Shalimar Paints in 1902 in Kolkata and has seen the changing mood of public from the general white wash to distempers and further shift to decorative paints like emulsions and enamels. Increasing preference of people towards the use of decorative paints due to growing level of income and the introduction of new technologies in the manufacturing of paints has propelled the growth of the industry. Asian Paints, Nerolac Paints, and Berger Paints have the majority of the market share in the paint sector. Apart from these, there are many small sector paint companies which constitute the unorganized sector. Out of the total output of paint industry, about 25% is consumed by the industrial sector while rest 75% is consumed by the domestic sector in the form of enamels, emulsions, paints, putties etc. The total value of paint industry was at US$ 7.1 billion at the end of FY 2019-20 with Asian Paints holding a market share of 39%, Berger Paints 12%, Kansai Nerolac 11%, Akzo Nobel 6% and others 32%.

Fig 1: India's Paint Market Share Holding



Source: Nirmal Bang Institutional Research

The domestic paint industry has grown at a CAGR of 10.4% in the last decade in which the contribution of decorative paint segment in CAGR is at 11.4% while the industrial paint segment has grown with a CAGR of 7.9%. The paint industry is primarily a raw material-intensive industry, with crude oil accounting for almost half of all raw materials. To become completed goods, these raw ingredients go through a processing cycle. Due to the longevity of this production process, paint industry needs to invest in working capital and efficient working capital management becomes an important issue for their profitability and survival.

Literature Review

Teruel & Solano (2007) found in their study that managers can add to the value of their enterprise by reducing their inventory and accounts receivable days. Sharma & Kumar (2010) found out that working capital management and profitability is positively correlated. Their study revealed that inventory and debtors' days are negatively correlated and cash conversion period and creditors' days are positively correlated to profitability. Vishnani & Shah (2007) had an opinion that a firm should maintain a balance between liquidity and profitability as imbalance can have impact over firm's solvency and earnings. Eljelly (2004) found a negative relation between firm's profitability and liquidity levels using regression analysis. They also discovered that the cash conversion period has a greater impact on profitability than the current ratio. Ghosh & Maji (2004) found out that working capital management was not up to the proper level in Indian cement industry resulting in low profitability during the time period of 1993 – 2002. Padachi (2006) performed the working capital analysis of small manufacturing firms and arrived at that profitability is affected towards lower side due to high investment in inventories and receivables days. He also

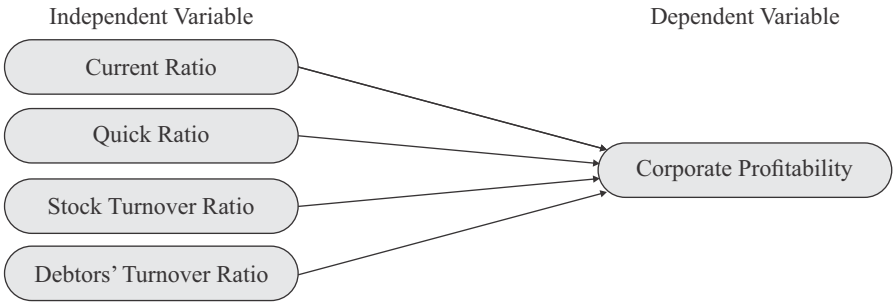
revealed that there is an emerging trend of financing working capital through short term fund sources. Ramanaiah (2011) conducted a study over liquidity management in Maa Fruits Pvt. Ltd. and opined that a firm striving to maximize profits should not do that at the cost of liquidity. Firms can significantly improve their chance of survival and profitability if effective liquidity management is done. Singh & Pandey (2008) studied the role of working capital management in the profitability of Hindalco. Using regression analysis, they discovered the major impact of current ratio, quick ratio, receivable turnover ratio and working capital to total assets ratio on profitability. Deloof (2003) studied the relationship between working capital management and profitability of Belgian firms where he noticed a negative correlation between the firm's profits and account receivable and inventory days. His suggestion was that the profitability and firms' value can be increased if inventories are kept within reasonable limit and account receivables are realized earlier. Paul & Mitra (2018) analyzed the situation in Indian Steel industry to conduct a study over the impact of working capital on the firms' profitability. He performed pooled OLS on 35 steel companies to derive the results that acid test ratio and debtors' turnover ratio are having more impact on the firm's profitability. Raheman & Nasr (2007) conducted a study on the impact of working capital management on the performance of Pakistani corporates to find that profitability is negatively correlated with the collection period and cash conversion cycle. Dong & Su (2010) did the study on the effect of working capital on the liquidity and profitability of the firms in Vietnam where he found a strong negative relationship amid profitability and cash conversion cycle. He opines that managers can add value to their enterprise by reducing the days of cash conversion cycle. Bhatia & Srivastava (2016) performed the panel data and OLS on the companies in India to check the relationship of working capital management with their performance and found that working capital management should always be upgraded for better profitability.

