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Review Article

Analysis of financial liquidity and predicting the bankruptcy risk of Indian cement companies

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ABSTRACT

Liquidity is important to the efficient running of any business. Maintaining liquidity on a daily basis is a critical part of managing working capital to guarantee that the company works effectively and achieves its obligations.Efforts to boost profitability, on the other hand, are likely to lower businesses' liquidity, and a focus on liquidity may have an adverse effect on profitability. The study's major goal was to determine if organizations can make a profit while retaining essential liquidity, or whether they are willing to compromise liquidity to make a bigger profit. The data has been analyzed using Motaal's Liquidity Assessment Test and Spearman's Rank Coefficient of Correlation. This study makes an attempt to examine the link between the sample businesses' liquidity and profitability, as well as the possibility of bankruptcy. Among the ten selected cement companies, UltraTech Cement, Shree Cement, Ambuja Cement, ACC, J.K. Cement, Ramco, Birla Corporation, JK Lakshmi, Rain Industries, and India Cement, UltraTech Cement, Shree Cement, Ambuja Cement, ACC, J.K. Cement, Ramco, Birla Corporation, JK Lakshmi, Rain Industries, India Cement and UltraTech. Shree Cement, according to Motaal's liquidity test, has the best liquidity status.

1. Introduction

When an organization is unable to pay its creditors and lenders, it is declared bankrupt or in financial hardship. It occurs more often when a company is heavily indebted, has a limited earning capacity, a high breakeven threshold, or has sales that are vulnerable to economic downturns. Bankruptcy, also known as financial hardship, occurs when a firm is unable to pay its financial commitments to creditors, usually owing to high fixed expenditures, illiquid assets, or revenue sensitivity to economic downturns. A corporation in financial difficulties may face expenses associated with the circumstance, such as higher finance costs, project opportunity costs, and fewer productive staff. Several business units get ill as a result of these factors, progressing from healthy to sick, sick to incipient illness, incipient sickness to distress, and distress to business unit dissolution. If a corporation's financial hardship is due to heavy debt, the company may be able to undergo debt reformation. If the firm is in trouble due to operational challenges, it may negotiate a payment holiday with its creditors and improve operations to be able to fulfill its debt.

2. Literature Review

Several researchers have carried out studies related to liquidity, profitability, and possibilities of bankruptcy of firms and a few of the prominent studies have revealed the following:

Ashok Panigrahi (2013)[1] conducted a comparative assessment of the liquidity positions of five top Indian cement businesses in order to determine the companies'

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liquidity positions. This research spans ten years, from 2000-2001 to 2009-2010. The research is based entirely on secondary data. To analyze the data in this study, the author employed methods such as mean, standard deviation, coefficient of variation, ratio analysis, and Motaal's ultimate rank test. It has been found that Small firms have stronger liquidity than big enterprises, and the growth rates of current ratios, quick ratios, and working capital to current assets are all negative, suggesting a poor liquidity position. A company's aggressive working capital management strategy means it spends less on current assets to produce a higher rate of return, according to the author. However, it is crucial to note that aggressive working capital tactics increase the risk of default and bankruptcy.

Haresh Kothari and Shankar Sodha (2018)[2] assess the financial performance of the Indian cement sector, with a focus on Cement Corporation of India Limited (CCI). Financial performance was assessed using financial ratios, while the company's liquidity condition was assessed using short-term solvency ratios, and earning performance was assessed using profitability ratios. To assess the company's overall financial status, the author used a variety of financial and statistical tools and approaches. According to the author's study, sales have no substantial influence on the cement company of India's net liquidity position, profitability, or solvency. During the early stages of the research, the firm was unable to meet its duties on time. The corporation makes a good profit in the first two years but then declines for the remainder of the study period.

OVAM Sridevi and G.V.Chalam (2018)[3] explored the nature of the relationship between Working Capital Management (WCM) and liquidity and the performance of a selected business in the cement industry. The author conducted his research using a sample of five cement companies that were publicly traded on the Bombay stock exchange between 2008 and 2017. In the author's opinion, some of the metrics to evaluate a company's working capital soundness include the current ratio, quick ratio, current assets to total assets ratio, current assets turnover ratio, working turnover ratio, and so on. Effective working capital and liquidity management, according to the results of the authors, is a key factor in achieving financial success.

