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Original Research Article

Impact of liquidity and profitability on share price: An analysis of Indian cement companies

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ABSTRACT

Purpose: All of the choices made in the workplace concerning cash, receivables, inventory, and payables influence how a corporation maintains its liquidity level. Liquidity plays a vital role in the successful functioning of every business. The important part in managing working capital is maintaining liquidity on a day-to-day basis to ensure the smooth running of the organisation and to meet its obligations. Hence, it is very important to keep a close eye on the liquidity position of the company as without it, the company cannot survive. But efforts to increase the profitability would tend to reduce firms' liquidity and too much attention on liquidity would tend to affect profitability. No doubt, every firm tries to maximise profitability by maintaining liquidity. But the question arises, is it the liquidity or profitability that helps in maximizing shareholder's wealth by increasing the share price of Indian cement companies? Hence, the study is aimed to understand the impact of liquidity and profitability on the share price of Indian cement companies.

Approach: To determine wheather investors in the cement sector should prefer companies those are liquid or profitable, we applied the t-test, correlation test, and the resultant p-value. It is found that, having a quicker cash conversion cycle (CCCy) increases the company's market value indicating that, higher the liquidity, more is the chances that the share price may go up.

Findings: It is found that the profitability in cement companies isn't as high as the company's ability to pay its debts, i.e. liquidity. In other words, the liquidity of Indian cement companies are more and the profitability is less, and the market value of a firm rises in tandem with the growth in its liquidity. Moreover, when the market value grows, the CCC decreases, whereas the economic value added (EVA) increases.

Value: Prior studies reveal that the working capital requirements of Indian cement companies are much more as compared to other industries. Although low operational cash affects the daily operations of the business, excess working capital usage will harm the firm's profitability. Hence, the question, why do Indian cement businesses need so much of working capital? This study's purpose was to answer it. The findings of this research states that, companies believe that maintaining liquidity will increase their share price.

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1. Introduction

A company's ability to effectively manage its working capital is directly related to its liquidity and capital structure.[1] Under the conservative strategy, long-term capital is used to maintain a positive working capital ratio. However, a company with negative working capital may be adopting a risky strategy that relies on short-term debt to support long-term investments. As the gap between current assets and short-term commitments, working capital may be thought of. Long-term decision-making is tied to corporate strategy, which changes less often than other

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aspects of a company's decision-making, especially as liquidity is affected by decisions made in a range of areas that aren't necessarily coordinated inside a company.[2] Inventory management does not have to collaborate with the persons in charge of managing receivables and payables or of replacing inventory, and cash levels may end up being a result of current business rather than a planned goal. Workplaces have a history of enforcing such policies. If a company's management lacks financial expertise, this tendency will be more noticeable.[3]

Liquidity gives a company the ability to meet its obligations while also allowing it to offer its customers extended payment terms.[4] As a result, the company's current assets, such as its cash on hand and accounts receivable and payable, aren't being stretched. This strategy will be difficult to finance, however, due to the higher cost of invested capital caused by the larger long-term capital. Capital structure and metrics like economic value added are affected by this change.[5] Decisions in the areas of inventory, receivables, and cash balance are the result of CFOs' examination of capital structure choices and their impact on working capital decisions in developing countries. Working capital levels, current asset management, liquidity, and profitability all play a crucial role in meeting market needs and avoiding unnecessary capital investment expenditures.[6]

2. Data and Research Methodology

This study is conducted by taking the top ten Indian cement companies in terms of market value as per the data collected from the Moneycontrol website. The inclusion of just those organisations that matched all of our criteria, including economic value added (EVA), cash conversion cycle (CCCy), current ratio (CR), quick ratio (QR), enhanced liquidity ratio (AT), and market capitalization (MC), will be taken into consideration. The Pearson correlation coefficient, as well as descriptive statistics, were used to analyse the whole time sequence. To analyse all of the data, t-tests and p-values were employed in conjunction. With a 95 per cent confidence level in both directions, the test was valid. When determining which function to use to generate the dependence, this was taken into consideration by the developers.

3. Literature Review

Panigrahi (2014)[7] conducted a comparative analysis of the liquidity situations of five well-known Indian cement firms in his research. This research covers ten years from 2000 to 2010. The data for this research completely taken from secondary sources. The author employed a variety of methodologies to analyse the data in this study, including the mean, standard deviation, coefficient of variation, ratio analysis, and rank coorelation test. Studies reveal that the growth rates of current and quick ratios, as well as the ratio of working capital to current assets, are all negative, indicating that small firms have superior liquidity than big enterprises. When a company takes a proactive approach to working capital management, it minimises its current asset spending in order to increase the rate of return on those assets. It's also important to remember that using aggressive working capital procedures increases a company's risk of insolvency.