Objective of the Study

The study's main goal is to determine the impact of working capital management on the cost effectiveness of the Indian paint companies.

Theoretical Framework

Fig 2: Concept diagram of theoretical framework



Research Methodology

Data Sources:

The study examines various elements of working capital management and attempts to establish a link between these factors and the profitability of paint companies. The study has been done for a period of 10 years i.e. from 2011 – 2020. The data of companies have been collected from their annual reports and other financial websites like moneycontrol.com, businessstandard.com and financialexpress.com. This information has also been reorganized and tabulated to meet the study's objectives.

Sample Frame:

This study is mainly confined to the study of organized sector of Indian Paint Industry. It consists of 12 major companies out of which, data of only six companies are available as these are only publically listed on stock exchanges. These six companies are also the top players in the industry and hence, they have been chosen for the study. The data for a period of 10 years (2011- 2020)

have been taken for these six companies. The data analysis entails descriptive and panel data analysis in order to build an empirical model and determine a link between working capital management and paint industry's profitability.

Regression Model:

The data set is subjected to analysis through panel data regression in order to create a model for scrutinizing the impact of various working capital management variables on the paint industry's profitability. Through panel data regression, attempt has been made to construct a model of study by pooling both time series and cross sectional data. The model is hereunder:

$$\mathbf{ROE_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 QR_{it} + \beta_3 DTR_{it} + \beta_4 STR_{it} + e_{it}}$$

where,
'i' represents number of firms and 't' represents number of years. $\beta_0, \beta_1, \beta_2, \beta_3$ and β_4 represents coefficients of independent variables and error term is represented by 'e'.
CR = Current Ratio,
QR = Quick Ratio,
DTR = Debtors' Turnover Ratio
STR = Stock Turnover Ratio.

The regression model which we aim to develop has Return on Equity (ROE) as dependent variable which is calculated by dividing the net income of the firm with the shareholders' equity which can further be calculated by deducting external liabilities from the total assets or by adding up share capital and reserves. The independent variables in the model are current ratio and quick ratio which point towards the liquidity position of the firm and debtors' turnover ratio and stock turnover ratio which shows the operational effectiveness of the firm. These variables are detailed as:

- **QR** – It is the quick ratio used for assessing very short term liquidity position of the firm and is calculated as a ratio of Current Assets – (inventories + Prepaid Expenses) on Current Liabilities.

- **CR –** It is the ratio of current assets to current liabilities that is used to measure a company's short-term liquidity status (within one year).

- **DTR** – It is the debtors' turnover ratio which is calculated as net sales by average debtors.

- **STR** – It is the stock turnover ratio which shows the effectiveness with which the inventory is rotated in business and is arrived at as a ratio of net credit sales on average stock.

Steps in Model Development

In order to develop model for the study, various steps have been taken. First of all, the cross sectional data of all the six companies taken were arranged over the time series and were tested for the fitment of the pooled ordinary least square regression. This was done to check out whether panel data regression analysis could be carried out or not.

Next step was taken to see whether fixed effect regression is fit or not to check that intercept may vary over variables but their slope is fixed over the time period. As the next step, random effect regression is carried on to check that whether the intercept is the common mean value for all variables or not. As the last step, application of Hausman test is done to check the applicability of either of the fixed effect or random effect using the null hypotheses for the applicability of random effect and alternate hypotheses for the applicability of fixed effect regression model.