In (2018)[4,5], Panigrahi, Namita and Chaitali conducted a study of the association between liquidity and profitability for a period of five years from 2011-12 to 2015-16 for five selected pharmaceutical companies, namely, Ajanta Pharma, Biocon Ltd, Torrent Pharma, Ipca Labs, and Lyka Labs. The authors found that the liquidity position of Biocon is best among all the five companies as per Motaal's test of liquidity. The techniques of Motaal's ultimate rank test have been applied to analyze the data. In this paper, the researchers attempted to study the association between liquidity and profitability of the sample companies by using Spearman's Rank Coefficient of Correlation. The results found were the same as the theoretical views i.e. both are negatively correlated.

N. Chandrakala (2019)[6] investigated the financial performance of many Indian cement companies for a period of five years. Ultratech Cements, Shree Cements, Ramco Cements, Dalmia Bharat, and Birla Corporation were selected for this study. The author conducted several ratio analysis to have a better knowledge of the financial performance of the selected organizations. The study shows that among all, Dalmia Bharat has a good current ratio, quick ratio, and net profit ratio, showing that Dalmia Bharat creates more net profit and is more successful at converting sales into actual profit. Birla Corporation has a good absolute liquid ratio, Ramco Cements made more gross profit than other enterprises, and it may reach a respectable return on sales if overhead expenses are maintained under control, according to the author. Shree Cements has a larger operating profit than other companies, reflecting better cost control, bigger shareholder returns, and longer-term investment in the firm.

Ashok Panigrahi (2019)[7,8] conducted a study on predicting the financial distress of pharmaceutical companies. This study also uses Altman's 'Z' Score Model to test the financial distress of sample pharmaceutical companies. This model has already been applied in several financial distress and bankruptcy studies with satisfactory results. The study covers a period of 5 years viz., 2012-2013 to 2016-2017. The result shows that the average Z Score of the pharmaceutical industry is 5.90 during the period of study. The study revealed that the pharmaceutical industry has a healthy financial position because Z-Score is much above the cut-off scores i.e. 1.8.

Al-Homaidi, Eissa A, Al-Ahdal, Waleed M, and Khan, and Samar H (2020)[9] conducted a study for the period 2010 to 2016 analysing the impact of pooled, fixed, and random models on a panel of Indian publicly listed enterprises to account for their consistency. The author studied 2154 Indian firms. Liquidity ratio (LQD) measures a company's liquidity by comparing liquid assets to total assets. External drivers include economic activity, inflation, currency exchange rates, and interest rates. Leverage, return on assets, and business age, according to the author, affects liquidity. Except for the leverage ratio and company age, all statistics demonstrate a significant positive association with LQD.

Jacek Jaworski and Leszek Czerwonka (2021)[10] used meta-analysis to discover a link between a company's performance and its financial liquidity. By combining and integrating previous individual empirical studies on the connection between business profitability and liquidity, as well as identifying factors that impact this relationship, the author's study contributes to the body of knowledge in this area. Financial managers may benefit from the information in this article, which discusses the importance

of managing liquidity and working capital. An analysis of 16 different countries' current liquidity ratios found no consistent link between profitability and it. The empirical findings of several studies are not all consistent. As a result, the degree and direction of this dependency are determined by macroeconomic and institutional variables.

3. Scope of The Study

The present study covers a period of Five Years from 2016-17 to 2020-21. It was based on the information collected from the organization's annual reports and the website w ww.moneycontol.com, which were used in the study. The research was conducted on Ten cement companies based on their market capitalization and publicly available financial information. The information gathered was rearranged, regrouped, and reorganized to meet the needs of the investigation. The study's objective is to determine the efficacy and efficiency of the working capital levels of the sample companies and to judge the liquidity level of the companies and the chances of each company becoming bankrupt in near future.[11] We would like to mention it here that, low liquidity may lead to the verge of bankruptcy of a company anytime.

