

Liquidity Management of Indian Cement Companies – A Comparative Study

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Abstract: Liquidity management is a concept that is gaining serious attention all over the world because of the current financial turmoil and the state of the world economy. The concern of business owners and managers all over the world is to devise a strategy which will help in maintaining liquidity as well as to increase profitability and shareholder's wealth. Liquidity is perceived as the debt paying ability of a going concern. It is the ability of a company to meet the short term obligations. Hence, it is of utmost important to keep a constant eye on liquidity position of the company as without it the company cannot survive. In this paper a comparative study on the liquidity position of five leading Indian cement companies has been done to know the liquidity position of the companies. The study covers a period of 10 years viz, 2000-2001 to 2009-2010. For the purpose of investigation purely secondary data is used. The techniques of mean, standard deviation, coefficient of variation, ratio analysis, and Motaal's ultimate rank test has been applied to analyse the data. It has been found that the liquidity position of small companies are better as compared to big ones and most interestingly the growth rate of current ratio, quick ratio and working capital to current assets of all the companies are negative which indicates an unsound liquidity position. Moreover, low or negative working capital in some cases indicates the aggressive working capital management policy of the firms which implies minimal investment in current assets by the companies so as to derive a higher rate of return. But it has to be remembered that risk of default and bankruptcy increases when a firm adopts more aggressive working capital policies. One should remember that a negative working capital is a sign of managerial efficiency in a business with low inventory and accounts receivable (which means they operate on an almost strictly cash basis). In any other situation, it is a sign that a company may be facing bankruptcy or serious financial trouble. In our case, Motaal's Ultimate Rank Test shows that the liquidity position of Shree Cements is sounder as compared to other companies.

Key Words: Liquidity, Working Capital, Cement Industry, Profitability.

I. Introduction

Liquidity is the ability to meet expected and unexpected demands for cash through ongoing cash flow or the sale of an asset at fair market value. Liquidity risk is the risk which at some time an entity will not have enough cash or liquid assets to meet its cash obligations. A firm in order to remain in existence and sustain its activities as a going concern must remain liquid and meet its obligations as and when they become due. Even though firms traditionally are focused on long term capital budgeting and capital structure, the recent trend is that many companies across different industries focus on working capital management efficiency (**Barad Mahesh M., 2010**).

When there is a poor management of working capital, funds may be unnecessarily tied up in idle assets. This will reduce liquidity of the company and also the company will not be in a position to invest in productive assets like plant and machinery. It will also affect profitability of the company (**Panigrahi, A.K., 2013**). The existence of an adequate liquidity and its careful management can make substantial difference between the success and failure of an enterprise.

Normally, when we analyse working capital, it always refers to normal or positive working capital (excess or current assets over current liabilities). However, there are certain situations in which working capital is in negative form (excess of current liabilities over current assets). Now the question arises how can a company manage liquidity with the negative working capital? Earlier negative working capital is considered as a risk of insolvency of the organizations but at present negative working capital is a sign of managerial efficiency in a business. Earlier it was considered that the companies should avoid under-investment in working capital if they wanted higher profits margins. In the present scenario some companies are using negative working capital and getting a good amount of profits and good return on capital also. Negative working capital indicates lower cost of working capital (another way is higher profitability), but at the same time, it indicates poor liquidity (worried situation for the creditors, etc.) or we can say company is overburdened with current liabilities, which is not good for any situation (specially in a period of recession, etc). But negative Working capital doesn't always mean bad financial condition; it indicates that most of the day to day activities are funded by customers rather than company's own working capital. Some latest examples are movie theaters - customers are paying first and distributors are normally paid later on; Schools/ educational institutions- fees paid in advance by the

students annually, whereas faculties are getting salary after one month. When an organisation uses supplier's credit and customers' advance to fulfill their day to day needs, it leads to a situation of lower or negative working capital. Banks, financial institutions, distributors, retailers with cash business or advance payment contract have negative working capital (**Panigrahi, A.K., 2013**).

It is often observed that whenever a financial analysis of companies is done, more emphasis is given on the profitability of the business rather than on its liquidity. Of course, this is quite obvious, as the most important financial objective of any business is to earn profit. So, the managers lay more emphasis towards profitability. But another significant variable is liquidity which means the ability of a company to honour short term financial obligations. If the company which is not able to honour its short-term financial obligations, it moves a step ahead towards its bankruptcy. Liquidity management, therefore, involves the amount of investments in liquid assets to meet the short-term maturing obligation of creditors and others.