Hypotheses of the Study

The study has been done to test the following hypotheses:

- The relation between CR and ROE is not significant.

- The relation between QR and ROE is not significant.

- The relation between DTR and ROE is not significant.

- The relation between STR and ROE is not significant.

Data Analysis

Table 1: Financial Ratios of Berger Paints India Ltd

Year	Current Ratio	Quick Ratio	Debtor Turnover Ratio	Stock Turnover Ratio	Return on Equity
2011	1.67	0.88	9.86	5.27	21.79
2012	1.43	0.75	10.12	5.32	22.78
2013	1.42	0.76	9.51	5.26	22.93
2014	1.24	0.68	9.48	5.56	22.26
2015	1.46	0.82	9.32	6.01	21.01
2016	1.69	0.97	7.77	5.76	23.72
2017	1.74	0.95	7.93	4.87	24.9
2018	1.68	0.96	7.45	5.13	20.99
2019	1.69	0.88	9.13	4.91	20.13
2020	1.52	0.77	8.9	4.98	24.72

Table 2: Financial Ratios of Kansai Nerolac Paints

Year	Current Ratio	Quick Ratio	Debtor Turnover Ratio	Stock Turnover Ratio	Return on Equity
2011	2.23	1.42	10.08	6.05	22.48
2012	1.99	1.13	9.76	5.73	20.3
2013	1.7	0.85	7.87	5.23	22.77
2014	1.79	0.85	8.39	4.84	14.58
2015	2.14	1.25	8.65	6.46	17.11
2016	2.57	1.9	6.87	6.7	38.92
2017	3.39	2.4	6.87	5.78	18.03
2018	2.97	2.02	6.64	5.69	16.52
2019	2.8	1.44	7.16	4.91	13.64
2020	3.37	1.99	6.76	5.31	14.13

Table 3: Financial Ratios of Akzo Nobel India

Year	Current Ratio	Quick Ratio	Debtor Turnover Ratio	Stock Turnover Ratio	Return on Equity
2011	3.42	3.01	15.92	7.16	16.2
2012	2.49	2	14.61	5.96	14.12
2013	1.33	1.05	10.36	7.09	19.82
2014	1.23	0.94	9.6	7.46	17.74
2015	1.14	0.94	9.55	6.93	20.28
2016	1.09	0.8	7.45	7.63	27.78
2017	1.52	1	6.29	6.35	24.51
2018	1.76	1.36	6.89	7.75	31.07
2019	1.59	1.15	6.52	7.45	18.6
2020	1.63	1.19	6.76	6.28	19.2

Table 4: Financial Ratios of Shalimar Paints

Year	Current Ratio	Quick Ratio	Debtor Turnover Ratio	Stock Turnover Ratio	Return on Equity
2011	1.12	0.68	4.31	4.9	22.97
2012	1.14	0.68	4.26	4.6	23.76
2013	1.17	0.68	4.12	4.02	15.26
2014	1.14	0.71	3.68	3.98	-3.96
2015	1.02	0.66	3.33	4.09	-17.99
2016	1.08	0.69	3.24	3.63	8.3
2017	0.97	0.66	2.94	3.78	-5.27
2018	0.74	0.51	2.72	3.66	-33
2019	1.11	0.83	3.14	4.03	-26.77
2020	0.82	0.45	4.48	3.97	-13.99

Table 5: Financial Ratios of Asian Paints

Year	Current Ratio	Quick Ratio	Debtor Turnover Ratio	Stock Turnover Ratio	Return on Equity
2011	1.47	0.85	15.57	5.92	38.54
2012	1.28	0.71	16.06	6.02	35.97
2013	1.37	0.74	14.29	5.99	32.91
2014	1.48	0.88	14.08	6.14	30.17
2015	1.52	0.88	14.43	6.28	29.41
2016	1.82	1.19	15.07	7.14	26.74
2017	1.79	1.12	14.49	5.73	25.5
2018	1.55	0.96	10.87	6.33	24.24
2019	1.47	0.86	10.58	6.11	22.76
2020	1.73	0.96	10.92	5.96	26.7

