

## **The Effect of Working Capital Management on Profitability of Ceramic Manufacturing Companies in India**

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### **Abstract**

Working capital administration is concerned about momentary speculation and financing choice of an element and is a significant business necessity and a huge piece of corporate account. Hence, this investigation tried to analyze the impact of working capital administration on productivity of ceramic manufacturing organizations in India. The investigation utilized an example of the five ceramic manufacturing firms recorded at the Bombay Stock Exchange.

The examination utilized secondary information from the ceramic manufacturing organizations from the fiscal reports for a time period from 2016-2020. The information gathered was investigated utilizing the Karl Pearson correlation and the multiple linear regressions. The examination results revealed that the Current Ratio, Quick Ratio, Cash Ratio are significantly positively correlated with Working Capital. The study revealed that RER, EPS, DPS, PER, RC, and RA indicate a negative relationship with the Working Capital. The co-efficient of working capital is negative and significant.

**Keywords:** Working Capital Management, Profitability.

### **1. Introductions**

Working capital can be perceived as a proportion of both an organization's productivity and its short term monetary well-being. For a layman, it means the contrast between the current assets and current liabilities. It is the company's property of current assets, (for example, cash).

Working capital is for the most part separated in two types, viz. gross working capital and net working capital. Gross Working Capital (GWC) is only the current assets. Net working capital, NWC (current resources short current liabilities), gives a precise evaluation of the liquidity position of firm with the liquidity-productivity issue unequivocally verified in the monetary plan of commitments which develop inside a year time frame.

Assets are required in each business for continuing everyday tasks. Working capital assets are viewed as the existence blood of a business firm. A firm can exist and get by without making benefit yet can't run without working capital assets. In the event that a firm isn't procuring benefit it very

well might be named as 'sick unit', be that as it may, not having working capital may cause its liquidation working capital to endure. The options are not wonderful. Hence, each firm should conclude how to adjust the measure of working capital it holds, against the danger of failure."

A study of working capital administration is very significant for inside and outside specialists. Deals development, profit presentation, plants extension, new product offering, increment in pay rates and wages, rising cost level, and so forth, put strain on working capital support. Disappointment of any endeavour is without a doubt due to helpless administration and of absence of the executives ability.

Significance of working capital administration stems from two reasons, viz., (I) A generous segment of aggregate speculation is invested into current resources, and (ii) level of current assets and current liabilities will change rapidly with the variety in sales. In spite of the fact that fixed assets speculation and long-term acquiring will likewise react to the adjustments in sales, however its response will be feeble.

### **CERAMIC MANUFACTURING FIRMS IN INDIA**

The ceramic business appeared about a century back and has developed over the long run to shape mechanical base. Throughout the long term, the business has been modernizing through new developments in item profile, quality what's more, plan to arise as a cutting edge, world – class industry, prepared to take on worldwide rivalry. Despite the fact that there are various enormous organizations in the ceramics area, small and medium ventures (SMEs) represent over half of the absolute market in India.

A huge and developing working class population of more than 300 million individuals, a changing way of life, better typical cost for basic items etc. is development drivers for this sector. With the development in the housing area the interest of earthenware is expected to increase. The ceramic manufacturing firms in India taken for study are Kajaria Ceramics, Cera Sanitaryware, HSIL, Asian Granite India, Somany Ceramics.

### **KAJARIA CEMENTS**

The biggest maker of artistic and vitrified tiles in India with a yearly total limit of 73 million. sq. meters, conveyed across eight plants. Furnished with forefront innovation they endeavor to convey quality items and administrations to their clients. Their group of specialists work nonstop to guarantee that the nature of our item is rarely undermined.

To oblige the particular necessities of their clients they produce different classes of tiles, including kitchen tiles, restroom tiles, divider tiles, floor tiles and outside wall tiles. The kajaria target delivering tiles that supplement the unmistakable style of clients and oblige the immense requirements of Indian crowd. The entirety of tiles is created with serious consideration utilizing best in class innovation to guarantee that they satisfy the hopes of the purchasers. Choicest of materials are utilized to create our grand scope of items.

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### **CERA SANITARYWARE**

Cera Sanitaryware Ltd (once Madhusudan Oils and Fats Limited) is occupied with the matter of assembling selling and exchanging of building items and is having non-regular breeze and sunlight based force for hostage use in the State of Gujarat. The organization's principle product offerings are Sanitaryware, Faucetsware and Bathware. Cera Sanitaryware Ltd. a Gujarat based organization was formed in the year July seventeenth 1998. The organization is going by its Chairman Vikram Somany. The organization is occupied with Manufacture of Ceramic Sinks, Wash Basins, Wash Basin Pedestals, Baths Bidets, Water Closet Pans, Flushing Cisterns Urinals and comparative sanitary installations.