Liquidity is having enough money in the form of cash, or near-cash assets, to meet the financial obligations. In business, cash is king, particularly during tough economic times or when the markets are turbulent. Without cash, company cannot pay its bills nor carry out growth plans, and it may find it difficult to get credit or take advantage of business opportunities. A company that cannot pay its creditors on time and continue not to honour its obligations to the suppliers of credit, services, and goods can be declared a sick company or bankrupt company.

Current assets are liquid so holding more current assets refer to high liquidity but on the other hand current assets include such items which diminish firm's profitability. It must be remembered that different items of current assets have different degree of liquidity. Cash is the most liquid asset. For other types of current assets, liquidity concept has two dimensions, i.e., Time and Risk. The speed with which current assets other than cash can be converted into cash is known as time dimension of liquidity consideration. More quickly and rapidly current assets are converted into cash, more liquid those current assets shall be. The greater the relative proportion of liquid assets, the lesser the risk of running out of cash, all other things being equal. All individual components of working capital including cash, marketable securities, account receivables and inventory management play a vital role in the performance of any firm (**Panigrahi, A.K., 2012**). Probably due to this factor, liquid assets are also called quick assets.

For the business owners, one of the most important tasks is to estimate and evaluate cash flows of the business, to well identify the long run and short run cash inflows and outflows to timely sort out the cash shortages and excess to formulate financing and investing strategies respectively. It also helps in planning the payments to creditors on time to avoid losing reputation and trust of the customers and to avoid potential bankruptcy (**Panigrahi, A.K., 2013**). If all the current obligations are met without any delay as and when these become due, creditors and all others will have a feeling of confidence in the financial strength of the organization and this will sustain the credit standing of the organization. But failure to meet such obligations on continuous basis would cause an adversely affect on the credit standing and market reputation resulting in more difficult to finance the level of current assets from the short-term sources. Keeping liquidity is usually costly, but helps avoiding negative effects of unexpected cash-flow shocks.

Liquidity plays a significant role in the successful functioning of a business firm. A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions. A study of liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business (**Bhunja, 2010**). Liquidity requirement of a firm depends on the peculiar nature of the firm and there is no specific rule on determining the optimal level of liquidity that a firm can maintain in order to ensure positive impact on its profitability.

One should try neither to maximize nor minimize the liquidity ratios; one should try to optimize them in relation to the objective, which in case of a commercial company is probably the maximization of profit on capital employed. The lower the liquidity ratios are, the more vulnerable the company is to pressure from creditors which it unable to meet and vice versa. Therefore, one should seek to have as little working capital as is consistent with not being unduly vulnerable to pressure from creditors.

II. Review of Literature

A brief review of the different researches in the field is attempted in the following paragraphs.

Agarwal (1988) devised the working capital decision as a goal programming problem, giving primary importance to liquidity, by targeting the current ratio and quick ratio. The model included three liquidity goals, two profitability goals, and, at a lower priority level, four current asset sub-goals and a current liability sub-goal (for each component of working capital). In particular, the profitability constraints were designed to capture the opportunity cost of excess liquidity (in terms of reduced profitability).

Reddy (1995) in his study on “Management of working capital”, studies various issues related to working capital management among selected (six companies) private large – scale companies in the state of Andhra Pradesh during the period from 1977 to 1986 . The study revealed that investment in current assets was more than that of fixed assets and inventories constituted highest percentage of total current assets. Study also pointed out that the liquidity and solvency position of sample units was found to be highly unsatisfactory. The study is based on his findings, suggested the direct need for improvement of liquidity and solvency position of sample companies failing which the situation would lead to serious liquidity crunch.

Richard (1995) in the study on “Invest working capital for better returns” felt that the investment in working capital has to be capitalized. They said that the goals of investment in working capital were threefold: to find income producing opportunities for cash that is temporarily idle, to maximize yield and to maintain the liquidity of the investment. With his experience as associate financial consultant with Merrill Lynch’s Private client group in Arlington Mr. Romero felt that the firms have to have concrete formula of optimum investment in working capital.