Table 6: Financial Ratios of Indigo Paints

Year	Current Ratio	Quick Ratio	Debtor Turnover Ratio	Stock Turnover Ratio	Return on Equity
2011	1.9	1.18	6.27	7.85	41.81
2012	1.88	1.35	5.34	9.67	19.49
2013	1.83	1.22	5.32	10.59	14.87
2014	1.53	0.99	5.23	9.04	8.33
2015	1.54	1.16	4.38	8.78	12.65
2016	1.31	1.03	3.76	5.54	-4.5
2017	1.25	0.86	3.69	6.08	-16.29
2018	1.17	0.84	3.97	8.15	2.57
2019	1.12	0.75	5.14	7.73	20.8
2020	1.14	0.73	5.98	8.14	26.74

Nature of the Data:

Descriptive statistics is being used to show the nature of data. Table 1 shows a descriptive overview for six firms over a ten-year period from 2011 to 2020, totaling 60 firm-year observations. A wide range in the value of ROE, from -33.0 to +41.8, is observed with a standard deviation of 15.2. The mean return of the paint industry is about 17% which can be considered as a good return. The average current ratio and quick ratio of the industry are 1.64 and 1.05 respectively which is a sign of healthy short term solvency position. However, the minimum and maximum values for both current ratio and quick ratio have wide fluctuations ranging from risky to very comfortable. The table shows that firms took about 46 days on an average to get back their money from debtors which gets extended even to 122 days in some situations. This shows the bad management on part of receivable management. The picture of inventory turnover is also gloomy with about 61 days needed to sell inventory which may get extended to 91 days on the downside.

Table 1: Summary Statistics of the Paint Industry in India

Variable	Mean	Median	S.D.	Min	Max
CR	1.64	1.52	0.601	0.740	3.42
QR	1.05	0.910	0.465	0.450	3.01
DTR	8.07	7.45	3.71	2.72	16.1
STR	6.06	5.96	1.49	3.63	10.6
ROE	16.9	20.6	15.2	-33.0	41.8

Source: The author
Notes CR- Current ratio, QR-Quick ratio, DTR- Debt turnover ratio, STR- Stock turnover ratio, ROE- Return on equity.

Test of Stationarity

H_0: Data is not stationery
H_a: Data is stationery

The data set is subjected to test its stationery property. Levin-Lin-Chu test has been applied on the data set in the study to check their stationarity and the results of the test are tabulated in table 2. These results shows that all the p-values are lesser than 0.05 and our null hypotheses that data is not stationery is rejected and alternate hypotheses is accepted leading us to the conclude that data collected is stationery at all levels. This also confirms that panel data regression may be used for further analysis.

Table 2: Levin-Lin-Chu Unit root test Result

Variables	T statistics	p-value
CR	-4.48	0.0011
QR	-6.442	0.0000
DTR	-4.400	0.0054
STR	-6.187	0.0000
ROE	-4.984	0.0004

Source: The author
Notes CR- Current ratio, QR-Quick ratio, DTR- Debt turnover ratio, STR- Stock turnover ratio, ROE- Return on equity.

Test of Multi-collinearity

Before using a panel regression model, it is necessary to perform a multi-collinearity test. The level of the correlation among different independent variables is identified through the Variance Inflation Factor (VIF). A problem of multi-collinearity will be there if VIF values are more than 10. After applying the test over the data set, we arrived at that VIF values for all independent variables are below 10 and these four variables can be taken for further panel regression analysis. The VIF values are represented in table 3.

Table 3: Test for Multi-collinearity

Collinearity Statistics		
	VIF	1/VIF
CR	7.681	0.1301
QR	7.878	0.1269
DTR	1.111	0.9000
STR	1.183	0.8453

Source: The author
Notes CR- Current ratio, QR-Quick ratio, DTR- Debt turnover ratio, STR- Stock turnover ratio, ROE- Return on equity.