4. Data Analysis & Findings

The following tables show the computed liquidity ratios, the amount invested in liquid assets, working capital, and other associated ratios for the chosen firms:

4.1. Motaal's comprehensive test of liquidity

The soundness of a company's liquidity is assessed using a thorough set of criteria provided by Motaal. The following three ratios are merged into a point score by using a ranking mechanism in order to acquire a more complete estimate of liquidity.

1. (a) Working Capital (WC to Current Asset Ratio= Working Capital/Current Assets x100
   (b) Stock to Current Asset Ratio= Inventory or Stock/Current Assets x100
   (c) Liquid Resources (LR to Current Asset Ratio= Liquid Resources or Quick Assets/Current Assets x100

Increasing a company's working capital to current assets ratio and its liquid resources to current assets ratio can help strengthen its liquidity. An organization's liquidity is better reflected by a smaller stock-to-current-assets ratio. As a company's top three ratios change over time, they are listed in that order. Finally, the final ranking is based on the premise that lower points are awarded for better liquidity, and vice versa.

According to Table 11, Shree Cement received Rank 1 in Motaal's final rank test of liquidity, meaning that it is the most liquid business among the 10 corporations studied. Ranks 2, 3, 4, 5, 6, 7, 8, 9 are allocated to Rain Industries, Birla Corporation, Ambuja Cements, ACC, J.K. Cement, Ultratech Cement, The Indian Cements, and J.K. Lakshmi Cement, respectively. The most adverse liquidity situation belongs to Ramco Cements, which is ranked tenth.

5. Limitations of The Study

The following are some of the limitations of this study:

1. Data for just the last five years is provided for only ten companies in the study (2016-17 to 2020-21). Increasing the length of the study may lead to a different conclusion than was initially anticipated.
2. The reliability, quality, and accuracy of the data used in the study were all assessed using the website www. moneycontrol.com. These aspects all play a role in the study's final conclusions.
3. Statistical methods have limitations in the creation and application of their conclusions, and this study is no different.
4. Due to the study's reliance on secondary sources for all of its information, no one could have seen what is described in the report directly.
5. Some of the suggestions may be out of date due to the fact that the data utilised in the study originates from an earlier time period.

6. Conclusion and Recommendations

Working Capital Management (WCM) is a financial function that manages current assets and liabilities. It is the relationship between the existing assets and liabilities of a corporation. The everyday activities of a business must strike a balance between liquidity and profitability. The short-term commitments of a corporation need liquidity, and a lucrative endeavour may generate consistent cash flow. It should come as no surprise that cash is an important measure of financial well. Working capital management guarantees that a company can meet both short-term debt obligations and long-term operational requirements. Keeping track of commodities, receivables, payables, and cash is part of managing working capital.

Shree Cement has the best liquidity ratio of the ten firms analysed. The study's other firms need to boost their liquidity. The companies in the research didn't have a good liquid/current ratio. Working capital was negative in numerous circumstances. To maximise capital returns and profitability, several businesses are increasingly operating with negative working capital. Negative working capital lowers working capital expenses (increases profitability), but it also indicates a cash shortage (stressed circumstance for the lenders and so forth). In a downturn, it may also be burdened with prior duties, which is negative. As a result, there should be a trade-off between profitability and

Table 1: (Data of Ultratech Cement) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	13325.67	8328.61	4997.06	2400.64	10925.03	1.60	1.31	37.50%	18.02%	81.98%
2018	11461.31	11515.44	-54.13	3267.59	8193.72	1.00	0.71	-0.47%	28.51%	71.49%
2019	12954.24	15533.25	-2579.01	4098.96	8855.28	0.83	0.57	-19.91%	31.64%	68.36%
2020	14721.46	16580.58	-1859.12	4183.35	10538.11	0.89	0.64	-12.63%	28.42%	71.58%
2021	24050.29	20591.72	3458.57	4017.97	20032.32	1.17	0.97	14.38%	16.71%	83.29%
Mean	15302.59	14509.92	792.67	3593.70	11708.89	1.10	0.84	3.77%	24.66%	75.34%
CAGR (%)	12.53%	19.85%	-7.10%	10.85%	12.89%	-6.10%	-5.80%	-17.44%	-1.50%	0.32%
S.D.	4495.29	4230.81	2963.15	680.11	4284.02	0.28	0.27	0.20	0.06	0.06
C.V.	0.29	0.29	3.74	0.19	0.37	0.25	0.32	5.43	0.25	0.08