Hrishikes (1995) in his book on “*Total Management by Ratios*” says that problem of liquidity management is more acute for companies which are growing at a fast rate. The rising cash flow (profit) curves gives a euphoric feeling of “all being well everywhere”, which makes the managers to press the growth button faster. What they lose sight of is the real cash position of the company which might be showing a downward trend and hence, pushing the company the slowly and then vigorously towards a severe liquidity crisis despite the company making high profit. Unfortunately, once an enterprise-manager presses the growth buttons, it is difficult for them to retract the steps. The continuous erosion of liquidity ultimately makes a high-growth company sick. There is nothing wrong in making profit, in fact, that is the purpose of business, but unless there is cash coming through profit, an enterprise will soon be dead.

Ghosh and Maji (2003) attempted to examine the efficiency of working capital management of Indian cement companies during 1993 to 2002. They calculated three index values-performance index, utilization index and overall efficiency index to measure the efficiency of working capital management, instead of using working capital management ratios. By using regression analysis and industry norms as a target efficiency level of individual firms, they tested the speed of achieving target level of efficiency by individual firms during the period of study and found that some of the sample firms successfully improved efficiency during these years.

Elijelly (2004) in the study on “Liquidity – profitability tradeoff: An empirical investigation in an emerging market” empirically examined the relation between profitability and liquidity, as measured by current ratio and cash gap (cash conversion cycle) on a sample of joint stock companies in Saudi Arabia. The study found significant negative relation between the firm’s profitability and its liquidity level, as measured by current ratio.”

Singh and Pandey (2008) suggested that, for the successful working of any business organization, fixed and current assets play a vital role, and that the management of working capital is essential as it has a direct impact on profitability and liquidity. They studied the working capital components and found a significant impact of working capital management on profitability for Hindalco Industries Limited.

Chakraborty (2008), in the study on “Working Capital and Profitability: An Empirical Analysis of Their Relationship with Reference to Selected Companies in the Indian Pharmaceutical Industry” evaluated the relationship between working capital and profitability of Indian pharmaceutical companies. He pointed out that there were two distinct schools of thought on this issue: according to one school of thought, working capital is not a factor of improving profitability and there may be a negative relationship between them, while according to the other school of thought, investment in working capital plays a vital role to improve corporate profitability, and unless there is a minimum level of investment of working capital, output and sales cannot be maintained - in fact, the inadequacy of working capital would keep fixed asset inoperative.

Kevin and Young (2009) in their article, “Need Cash? Look Inside Your Company” had taken a hard look at the way company manages its working capital. He identified that a lot of capital tied up in receivables and inventory could be turned into cash by challenging the working capital practices and policies of the company. He had explored six common mistakes that companies make in managing working capital. He says that the simple act of correcting them could free up enough cash to make the difference between failure and survival in the current recession.

Sherin (2010) in her article on “Liquidity v/s profitability - Striking the right balance” writes about the implications of liquidity and profitability in a pharmaceutical company. A firm is required to maintain a balance between liquidity and profitability while conducting its day to day operations. Investments in current assets are inevitable to ensure delivery of goods or services to the ultimate customers. A proper management of the same could result in the desired impact on either profitability or liquidity.

Chandrabai et al. (2011) in their paper on “Working Capital Management of Indian Electrical Equipment Manufacturers-A Comparative study” found that the companies in the electrical equipment industry have performed fairly well for financial year 2010. The sales of most of the companies have increased. The management of Working Capital is one of the most important and challenging aspect of the overall performance of the organization. Merely more effective and efficient management of working capital can ensure survival of a business enterprise. Working Capital Management is concerned with the problems that arise in attempting to manage the Current Assets, Current Liabilities and the interrelation that exists between them. This study analyses the comparative study of working capital management in Indian Electrical Equipment Industry and it is limited to the companies BHEL and ABB Ltd represent public and private sector enterprises respectively. Relevant data has been extracted from the consecutive annual reports between financial years 2005-06 to 2009-10 of both the companies

Brahma (2011) conducted a study to examine and evaluate the importance of liquidity management on profitability as a factor accountable for poor financial performance in the private sector steel Industry in India.