An investigation of how a company's profitability and liquidity affect its stock price was conducted by Monika Bolek and Rafal Wolski in 2012.[8] In terms of working capital, according to the author, it all boils down to the choices you make about how you manage your cash, receivables, inventory, and payables. As a result, the more money a company invests in networking, the more money it has available; the more money a company has, the more expensive it is, and the worse its return on equity and return on assets is; the more money a company has, the more expensive it is, and the worse its return on assets is. According to the author, increased liquidity may result in a rise in the value of assets traded on a particular exchange as a result of increased demand. To better understand how Warsaw Stock Exchange investors read firm liquidity and profitability data, we'll take a look at the relationships between the aforementioned variables in this article.

Panigrahi & Sharma (2013)[6] investigated the relationship between working capital management and company performance, i.e. the effect on profitability, using a sample of five selected Indian cement businesses between 2001 and 2010. The average receivable duration, inventory conversion period, average payment period (which measures working capital efficiency), and the cash conversion cycle were all investigated in this research. Throughout the investigation, the author used multivariate regression analysis and Pearson's correlation to test hypotheses. A positive relationship between profitability and accounts receivable, inventory turnover, and accounts payable has been shown in studies. The authors concluded that, businesses are selling items and collecting receivables prior to paying payables.

When it comes to working capital management and its many components, Panigrahi (2017)[9] has looked at inventory levels, bank balances, and other current responsibilities. Each step of this component of working capital is scrutinised for management effectiveness and efficiency. Working capital management will be investigated as part of this study's scope. The research included samples from 30 Bombay Stock Exchange-listed cement businesses in India (BSE). The scope of this research only includes a limited number of Indian cement businesses who have used the CMIE Prowess 4.0 database software. For each company, there was a plethora of information on the company's history, its total assets, and its yearly financial statements for the years 2006 to 2015. SPSS 21.0 was

used for the investigation's many statistical investigations. The average time to collect receivables, inventory, and payment as well as the cash conversion cycle were all investigated by this study's author. However, the research found that days of receivables had a positive association with profitability, despite the fact that days of accounts payables and inventories have a negative link. It doesn't matter what theorists say: WCM and profitability have a positive link (as assessed by the cash conversion cycle). Reduced cash conversion has a detrimental impact on profitability, according to the author.

A study conducted by Luca Sensini and Maria Vazquez (2021)[10] investigated the influence of working capital management systems on the profitability of agricultural and industrial enterprises in Argentina. Instead of employing a representative sample, the author examined 326 businesses that were chosen using stratified random techniques and based on the economy in which they operated at the time of the study. The information required was gathered via the use of a structured questionnaire. In a research using working capital drivers (DSI, DPO, CCCy, and DSO) as independent variables, EBITDA was used as the dependent variable and working capital drivers (DSI, DPO, CCCy, and DSO) as the dependent variable. In addition, leverage was used as a control variable in the experiment. When examining the effect of individual traits on firm success, the author used dynamic panel data techniques, which he developed from scratch. Before they were published, our results were also reviewed and approved by the author. In this investigation, the researchers came up with some rather astonishing discoveries. The variables (DSI, DPO, and CCCy) were shown to have a negative connection with corporate profitability, showing that raising inventory and requesting longer extensions from suppliers were more expensive than the benefits they provided.

4. Need of Research

Today, a company's financial health and performance depend heavily on its ability to effectively manage working capital. A lack of operational capital has a detrimental influence on the company's day-to-day operations. When a corporation has an excessive amount of working capital, its financial health worsens. As a result, managing a company's working capital effectively is critical. We're primarily interested in how Indian cement businesses manage their working capital. When the query was posed, this inquiry was launched. The success or failure of a business is determined by how it manages its present assets and obligations, according to this research. Working capital management is critical to a company's overall success and viability since it encompasses both current assets and liabilities. The long-term viability of an organisation depends on maximising the utilisation of its present assets and current obligations. As a result, the company is better able to meet its present financial obligations and experience an increase in earnings.