Table 2: (Data of Shree Cement) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	3282.19	1989.02	1293.17	1314.50	1967.69	1.65	0.99	39.40%	40.05%	59.95%
2018	5700.25	2967.15	2733.10	1569.02	4131.23	1.92	1.39	47.95%	27.53%	72.47%
2019	4719.22	2126.58	2592.64	1870.31	2848.91	2.22	1.34	54.94%	39.63%	60.37%
2020	7893.82	4015.56	3878.26	1713.49	6180.33	1.97	1.54	49.13%	21.71%	78.29%
2021	8187.33	3700.81	4486.52	1715.72	6471.61	2.21	1.75	54.80%	20.96%	79.04%
Mean	5956.56	2959.82	2996.74	1636.61	4319.95	1.99	1.40	49.24%	29.97%	70.03%
CAGR (%)	20.06%	13.22%	28.25%	5.47%	26.89%	6.04%	12.07%	6.82%	-12.15%	5.69%
S.D.	1869.67	812.46	1107.38	187.14	1778.95	0.21	0.25	0.06	0.08	0.08
C.V.	0.31	0.27	0.37	0.11	0.41	0.11	0.18	0.12	0.28	0.12

Table 3: (Data of Ambuja Cement) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	8288.16	7408.13	880.03	2163.51	6124.65	1.12	0.83	10.62%	26.10%	73.90%
2018	11094.56	8877.32	2217.24	2458.27	8636.29	1.25	0.97	19.98%	22.16%	77.84%
2019	12406.85	8394.26	4012.59	2957.89	9448.96	1.48	1.13	32.34%	23.84%	76.16%
2020	14319.01	9070.31	5248.70	2096.50	12222.51	1.58	1.35	36.66%	14.64%	85.36%
2021	12804.83	9260.40	3544.43	1648.58	11156.25	1.38	1.20	27.68%	12.87%	87.13%
Mean	11782.68	8602.08	3180.60	2264.95	9517.73	1.36	1.10	25.46%	19.92%	80.08%
CAGR (%)	9.09%	4.56%	32.13%	-5.29%	12.74%	4.33%	7.82%	21.12%	-13.18%	3.35%
S.D.	2027.44	662.89	1504.81	432.69	2111.65	0.16	0.18	0.09	0.05	0.05
C.V.	0.17	0.08	0.47	0.19	0.22	0.12	0.17	0.36	0.26	0.07

Table 4: (Data of ACC Cement) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	4069.64	4051.18	18.46	1224.63	2845.01	1.00	0.70	0.45%	30.09%	69.91%
2018	5654.92	4792.66	862.26	1404.78	4250.14	1.18	0.89	15.25%	24.84%	75.16%
2019	6684.44	4706.16	1978.28	1679.39	5005.05	1.42	1.06	29.60%	25.12%	74.88%
2020	7534.57	4698.23	2836.34	1141.93	6392.64	1.60	1.36	37.64%	15.16%	84.84%
2021	8448.63	4804.26	3644.37	901.27	7547.36	1.76	1.57	43.14%	10.67%	89.33%
Mean	6478.44	4610.50	1867.94	1270.40	5208.04	1.39	1.12	25.22%	21.18%	78.82%
CAGR (%)	15.73%	3.47%	187.79%	-5.95%	21.55%	11.85%	17.47%	148.67%	-18.73%	5.03%
S.D.	1517.89	282.99	1306.72	260.84	1638.19	0.27	0.31	0.16	0.07	0.07
C.V.	0.23	0.06	0.70	0.21	0.31	0.20	0.28	0.62	0.34	0.09