Nandi Chandra Kartik (2012) in his paper on “Trends in Liquidity Management and Their Impact on Profitability: A Case Study” makes an attempt to assess the trends in liquidity management and their impact on profitability. An attempt has been made to establish the linear relationship between liquidity and profitability with the help of a multiple regression model. On the basis of overall analysis, it is therefore important to state that the selected company always tries to maintain adequate amount of net working capital in relation to current liabilities so as to keep a good amount of liquidity throughout the study period.

Profile of Indian Cement Industry

Cement is an essential component of infrastructure development and most important input of construction industry, particularly in the government’s infrastructure and housing programs, which are necessary for the country’s socioeconomic growth and development. It is also the second most consumed material on the planet (WBCSD 2002). The Indian cement industry is the second largest producer of cement in the world just behind China, but ahead of the United States and Japan. It is considered to be a core sector accounting for approximately 1.3% of GDP and employing over 0.14 million people. Also the industry is a significant contributor to the revenue collected by both the central and state governments through excise and sales taxes.

III. Profile of Companies under Study

Ambuja Cements:

Ambuja Cements Ltd. (ACL) is one of the leading cement manufacturing companies in India. The Company, initially called Gujarat Ambuja Cements Ltd., was founded by Narotam Sekhsaria in 1983 with a partner, Suresh Neotia. Sekhsaria’s business acumen and leadership skills put the company on a fast track to growth. The Company commenced cement production in 1986. The global cement major Holcim acquired management control of ACL in 2006. Holcim today holds little over 50% equity in ACL. The Company is currently known as Ambuja Cements Ltd. ACL has grown dynamically over the past decade. Its current cement capacity is about 27.25 million tonnes. The Company has five integrated cement manufacturing plants and eight cement grinding units across the country. ACL enjoys a reputation of being one of the most efficient cement manufacturers in the world. Its environment protection measures are on par with the finest in the country. It is one of the most profitable and innovative cement companies in India. ACL is the first Indian cement manufacturers to build a captive port with three terminals along the country’s western coastline to facilitate timely, cost effective and environmentally cleaner shipments of bulk cement to its customers.

ACC Cements:

ACC Limited (ACC) is engaged in manufacture of cement. The Company is also engaged in the manufacture of ready mixed concrete. During the year ended December 31, 2011, the Company produced 201,954 metric tons of Portland Slag cement (PSC). During 2011, the Company sold 233.07 lakh tons of cement and 2.41 lakh tons of clinker. The Company has grinding plants in Karnataka and clinkering line in Maharashtra. The Company’s subsidiaries include ACC Mineral Resources Limited, Lucky Minmat Limited,

Bulk Cement Corporation (India) Limited, National Limestone Company Private Limited and Encore Cement and Additives Private Limited. The Company is subsidiary of Ambuja Cement India Private Limited. During the year ended December 31, 2011, the Company acquired 40% stake in Akaash Manufacturing Company Private Limited. In October 2012, the Company amalgamated with ACC Concrete Limited. In November 2012, its subsidiary Encore Cement and Additives Private Limited was amalgamated with it.

India Cements:

India Cements Ltd is the largest producer of cement in South India. The company has four plants in Tamil Nadu and four in Andhra Pradesh, India which cater to all major markets in South India and Maharashtra. They are the market leader with a market share of 28% in the South India. The Company's products include Coromandel King-Sankar Sakthi- Raasi Gold, Coromandel-Sankar-Raasi, Blended Cement and Sulphate Resisting Portland Cement (SRC). As of March 31, 2012, it had seven operating units in Tamil Nadu and Andhra Pradesh, and including Trinetra Cement Limited, Company's subsidiary, had 10 operating units with capacity of 15.5 million tons per annum. During the fiscal year ended March 31, 2012 (fiscal 2012), overall clinker production was at 71.95 lakh tons (76.34 lakh tons) while the grinding was at 94.63 lakh tons (99.80 lakh tons). In fiscal 2012, the Company sold at 94.51 lakh tons of cement and 0.76 lakh tons of clinker. Coromandel Electric Company Limited became a subsidiary of the Company during fiscal 2012. In July 2013, India Cements Ltd incorporated a new subsidiary for infrastructure business.