5. Scope of The Study

The cement industry of India is the exclusive focus of this study. The study focuses on 10 cement companies that are traded on the Indian stock market. Using their annual reports from 2016-17 to 2020-21, the Indian cement industry's working capital management is being examined. Cement executives may use the data to gauge how well their companies' working capital is going. A company's ability to carry out its day-to-day operations while still keeping a healthy level of working capital is referred to as working capital management. The profitability and liquidity of a firm are supported by a sound working capital strategy. Every business needs money to get off the ground and to keep things running smoothly on a day-to-day basis. Because of this, the company must keep track of its current assets and liabilities. Every business relies on working capital to stay afloat. To begin selling, a manufacturing company needs a little amount of capital to begin producing goods. Costs of production, management, and marketing all need to be taken into consideration. Since many transactions are done on credit, there is a delay in revenue collection, which may be up to 90 days in certain situations. Before transforming its purchases into commodities and then cash, a company has to ensure that it has enough money to remain afloat in light of all of these circumstances. The scope of a research endeavour varies from one to the next. The purpose of this study is to assess the working capital status of the selected organizations. It's shown us where we need to make changes. Cement firm leaders may apply the research's suggestions for improved resource management. This study, which is part of working capital management, looks at inventory, cash and bank balances, and other current commitments as part of the process. As part of this study project, the efficiency and effectiveness of the working capital sector will be examined in more detail. Further investigation into how current assets and current liabilities are handled in terms of the concept of working capital is required as a consequence of the findings of this research.

6. Testable Hypothesis

The following hypotheses will be tested.

1. The first hypothesis is that better profitability measurements such as ROA (Return on Assets) and ROE (Return on Equity) are seen as evidence that the firm is properly managed by shareholders. As a result of this, the product's value (V) increases in value. If true, we expect (r indicates the change): $r_V > 0$ and $r_{ROA}, r_{ROE} > 0$.

2. According to the second hypothesis, the company's current asset levels with reserves are a crucial signal of the company's willingness to engage in new contracts with investors. In this case, the market value (V) rises in parallel with the rise in the liquidity ratios, which are the CR (Current Ratio), QR (Quick Ratio), and AT (Acid Test Ratio). If true, we expect: $r_V > 0$ and r_{CR}, r_{QR}, $r_{AT} > 0$.
3. Third hypothesis: If investors are seeking profitability or liquidity, they will have an effect on a firm's market value (V) based on the CCCy and EVA, as well as their influence on a firm's market value (V) based on the CCCy and EVA (V). There may be some overlap here since investors don't always make the best decisions. If true, we expect: $r_V > 0$ and $r_{CCCy} < 0$, $r_{EVA} > 0$.

7. Liquidity and Profitability Factors

The method used to manage the company's liquidity is influenced by the preferences of individual employees, and this has an impact on the overall strategy. As the first step in this technique, it is decided by the amounts of inventory, receivables cash, and payables that are determined by the judgments on those amounts (each of them being subject to management). Networking capital is the consequence of arbitrary management decisions that determine the current asset and liability amounts in the company. Some believe that managers in this setting make the best judgments they can, but that there is no overall aim to pursue because of their decisions. In the context of capital structure management, a target net working capital level is described as an objective for managers to accomplish by making the appropriate choices. In the case that an acceptable amount of liquidity cannot be achieved, there are additional solutions for managing short-term credit concerns.

Current ratio (CR), quick ratio (QR), and acid test (AT) have historically been used as the major indicators of liquidity in a business.[5] They indicate a company's liquidity state, and they may be achieved by keeping current assets (CA) high and current liabilities (CL) low at all times. Inventory is marked by the letter I, while receivables are signified by the letter R. Inventory and receivables are two different things. These measures may be expressed mathematically in the following ways:

$$CR = \frac{CA}{CL}$$

$$QR = \frac{CA - I}{CL}$$

$$AT = \frac{CA - I - R}{CL}$$

The cash flow cycle (CFCy) is a dynamic liquidity indicator in addition to the cash conversion cycle (CCCy). the amount of receivables conversion period (RCPe), as well as the amount of inventory conversion period (ICPe), are subtracted to arrive at the CCCy. The PDPe is an excellent place to start.

$$CCCy = RCPe + ICPe - PDPe$$

Hence:

$$CCCy = \left(\frac{360\ R}{SALES}\right) + \left(\frac{360\ I}{CGS}\right) - \left(\frac{360\ CL}{X}\right)$$

where: X = CGS + expenses + interest + labour + advertising + insurance + travel + salaries – depreciation.