Table 5: (Data of J.K. Cement) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	1479.26	1280.76	198.50	560.89	918.37	1.15	0.72	13.42%	37.92%	62.08%
2018	1684.45	1309.62	374.83	589.81	1094.64	1.29	0.84	22.25%	35.01%	64.99%
2019	2045.44	1609.77	435.67	623.88	1421.56	1.27	0.88	21.30%	30.50%	69.50%
2020	2234.57	1824.69	409.88	690.40	1544.17	1.22	0.85	18.34%	30.90%	69.10%
2021	3183.10	1957.36	1225.74	756.59	2426.51	1.63	1.24	38.51%	23.77%	76.23%
Mean	2125.36	1596.44	528.92	644.31	1481.05	1.31	0.90	22.76%	31.62%	68.38%
CAGR (%)	16.56%	8.85%	43.92%	6.17%	21.45%	7.08%	11.57%	23.47%	-8.92%	4.19%
S.D.	591.43	269.98	358.15	70.82	522.94	0.16	0.18	0.08	0.05	0.05
C.V.	0.28	0.17	0.68	0.11	0.35	0.12	0.20	0.37	0.15	0.07

Table 6: (Data of Ramco Cement) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	1421.78	2025.48	-603.70	576.57	845.21	0.70	0.42	-42.46%	40.55%	59.45%
2018	1300.42	1856.43	-556.01	561.25	739.17	0.70	0.40	-42.76%	43.16%	56.84%
2019	1380.51	2067.55	-687.04	561.08	819.43	0.67	0.40	-49.77%	40.64%	59.36%
2020	1575.71	2336.32	-760.61	646.88	928.83	0.67	0.40	-48.27%	41.05%	58.95%
2021	1458.91	2419.37	-960.46	599.34	859.57	0.60	0.36	-65.83%	41.08%	58.92%
Mean	1427.47	2141.03	-713.56	589.02	838.44	0.67	0.39	-49.82%	41.30%	58.70%
CAGR (%)	0.52%	3.62%	9.73%	0.78%	0.34%	-2.99%	-3.17%	9.17%	0.26%	-0.18%
S.D.	90.93	207.54	141.96	32.13	61.45	0.04	0.02	0.09	0.01	0.01
C.V.	0.06	0.10	-0.20	0.05	0.07	0.05	0.05	-0.17	0.02	0.02

Table 7: (Data of Birla Corporation) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	2094.84	1244.16	850.68	630.18	1464.66	1.68	1.18	40.61%	30.08%	69.92%
2018	2454.05	1588.77	865.28	686.96	1767.09	1.54	1.11	35.26%	27.99%	72.01%
2019	2504.51	1785.15	719.36	783.02	1721.49	1.40	0.96	28.72%	31.26%	68.74%
2020	2693.94	2100.08	593.86	787.63	1906.31	1.28	0.91	22.04%	29.24%	70.76%
2021	2668.08	2024.80	643.28	810.09	1857.99	1.32	0.92	24.11%	30.36%	69.64%
Mean	2483.08	1748.59	734.49	739.58	1743.51	1.45	1.02	30.15%	29.79%	70.21%
CAGR (%)	4.96%	10.23%	-5.44%	5.15%	4.87%	-4.78%	-4.86%	-9.90%	0.19%	-0.08%
S.D.	214.81	310.21	108.56	69.14	153.89	0.15	0.11	0.07	0.01	0.01
C.V.	0.09	0.18	0.15	0.09	0.09	0.10	0.11	0.23	0.04	0.02

Table 8: (Data of J.K. Lakshmi Cement) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	1118.75	1329.72	-210.97	321.20	797.55	0.84	0.60	-18.86%	28.71%	71.29%
2018	1077.27	1497.79	-420.52	355.61	721.66	0.72	0.48	-39.04%	33.01%	66.99%
2019	1009.98	1553.16	-543.18	352.23	657.75	0.65	0.42	-53.78%	34.87%	65.13%
2020	1255.71	1702.06	-446.35	480.56	775.15	0.74	0.46	-35.55%	38.27%	61.73%
2021	1481.98	1483.66	-1.68	366.20	1115.78	1.00	0.75	-0.11%	24.71%	75.29%
Mean	1188.74	1513.28	-324.54	375.16	813.58	0.79	0.54	-29.47%	31.92%	68.08%
CAGR (%)	5.78%	2.22%	-61.96%	2.66%	6.95%	3.49%	4.63%	-64.04%	-2.96%	1.10%
S.D.	167.18	120.03	194.42	54.79	158.61	0.12	0.12	0.18	0.05	0.05
C.V.	0.14	0.08	-0.60	0.15	0.19	0.15	0.22	-0.62	0.15	0.07