Panel Data Analysis

In our empirical model, which has been developed to examine the result of working capital administration on the profit of the Indian Paint Industry, time series elements have been represented by 't' and cross sectional details have been represented by 'I'. the model to be tested is as:

$$ROE_{it} = \alpha + \beta_0 + \beta_1 CR_{it} + \beta_2 QR_{it} + \beta_3 DTR_{it} + \beta_4 STR_{it} + e_{it}$$

Only after deciding which model to be used, can the panel data regression results be analyzed. The following steps were undertaken for this purpose:

As a first phase, we combined 10-year time series data and cross-sectional data for six Indian paint companies from 2011 to 2020. The common intercept term and common slope coefficient were obtained in the second stage using pooled OLS regression. Table 4 shows that the regression's explanatory power is very good as adjusted R^2 is 0.5068 with the coefficients of CR, QR, DTR and STR. From the table, it is observed that all CR, QR, DTR and STR coefficients are significant in the model as the probabilities of all of them are less than 5%. As a result, it can be inferred that none of the null hypotheses are valid and all the variables i.e. CR, QR, DTR and STR have significant relationship with ROE.

Table 4: Results for Pooled OLS Regression

Model Specification	Constant	CR	QR	DTR	STR	Adjusted R-squared	Test	p-value
Data pooled and common intercept and slopes (p-value)	-30.22 (0.00) ***	21.74 (0.00) ***	-27.81 (0.00) ***	2.12 (0.00) ***	3.89 (0.00) ***	0.5068	F	0.0000 ***

Source: The author
*Notes: CR- Current ratio, QR-Quick ratio, DTR- Debt turnover ratio, STR- Stock turnover ratio, ROE- Return on equity. *** Significance at 1%, ** Significance at 5%, *Significance at 10%,*

Next, in order to test the null of a common intercept and slope coefficient verses the alternate of applying individual regression for each cross section, a pool ability test was performed. This test indicates that this data should not be pooled for regression purpose as the probability value for F statistics of the regression equation is less than 5% level of significance and point towards rejection of null hypotheses. Table 5 presents the validity of fixed effects and fixed time effects as calculated in the third step. The table reveals that the descriptive ability of the regression decreased i.e. R2 is now 0.2288 which suggests that only 22.88% variations in the dependent variable (ROE), can be described by the disparity in the explanatory variables. The table also shows the computed likelihood of F statistics, which indicates that null hypotheses are rejected since the significance level is less than 5%. This means the model is well fitted and the coefficients are not equal to zero. In the test, only OR & STR coefficients are significant as their probabilities are less than 5% which shows that only QR & STR were fitted well and both CR & DTR are not fitted well and their probabilities are more than 5% significant level. Hence, it can be concluded that null hypotheses H2 & H4 are rejected i.e. QR & STR have significant effect on the profitability of the companies of paint industry whereas the null hypotheses H1 & H3 are accepted that CR & DTR do not have major effect on the performance of the paint industry.

Table 5: Fixed Effect Regression result

Model Specification	Constant	CR	QR	DTR	STR	Adjusted R-squared	Test	p-value
Common slopes with cross section specific intercept (p-value)	-35.99 (0.02) **	23.34 (0.053) *	-29.92 (0.03) **	1.26 (0.14)	5.91 (0.00) ***	0.2288	F	0.0101 **

Source: The author
*Notes: CR- Current ratio, QR-Quick ratio, DTR- Debt turnover ratio, STR- Stock turnover ratio, ROE- Return on equity. *** Significance at 1%, ** Significance at 5%, *Significance at 10%,*

The validity of the random effect was next investigated, with the results shown in table 6. The results revealed an improvement in the descriptive power of the regression equation over the fixed effect i.e. the value of R2 is now 0.5369 which states that 53.69% of disparity in the dependent variable (ROE), can be explained by the variations in the explanatory variables. The computed likelihood of Wald Chi square statistics points to the rejection of null hypotheses because the level of significance is less than 5%. This indicates that the model is well-fitting and that the coefficients aren't zero. However, in this model, all four coefficients of CR, QR, DTR & STR are significant and their p-values are below 5%. Hence, it can be concluded that all the null hypotheses i.e. H_1, H_2, H_3 & H_4 are not accepted and CR, QR, DTR & STR have significant impact over the profitability of the paint firms.