If a company's cash conversion cycle moves rapidly, it has more money in the bank, more liquidity, and the potential to swiftly recover money from product sales. If the cash conversion cycle is delayed, it will take the company longer to pay back the money it borrowed. The paucity of finances is indicated by a protracted cash conversion cycle.

Various methods of expressing profitability ratios include the following: The return on assets (ROA) may be calculated using this equation.

$$ROA = \frac{EAT}{TA}$$

The return on equity ratio (ROE) is given by the equation:

$$ROE = \frac{EAT}{E}$$

Based on A. Marshall's definition of residual revenue from the late 1800s, the consulting company Stern Stewart & Company developed the notion of economic value-added in the 1990s. It is still in use today. Stern Stewart & Company is a management consulting business based in New York City that serves clients all around the globe. According to Marshall's definition, a company's earnings must be sufficient to pay all of its operating expenses as well as the total cost of its capital, which includes the cost of equity, among other things. To make the EVA formula more relevant and accurate in representing contemporary economic realities, it has to be changed to incorporate incentive schemes as well as other factors. Notably, the revisions were not included in Marshall's original design.

Individual companies adjust their accounting results in line with the EVA concept, which helps to prevent accounting issues. A company's worth is impacted by its EVA, even though there is no such relationship between the Polish stock market and EVA in other countries. When it comes to analysing business success, investors and management alike agree that company value is the most important metric. There is no one method for calculating the EVA ratio. Customization is required to cater for the unique characteristics of each company, not a lack of consistency. Most challenging is remembering to incorporate all the relevant variables in EVA calculations. EVA cannot be

predicted in advance of the lease term because of the lack of information on lease payments, capitalised R&D expenses, LIFO inventory values, and other issues.

Generally, EVA is calculated using the formula:

$$EVA = NOPAT - C * WACC$$

According to the economists who first proposed the concept of economic value added (EVA), there are around 160 different ways to calculate the EVA worth of a piece of capital (transformations of the accounting values of various economic categories). Depending on the kind of business and the type of operational or financial assets, it may be necessary to make adjustments. It's best to reduce the number of changes to a minimum to maintain the concept as simple as possible. If an investor can't get a clear picture of how their assets are being handled, they won't be happy with a number that's tough to come up with.

To put it another way, the framework of economic value-added serves as a basis for both corporate management decisions and investor evaluations of the company's position. It may be utilized in the evaluation of companies due to the following:

1. In contrast to profit-based categories, it is less susceptible to accounting fraud; it is a measurable indicator that is easy to evaluate, enabling investors and boards to compare and pick amongst projects.
2. Investors can use an EVA-based valuation approach to make decisions on the value of stocks.
3. Based on an incentive structure that emphasizes shareholder value growth, EVA levels can combine assessment with periodic results and unite the decision-making process.
4. It is possible to adjust EVA levels by altering the capital structure, boosting sales volume, or reducing expenses. This metric appears to be a metric that can be improved by the judgments of everyone.

Stock market participants use the measures listed above to evaluate a company's financial health. To minimize confusion, we started with the most prevalent signs at the beginning of our investigation. Other factors may be useful.

8. Findings

8.1. Descriptive statistics

Table 1 Below presents descriptive statistics for 10 cement companies of India for a period of five years from 2016-17 to 2020-21.

In Table 1, the mean value of economic value added is Rs -72.79 crores with a median is Rs -160.55 crores and the standard deviation is Rs 322.21 crores. Its minimum value is Rs -387.90 crores while the maximum is Rs 436.97 crores.

In Table 1, the mean value of return on equity is 10.11 percent with a median is 9.72 percent and a standard deviation is 1.85 percent. Its minimum value is 8.17 percent while the maximum is 12.61 percent.

In Table 1, the mean value of return on asset is 4.89 percent with a median is 4.74 percent and a standard deviation is 0.90 percent. Its minimum value is 4.06 percent while the maximum is 6.22 percent.

In Table 1, the mean value of the current ratio is 1.29 with the median being 1.27 and the standard deviation being 0.05. Its minimum value is 1.25 while the maximum is 1.37.

In Table 1, the mean value of the quick ratio is 0.91 with a median is 0.87 and a standard deviation is 0.09. Its minimum value is 0.83 while the maximum is 1.06.

In Table 1, the mean value of the acid test ratio is 0.71 with a median is 0.66 and a standard deviation is 0.12. Its minimum value is 0.61 while the maximum is 0.89.