Table 9: (Data of Rain Industries) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	5246.61	2643.64	2602.97	2368.33	2878.28	1.98	1.09	49.61%	45.14%	54.86%
2018	4372.70	2190.76	2181.94	1742.16	2630.54	2.00	1.20	49.90%	39.84%	60.16%
2019	4372.70	2190.76	2181.94	1742.16	2630.54	2.00	1.20	49.90%	39.84%	60.16%
2020	4981.75	2571.20	2410.55	1585.67	3396.08	1.94	1.32	48.39%	31.83%	68.17%
2021	4981.75	2571.20	2410.55	1585.67	3396.08	1.94	1.32	48.39%	31.83%	68.17%
Mean	4791.10	2433.51	2357.59	1804.80	2986.30	1.97	1.23	49.24%	37.70%	62.30%
CAGR (%)	-1.03%	-0.55%	-1.52%	-7.71%	3.36%	-0.48%	3.94%	-0.50%	-6.75%	4.44%
S.D.	355.05	199.96	159.70	290.33	346.59	0.03	0.09	0.01	0.05	0.05
C.V.	0.07	0.08	0.07	0.16	0.12	0.01	0.07	0.01	0.14	0.08

Table 10: (Data of India Cement) (Author's Calculations)

FY Year	Current Assets	Current Liabilities	Working capital (CA-CL)	Inventory	Quick assets (CA-IN)	Current ratio	Quick ratio	Working capital to current assets (%)	Stock / Inventory to current assets (%)	Quick asset / Liquid resources to current assets (%)
2017	1948.23	2436.16	-487.93	773.63	1174.60	0.80	0.48	-25.04%	39.71%	60.29%
2018	1968.19	1935.55	32.64	694.65	1273.54	1.02	0.66	1.66%	35.29%	64.71%
2019	2331.45	2508.30	-176.85	846.76	1484.69	0.93	0.59	-7.59%	36.32%	63.68%
2020	2382.36	2877.85	-495.49	841.54	1540.82	0.83	0.54	-20.80%	35.32%	64.68%
2021	1838.37	2579.41	-741.04	597.49	1240.88	0.71	0.48	-40.31%	32.50%	67.50%
Mean	2093.72	2467.45	-373.73	750.81	1342.91	0.86	0.55	-18.42%	35.83%	64.17%
CAGR (%)	-1.15%	1.15%	8.72%	-5.04%	1.10%	-2.28%	-0.04%	9.99%	-3.93%	2.28%
S.D.	219.98	305.46	270.81	94.47	143.40	0.11	0.07	0.14	0.02	0.02
C.V.	0.11	0.12	-0.72	0.13	0.11	0.12	0.12	-0.79	0.06	0.04

Table 11: otaal's comprehensive test of liquidity) (Author's Calculations)

S.N.	Company	Working capital to current assets (%)	Rank	Stock / Inventory to current assets (%)	Rank	Quick asset / Liquid resources to current assets (%)	Rank	Total Rank	Ultimate Rank
1	Ultratech Cement Limited	3.77%	7	24.66%	8	75.34%	3	18	7
2	Shree Cement Limited	49.24%	1	29.97%	6	70.03%	5	12	1
3	Ambuja Cements Limited	25.46%	4	19.92%	10	80.08%	1	15	4
4	Acc Limited	25.22%	5	21.18%	9	78.82%	2	16	5
5	J. K. Cement limited.	22.76%	6	31.62%	5	68.38%	6	17	6
6	The Ramco Cements Limited	-49.82%	10	41.30%	1	58.70%	10	21	10
7	Birla Corporation Limited	30.15%	3	29.79%	7	70.21%	4	14	3
8	Jk Lakshmi Cement Limited	-29.47%	9	31.92%	4	68.08%	7	20	9
9	Rain Industries Limited	49.24%	2	37.70%	2	62.30%	9	13	2
10	The India Cements Limited	-18.42%	8	35.83%	3	64.17%	8	19	8

liquidity.

7. Source of Funding

None.

8. Conflict of Interest

None.

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