Madras Cements:

Madras Cements (MCL), a flagship company of the Ramco group, is a major player in the blended cement category in south India. The company was incorporated in the year 1957. MCL is the sixth largest cement producer in the country and the second largest in South India. The Company undertook to replace the 4 cement mills at its Ramasamyraja Nagar Works, which were 20 years old, by a single new Combidan Cement Mill. The mill was commissioned at end of the year 1985. A 132 KVA sub-station and the limestone crushing plant were installed during the same year. The project was commissioned during December of the year 1986. Two D.G. sets were installed in the middle of the year 1988 to meet 60% of the unit's power requirement at Jayanthipuram. The Company had set up the 4 MW windmill farm in the year 1992 at Muppandal, Kanyakumari district, Tamil Nadu. Asia's largest one to be commissioned in the Private sector was set up. MCL is planning to enter into industries such as sugar, pharmaceuticals, power & power equipments and textiles. As at March 2008, Madras Cements lines up Rs 15 billion expansion. It will invest Rs 15.24 billion to increase its capacity.

Shree Cements:

Shree Cement Limited is a cement producer. The Company operates in two segments: Cement and Power. As of June 30, 2012, the Company had the cement capacity of 13.5 million tons per annum and power capacity of 560 megawatt. This includes 300 megawatt (150 megawatt x2) thermal power plant commissioned at Beawar. The Company's waste heat recovery power plants have a total capacity of 46 megawatt. The Company's brands include Shree Ultra, Bangur Cement and Rockstrong Cement. SCL has manufacturing facilities at Beawar and Ras in Ajmer and Pali district and grinding units at Khushkhera, Suratgarh and Jaipur, respectively, in Rajasthan and Roorkie in Uttarakhand.

Objectives of the Study

Keeping in view the importance of Cement sector in Indi's economic growth scenario, the study aims at evaluating the liquidity management of five leading Cement companies over a period of 10 years (2000-01 to 2009-10). More specifically the emphasis will be on the following issues:

1. To assess the management of working capital and its adequacy;
2. To study and compare the liquidity position of the companies under study;
3. To find out the areas of weakness in liquidity management and offer suggestions for improvement, if any.

Data set and Sample

A sample size of five Indian cement companies listed in BSE has been purposefully selected for the study purpose. The data for the study period 2000-2001 to 2009-10 have been collected from secondary sources i.e. Annual reports of the company as well as from the website www.moneycontrol.com. Keeping in view the scope of the study, it was decided to select five large companies on the basis of total assets and whose financial information is available for the entire study period so as to meet our requirements. Editing, classification and tabulation of the financial data collected from the above mentioned-sources have been done as per requirements of the study.

Limitations

We would like to make it clear that, mainly there are three limitations of this study, which are as under:

- The study is confined to ten years data only, i. e. from 2001–2010, therefore, a detailed analysis covering a lengthy period, which may give slightly different results has not been made.
- The study is based on secondary data collected from the website *www.moneycontrol.com* and the websites of sample companies; therefore the quality of the study depends purely upon the accuracy, reliability and quality of the secondary data source. Approximation, and relative measures with respect to the data source might impact the results.
- The study is based on five companies of the Cement Industry in India that are also drawn from the companies listed in BSE. Therefore, the accuracy of results is purely based on the data of sample units. If one takes more sample units the results may go slightly differently.

IV. Research Methodology

The samples selected for the study are the top five cement companies of Indian Cement Industry namely, Ambuja Cements, ACC Cements, India Cements, Madras Cements and Shree Cements. This study is based on secondary data. The data required for this study have been collected from the published annual reports of the selected companies and the website, moneycontrol.com. The study covered a period of ten years starting from 2001 to 2010. The techniques applied in the study are Percentage method, mean, standard deviation, coefficient of variation, Ratio Analysis, Motaal's Ultimate Rank Test.

Data Analysis and Findings

In order to study the liquidity position of all the companies, we have calculated the liquid ratios, amount invested in liquid assets, working capital and other related ratios which is depicted in the following tables:

TABLE - 1									
AMBUJA CEMENTS									
Rs. In Crores									
Year	Current Assets	Current Liabilities	Working Capital (CA-CL)	Quick Assets (C.A. - Inv.)	Current Ratio	Quick Ratio	Working Capital to Current Assets (%)	Stock/Inventory to Current Assets (%)	Quick Assets/Liquid Resources to Current Assets (%)
2001	400.61	303.73	96.88	239.18	1.32	0.79	24.18	40.30	59.70
2002	662.49	445.28	217.21	454.12	1.49	1.02	32.79	31.45	68.55
2003	823.88	574.16	249.72	599.68	1.43	1.04	30.31	27.21	72.79
2004	537.66	764.3	-226.64	283.38	0.70	0.37	-42.15	47.29	52.71
2005	594.47	783.47	-189	277.47	0.76	0.35	-31.79	53.32	46.68
2006	1,189.90	1,097.74	92.16	781.08	1.08	0.71	7.75	34.36	65.64
2007	1,615.11	1,575.25	39.86	1033.51	1.03	0.66	2.47	36.01	63.99
2008	2,368.01	1,883.11	484.9	1428.26	1.26	0.76	20.48	39.69	60.31
2009	2,008.77	2,256.36	-247.59	1325.53	0.89	0.59	-12.33	34.01	65.99
2010	3,200.82	2,990.55	210.27	2298.96	1.07	0.77	6.57	28.18	71.82
Mean	1340.17	1267.40	72.78	872.12	1.10	0.71	3.83	37.18	62.82
Growth	2,800.21	2,686.82	113.39	2,059.78	-0.25	-0.02	-17.61	-12.12	12.12
Growth Rate (%)	698.99	884.61	117.04	861.18	-18.85	-2.38	-72.84	-30.08	20.30
S.D	935.26	883.32	236.59	661.22	0.27	0.23	25.60	8.24	8.24
C.V.(%)	69.79	69.70	325.09	75.82	24.54	32.69	669.07	22.17	13.12

AMBUJA CEMENTS: It is evident from the above table that in case of Ambuja Cements, the current assets has shown a growth rate of around 700 percent and similarly current liabilities are also grown around 885 percent in 10 years. The standard deviation of the current assets was Rs.935.26 and the coefficient of variation was 69.79%, which shows a steady and fast growth of current assets during the period of study. As evident from the table, the current liabilities, working capital and quick assets are also changed in the similar fashion as that of current assets. The growth rate of current liabilities was 884.61 percent with a standard deviation of Rs.883.32 crores and a CV of 69.70 percent. The growth rate of working capital was 117.04 percent with a SD of Rs.236.59 crores and a CV of 325.09 percent. A higher CV rate indicates a greater variation of working capital during the period. The quick assets have registered a growth rate of 861.18 percent with a SD of Rs. 661.22 crores and a CV of 75.82 percent.

When the liquidity ratios of Ambuja Cements were analysed, we found that both current ratio and quick ratio have registered a negative growth i.e. -18.85 and -2.38 percent respectively. The negative growth in both the

ratios indicates that the liquidity position of the company has been degraded over the years. The average current ratio of the company was 1.10 and average quick ratio was 0.71, which is far less than the ideal rule of thumb i.e. 2 and 1, indicates an unsatisfactory liquidity position of the company during the years of study. Moreover, a higher CV percentage i.e. in case of current ratio 24.54 percent and in quick ratio 32.69 percent is also an indication of instability in the liquidity position of the company.

When we tried to find out the overall liquidity position of the company by applying Motaal's Comprehensive Test of Liquidity, we found that working capital to current assets ratio has shown a negative growth of 72.84 percent. This indicates that the growth rate of current liabilities was more as compared to the growth rate of current assets and hence the working capital is decreasing slowly and slowly. This aggressive approach in the working capital might be the policy of the firm to enhance the profitability but no doubt it endangers the liquidity position of the company.

The negative growth in stock to current assets ratio can be treated as a positive action towards liquidity management assuming that the company was reducing its inventory level to the extent possible so as to free up the money tied up with the inventories.

The quick asset to current ratio has also registered a positive growth of 20.30 percent during the study period, which is an indication of company's concern and steps to maintain liquidity.

After analyzing all the aspects of liquidity, we can just say that the present liquidity position of the company is not that much satisfactory as it ought to be. Company should take enough steps to increase the level of working capital, to increase the current ratio and quick ratio. Current assets should be increased at a faster rate as compared to current liabilities. Company must ensure that it has enough liquid resources to meet the short term obligations as they fall due. If the company operates strictly or mostly on cash basis or it is able to pay its creditors after it collects from its debtors, then the situation is in favour of the company. Otherwise, any moment the present situation may create serious financial troubles for the company which may even lead the company towards bankruptcy.