In Table 1, the mean value of the cash conversion cycle is -2 days with a median is 3 days and a standard deviation is 9 days. Its minimum value is -15 days while the maximum is 8 days.

In Table 1, the mean value of market value is Rs 31233.75 crores with a median is Rs 28585.51crores and a standard deviation is Rs 7457.07 crores. Its minimum value is Rs 26886.59 crores while the maximum is Rs 44499.43 crores.

Table 2 Shows the results. Some of the correlations are statistically significant at the 0.05 significance level, which implies that they are important. Other examples include the correlation between liquidity indicators and EVA, as well as the relationship between a company's market value and its profitability. According to the findings, the relationship was always positive, indicating that as liquidity improved, so did the company's value. Contrary to expectations, no such relationship was seen in the case of profitability. The cash conversion cycle was often shown to be negatively related to market value. A positive response from investors to higher levels of the AT, CR, and QR ratios was seen; moreover, this correlation was statistically significant, confirming this conclusion. Secondly, theCCCy was shown to be statistically significant and negatively connected with the market value at the 95% confidence level, which is the most stringent standard (0.05). This is a logical conclusion to reach.

The first hypothesis, which said that higher profitability ratios were associated with higher market value, has been

Table 1: (Descriptive statistics) (Author's finding)

Statistics	EVA	ROE	ROA	CR	QR	AT	CCC	Market Value
Mean	-72.79	10.11%	4.89%	1.29	0.91	0.71	-2	31233.75
Median	-160.55	9.72%	4.74%	1.27	0.87	0.66	3	28585.51
Standard Deviation	322.21	1.85%	0.90%	0.05	0.09	0.12	9	7457.07
Minimum	-387.90	8.17%	4.06%	1.25	0.83	0.61	-15	26886.59
Maximum	436.97	12.61%	6.22%	1.37	1.06	0.89	8	44499.43

Table 2: (Pearson's correlation analysis) (Author's Findings)

Correlation	EVA	ROE	ROA	CR	QR	AT	CCCy	Market Value
EVA	1							
t-statistic	——							
p-value	——							
ROE	0.82	1						
t-statistic	2.52	——						
p-value	0.09	——						
ROA	0.85	0.99	1					
t-statistic	2.85	11.32	——					
p-value	0.07	0.00	——					
CR	0.93	0.69	0.77	1				
t-statistic	4.44	1.64	2.08	——				
p-value	0.02	0.20	0.13	——				
QR	0.98	0.88	0.90	0.91	1			
t-statistic	9.42	3.27	3.68	3.77	——			
p-value	0.00	0.05	0.03	0.03	——			
AT	0.95	0.92	0.93	0.86	0.99	1		
t-statistic	5.19	4.14	4.52	2.97	12.06	——		
p-value	0.01	0.03	0.02	0.06	0.00	——		
CCCy	-0.89	-0.95	-0.96	-0.79	-0.95	-0.99	1	
t-statistic	-3.30	-5.53	-5.61	-2.25	-5.44	-10.22	——	
p-value	0.05	0.01	0.01	0.11	0.01	0.00	——	
Market Value	0.91	0.77	0.83	0.96	0.93	0.93	-0.89	1
t-statistic	3.72	2.09	2.61	6.08	4.51	4.23	-3.41	——
p-value	0.03	0.13	0.08	0.01	0.02	0.02	0.04	——

thrown out due to a lack of data to support it. Profitability is less crucial in cement enterprises than corporate liquidity, which might explain why this is the case.

A company's market value increases as a consequence of an increase in liquidity, which is statistically significant since the changes are substantial.

With respect to the third concept, the CCCy decreases while the EVA increases as the market value increases. This is a notion that is gaining more and more acceptance among the general public.

9. Conclusions

According to the results of the study, it seems that investors in the cement industry place a higher value on liquidity than they do on profitability when assessing companies. It seems that investors favour firms with significant quantities of cash on hand, as seen by the positive relationship between AT, QR, and CR, all of which imply a larger degree of liquidity, and market value.[8] According to investors, in order to take advantage of market opportunities, companies must be profitable and cash-liquid in nature. It may also highlight the significance of competitive cement market behaviour in verifying the development route of the cement sector. The new CCCy and EVA measurements, are compatible with the assumptions and expectations set out in this research. As seen by the satisfactory operation of the cement market, the economy is in fantastic health overall.

10. Source of Funding

None.

11. Conflict of Interest

None.

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