### **HSIL**

HSIL Ltd. is the biggest Indian sanitaryware maker. The industry is engaged with the matter of grouping, selling and exchanging of building items, glass items and plastic bundling items, purchaser items and retail business. The organization works into four particular business divisions specifically Building Products Division (BPD) Consumer Products Division (CPD) Retail division (RD) and Packaging Products Division (PPD). They are perceived among the best 300 organizations in India while appraised among the best 100 little and medium estimated organizations on the planet by the Forbes Magazine. The organization is settled in Gurgaon with four assembling units, one situated in Bahadurgarh, Haryana while the other three are situated in Andhra Pradesh. The organization additionally has six local workplaces and 18 stops. Their auxiliaries incorporate AGI Glasspack Ltd, Hindware Home Retail Pvt.Ltd., HSIL Associates Ltd. and Halis International Ltd. HSIL Ltd. was amalgamated in the year 1960 as Hindustan Twyfords Ltd. by the Somanyfamily in a combined effort with Twyfords Ltd UK. The organization was shaped to present glassy china ceramic sanitaryware in India.

### **ASIAN GRANITO INDIA LTD**

Expectations are intended to be tested; and presumptions intended to be busted. Really at that time a genuine pioneer rose up out of a far-fetched position. Asian Granito India Ltd. (AGL) has been quieting the doubters by setting benchmarks universally in the structure materials area. It has exposed fantasies that a youngster organization from a modest community area in Gujarat can lead the adjustment in the business by defining more significant standards, accomplishing the inconceivable and making new benchmarks.

Set up in the year 2000, the AGL has arisen as one of the biggest clay organizations of India in a limited capacity to focus 20 years. Its initiative is set apart by numerous fruitful difficulties our perpetual quest for greatness. Today it has arisen as probably the biggest gathering, with a worldwide impression across in excess of 78 nations. It is India's quickest developing Ceramic Wall and Floor Tile, Glazed Vitrified Tiles, Polished Vitrified Tiles, Composite Marble and Quartz Company.

### **SOMANY CERAMICS**

Established in 1969 by late Shri H. L. Somany, Somany Ceramics is a globally acclaimed association that has some expertise in pottery and unified items fragment. Over the most recent forty years,

Somany Ceramics has established itself as an undisputed colonist in the Indian Ceramic Industry with critical existence in India, Africa, The Middle East, United Kingdom and Russia.

The organization has fabricating plants in Kadi (Gujarat) and Kassar (Haryana), India and other joint endeavor plants, creating an absolute creation limit of 60 million square meters every year. Somany is a finished style arrangements supplier and its broad scope of items incorporate – Ceramic Wall and Floor Tiles, Polished Vitrified Tiles, Glazed Vitrified Tiles, Digital Tiles, Sanitaryware and Bath Fittings just as Tile Laying Solutions.

What makes Somany a significant and believed organization today is its dynamic ability to advance with changing style feel throughout the long term. It comprehends its purchasers, and consequently, its benefactors trust Somany to offer the best tiles, sanitaryware and shower fittings items in India.