Table 6: Random Effect Regression result

Model Specification	Constant	CR	QR	DTR	STR	Adjusted R-squared	Test	p-value
Common mean value for the intercept (p-value)	-32.10 (0.00) ***	23.38 (0.00) ***	30.20 (0.00) ***	1.94 (0.00) ***	4.39 (0.00) ***	0.5369	Wald chi square	0.0000

Source: The author
*Notes: CR- Current ratio, QR-Quick ratio, DTR- Debt turnover ratio, STR- Stock turnover ratio, ROE- Return on equity. *** Significance at 1%, ** Significance at 5%, *Significance at 10%,*

As the last step of model development, appropriateness of either fixed effect or random effect is checked. This was done through the application of Hausman test. The null hypotheses of the study emphasized on the appropriateness of the random effect model while the alternate hypotheses explained the utility of the fixed effect model. For taking up Hausman test, we formulated following hypotheses:

H_0: Random Effect Model is Applicable
Ha: Fixed Effect Model is Applicable

The results are tabulated in table 7 which indicates the appropriateness of Random Effect Model over Fixed Effect Model as the p-value of Chi-square is more than 5% level of significance leading to the acceptance of null hypotheses.

Table 7: Fixed Effect versus Random Effect: Hausman Test

Model Specification	Constant	CR	QR	DTR	STR	Adjusted R-squared	Test	p-value
To test whether model is fixed effect or random effect							Chi-square	0.4948

Source: The author
*Notes: CR- Current ratio, QR-Quick ratio, DTR- Debt turnover ratio, STR- Stock turnover ratio, ROE- Return on equity. *** Significance at 1%, ** Significance at 5%, *Significance at 10%,*

From the random effect model, it was apparent that three variables i.e. current ratio, debtors' turnover ratio and stock turnover ratio have a notable positive effect on the firm's ROE with less than 5% probabilities. Quick ratio also had probability less than 5% but was having a negative effect over ROE of the firm. The model revealed 53.69% of the disparity in the dependent variable, ROE, is described by the variations in the descriptive variables. Hence, it can finally be concluded that all the variables i.e. CR, QR, DTR & STR have significant impact over the companies' profitability in paint industry. The variable QR, on the other hand, appears to have a negative or inverse association with profitability.

Conclusion

It is evident in the studies of Asghar & Syed (2012) that a firm can increase its profitability through effectively managing working capital which will also have a positive effect on the total assets and financial performance of the firm. The study of Shubita (2013) also confirms that if working capital is managed properly, it will help in increasing the profitability and liquidity & profitability are inversely related. The effect of proper working capital administration on the profitability of six Indian paint companies was investigated in this study, and it was discovered that working capital had a substantial impact on the profitability of the companies. Panel data regression was applied to the data set after validating their stationarity through Levin-Lin-Chu test and their multi-collinearity through unit root test to reveal that CR, QR, DTR & STR have a notable impact on the performance of the paint firms. This also goes in line with the study of Vijayakumaran (2019), who found a negative relationship between net trade cycle with the firm value in the study of listed Chinese firms and opined that they can increase their market valuation by efficiently managing working capital. Thus, the study's conclusion also clearly indicates that the paint companies in India can increase their profitability by managing their working capital efficiently.

Implications On Firms and Managers

This study mainly concentrates on evaluating the impact of working capital management on the profitability of the firm. Practically it demonstrates that profitability, to a large extent, is affected by the variables of the working capital. Thus, through this study, it is advised to the firms that they should put all their efforts in effectively managing their working capital as this will increase their profitability. With increased profitability, the firms can have more funds at their disposal which will increase their chances of long term survival and sustainable growth. Hence, management of working capital should be adequately addressed to increase the efficiency and

profitability level of the organization.

Future Avenues for Research

Further researches can be carried out to find out the effect of individual variables on the working capital. Also industry wise impact of working capital management on profitability needs to be studied. Furthermore, impact of working capital management can also be studied on small and medium enterprises and its role in their flourishment. Another area of research can be how the firms can restructure their capital structure to ensure optimum liquidity at lowest cost.

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