## 2. Review of Related Studies

- a) **Yadav, Jain and Rastogi (2001)** studied the effect of working capital management on liquidity of the three blue chip public sector oil firms in India. BPCL, HPCL and IOCL for the period starting from 1987-88 to 1991-92. The data was collected from the official websites of the industries. Here, the liquidity position of BPCL was less satisfactory when compared to the other selected firms.
- b) **Ganesan (2007)** analysed the working capital management efficiency on a sample of 349 telecommunication equipment companies during the period of 2001 to 2007 and found an inverse correlation between liquidity and profitability. His research made it clear that working capital effectiveness can be upgraded by decreasing the days of operational capital, and this would in turn lead to an enhancement in effectiveness.
- c) **J P Singh and Shishir Pandey (2008)** conducted a research on working capital management's effect on profitability of Hindalco Industries Limited. This study was established on secondary data which were collected from annual reports of firms for 17 years period i.e. 1990-2007. The research procedure utilized in this paper was ratio analysis, percentage method, correlation coefficients and multiple regression analysis. The key implications drawn from this study was that current ratio, liquid ratio, receivables turnover ratio and working capital to total assets ratio had statistically important effect on the profitability of Hindalco Industries Limited. 2.
- d) **Sofat Rajni (2010)**, examined a study on Liquidity, Profitability and Risk Analysis of Cement Industry in India from the period of 2003-04 to 2007-08. The sample was seven cement companies. Ratio analysis and chi-square test had been applied to check the relationship between liquidity and profitability. The comprehensive study has shown that the overall relationship between current ratio and ROI was found to be significant and between quick ratio and ROI was not significant at 5% level. It had been witnessed from the study that certain companies like Birla Corporation Ltd. and Dalmia Cement (Bharat) Ltd. had negative correlation between current ratio and ROI but positive correlation between quick ratio and ROI. The level of operational risk was very high in case of Birla Corporation Ltd. and India Cement Ltd. The liquidity ratio of Madras Cement Ltd. was very low. The findings may have been more applicable if the study period was nearly 10 years.
- e) **Kushalappa. S. and Shetty Rekha (2013)** conducted a study on Liquidity, Solvency and Profitability Analysis of Manufacturing Industries in India mainly five manufacturing industries

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i.e. Cement Industry, FMCG Industry, Oil and Gas Industry, Automobile Industry and Pharmaceutical Industry from the year 2008 to 2012. The results showed that Oil and Gas Industry had highest current ratio and Automobile Industry had the lowest current ratio. The study also revealed that ONGC, Bajaj, HUL, Madras Cement, Lupin had maximum return on capital employed, in their relevant industry. Among the sample manufacturing companies, FMCG Industry had maximum return on capital employed ratio and Oil and Gas Industry had the least and so the strong conclusions were that FMCG Industry was the most profitable industry. In case of solvency also FMCG Industry had the lowest debt equity ratio and so was considered to be the most solvent industry. A question that needs to be asked, however, is whether the findings would be applicable to a large sample of manufacturing industries in the future.

- f) **Shruti Minocha(2018)** The present study has examined the relationship between working capital management and its profitability. The research has been conducted on a sample of 20 Cement Industries listed in Bombay stock Exchange for ten years period from 2005 to 2014. The research method adopted in the study was based on the secondary data collected from the annual reports of the companies. Both the quantitative and descriptive model of analysis were used in this study. In quantitative analysis the study applied two methods, Pearson correlation and hierarchical regression analysis. The study found out how working capital management like inventory management, account receivable and account payable management and cash management affects profitability of the cement companies in India. The study has also examined the relationship between the liquidity and profitability and relationship between size of the firm and profitability of the cement companies in India.
- g) **Dr. Krishnamohan Vaddadi, Mrs P. Uma Rajitha(2019)** This paper examined the working capital management in Hero MotoCorp Pvt. Ltd. The main objective of the research paper was to measure the liquidity and solvency position of the select automobile companies in India and compare the relationship between Industry and companies of Automobile by using ratios. The study takes into account 6 Indian Automobile companies, namely, Hero MotoCorp, TVS Motor, Ashok Leyland, Tata Motors, Mahindra and Mahindra and Maruti Suzuki during the period 2008-09 to 2017-2018 for analysing the performance of working capital. In this research paper, the structure and composition of working capital for a period of ten years was analysed to assess the working capital position and net profit. The Pearson's coefficient of correlation was calculated and SPSS tool was used for testing the hypotheses formulated.

### 3. Objective of the Study

To look at the impact of working capital management on the profitability of ceramic manufacturing organizations in India.

### 4. Methodology

To accomplish the investigation target, this examination adopted a quantitative research plan. A quantitative exploration design tends to investigate targets through experimental appraisals that include mathematical estimation and analysis approaches (Zikmund et al., 2011).

The target population consist of all the ceramic manufacturing companies in India. A sample of the five ceramic manufacturing firms listed at the Bombay Stock Exchange was selected for the study. The 5 firms included Kajaria Cements, Cera Sanitaryware, HSIL, Asian Granito India Ltd, Somany Ceramics. The listed companies were chosen due to accessibility of secondary data since they are required to circulate their fiscal reports to the public. The study utilized secondary data from the ceramic manufacturing firms audited financial statements. The data covered a period of 5 years from 2016-2020. The data collected was studied utilizing Karl Pearson correlation and multiple linear regression.

## 5. Data Analysis and Interpretation

**Table No.1**

The following table shows the correlation analysis of selected Manufacturing companies in India during the period from 2015 - 16 to 2019 - 20.

### Correlation Matrix of Ceramics Company

**H<sub>0</sub>:** There is no significant relationship between the dependent(WC) and independent variables (CR,QR and CR) of the selected Ceramic Companies.

**H<sub>1</sub>:** There is a significant relationship between the dependent (WC) and independent variables (CR,QR and CR) of the selected Ceramic Companies.

**Table No.1**

### Correlation Matrix

	<b>Current Ratio</b>	<b>Quick Ratio</b>	<b>Cash Ratio</b>	<b>Working Capital</b>
<b>Current Ratio</b>	1			
<b>Quick Ratio</b>	1.000**	1		
<b>Cash Ratio</b>	.943*	.941*	1	
<b>WorkingCapital Ratio</b>	.991**	.991**	.964**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed).

### Interpretation of Table-1

The above table represents the correlation coefficient of Ceramics. It is observed that the Current Ratio, Quick Ratio, Cash Ratio are significantly positively correlated with Working Capital.

### Multiple Regression

To carry out the influence of working capital and profitability ratio, the hypothesis stated below is tested by regression of the profitability ratio on the working capital. The results of the regression analysis such as the values of the co-efficient, R squared are presented in the table.

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**H<sub>0</sub>:** There is no significant influence between working capital and six independent variables, RER (X<sub>1</sub>), EPS (X<sub>2</sub>), DPS (X<sub>3</sub>), PER (X<sub>4</sub>), RC (X<sub>5</sub>) and RA (X<sub>6</sub>) of selected Ceramic Industries in India.

**H<sub>1</sub>:** There is a significant influence between working capital and six independent variables, RER (X<sub>1</sub>), EPS (X<sub>2</sub>), DPS (X<sub>3</sub>), PER (X<sub>4</sub>), and RC (X<sub>5</sub>), RA (X<sub>6</sub>) of selected Ceramic Industries in India.

**Table No.2**  
**Multiple Regression on Ceramics**

Coefficients									
Model	Unstandardized Coefficients			Standardized Coefficients	t	Sig.	R	R Square	Adjusted R Square
	B	Std. Error	Beta						
(Constant)	-.757	1.143			-.662	.511	.830	.688	.273
RER	1.079	.144	.008						
EPS	1.123	.183	.008						
DPS	1.073	.502	.001						
PER	.965	.037	.016						
RC	.999	.002	.992						
RA	1.247	1.981	.000.						

**Source: Computed**

b. Dependent Variable: Working Capital

a. Predictors: (Constant), RER, EPS, DPS, PER, RC, and RA

**Interpretation of Table-2**

The above table reveals that RER, EPS, DPS, PER, RC, and RA indicate a negative relationship with the dependent variable. It implies that the RER, EPS, DPS, PER, RC, and RA will reduce the 1.079, 1.123, 0.965, 0.999, and 1.247 in working capital of Ceramics. The R square value is .688 which means that the 68 percent variation is explained by the independent variables. The co-efficient of working capital is negative and significant. Overall, the null hypothesis stands accepted at a 1% level of significance.

**6. CONCLUSION**

Working capital management is significant in corporate financial management which has great impact on the firm profitability. So, the firms have to manage their working capital properly in order to attain the objectives of the firm. The main purpose of this study is to identify the impact of working capital management on profitability of ceramic companies in India. This study investigates the impact of working capital management on profitability of ceramic companies for the period of 2016-2020. In the sample of this study the researcher has included 5 ceramic companies from the Bombay Stock Exchange for a period of 2016 to 2020. Only those companies are selected whose financial data of the required variables for the required time period are available. Return on Equity,

Earning per share, Dividend per share, Price Earning Ratio, Return on Capital Employed and Return on Assets are used for the purpose of measuring profitability. Current ratio, Cash ratio and Quick ratio are taken as a measure of liquidity.

### **Tests of hypothesis:**

It is observed that the Current Ratio, Quick Ratio, Cash Ratio are significantly positively correlated with Working Capital.

The findings revealed that there is a negative relationship between the working capital and profitability of the firm. The working capital management has to be efficient to increase the profitability and the firm value. So, on this basis the study recommended that Companies should reduce the duration of collection through which they can produce the value of the shareholder. The results are consistent with the findings of Nobanee (2017), Vijayakumaran and Vijayakumaran (2017) and Lazaridis and Tryfonidis (2006).

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