ACC CEMENTS: Table -2 gives a detailed description of liquidity position of ACC Cements. It is evident from the table that in case of ACC Cements, the current assets has shown a growth rate of around 230 percent whereas the current liabilities are grown around 560 percent which is more than double of the growth rate of current assets in last 10 years. The standard deviation of the current assets was Rs.749.05 and the coefficient of variation was 46.39%, which shows a steady and fast growth of current assets during the period of study.

As evident from the table, the current liabilities, working capital and quick assets are also changed in the similar fashion as that of current assets. The growth rate of current liabilities was 556.20 percent with a standard deviation of Rs.1199.13 crores and a CV of 60.11 percent. The growth rate of working capital was negative to the extent of -667.78 percent with a SD of Rs.503.79 crores and a CV of -132.53 percent. A negative growth in working capital and a higher negative CV rate indicates a faster growth of current liabilities as compared to current assets with a greater variation during the period. The quick assets also have registered a negative growth rate of -45.25 percent with a SD of Rs. 1020.09 crores and a CV of 379.26 percent. All these indicates a very worse liquidity crunch in the company and the variability in working capital as well as quick assets are much more than the expected, which indicates a constant instability in the liquidity position in the company.

When the liquidity ratios of ACC Cements were analysed, we found that both current ratio and quick ratio have registered a negative growth i.e. -50.03 and -91.71 percent respectively. The negative growth in both the ratios indicates that the liquidity position of the company has been degraded over the years. The average current ratio of the company was 0.88 and average quick ratio was 0.17, which is far less than the ideal rule of thumb i.e. 2 and 1, indicates an unsatisfactory liquidity position of the company during the years of study. Moreover, a higher CV percentage i.e. in case of current ratio 22.07 percent and in quick ratio 301.72 percent is also an indication of instability in the liquidity position of the company.

TABLE - 2									
ACC CEMENTS									
Rs. In Crores									
Year	Current Assets	Current Liabilities	Working Capital (CA-CL)	Quick Assets (C.A. - Inv.)	Current Ratio	Quick Ratio	Working Capital to Current Assets (%)	Stock/Inventory to Current Assets (%)	Quick Assets/Liquid Resources to Current Assets (%)
2001	886.91	648.33	238.58	574.11	1.37	0.89	26.90	35.27	64.73
2002	916.07	978.53	-62.46	-247.63	0.94	-0.25	-6.82	32.76	-27.03
2003	934.91	1,100.07	-165.16	538.82	0.85	0.49	-17.67	36.94	57.63
2004	1,035.10	1,256.50	-221.4	-503.58	0.82	-0.40	-21.39	36.52	-48.65
2005	1,233.57	1,472.97	-239.4	349.8	0.84	0.24	-19.41	43.97	28.36
2006	1,436.45	1,765.79	-329.34	236.96	0.81	0.13	-22.93	41.84	16.50

2007	2,027.47	2,138.33	-110.86	-816.86	0.95	-0.38	-5.47	30.78	-40.29
2008	2,307.94	2,657.54	-349.6	2808.91	0.87	1.06	-15.15	31.67	121.71
2009	2,443.61	3,650.61	-1207	-565.15	0.67	-0.15	-49.39	31.88	-23.13
2010	2,925.70	4,280.30	-1354.6	314.31	0.68	0.07	-46.30	31.27	10.74
Mean	1614.77	1994.90	-380.12	268.97	0.88	0.17	-17.76	35.29	16.06
Growth	2038.79	3631.97	-1593.18	-259.80	-0.68	-0.81	-73.20	-3.99	-53.99
Growth Rate (%)	229.88	560.20	-667.78	-45.25	-50.03	-91.71	-272.12	-11.33	-83.40
S.D	749.05	1199.13	503.79	1020.09	0.19	0.51	21.42	4.59	53.95
C.V.(%)	46.39	60.11	-132.53	379.26	22.07	301.72	-120.61	13.02	335.98

When we tried to find out the overall liquidity position of the company by applying Motaal’s Comprehensive Test of Liquidity, we found that working capital to current assets ratio has shown a negative growth of 73.20 percent. This indicates that the growth rate of current liabilities was more as compared to the growth rate of current assets and hence the working capital is decreasing slowly and slowly. This aggressive approach in the working capital might be the policy of the firm to enhance the profitability but no doubt it endangers the liquidity position of the company.

The negative growth in stock to current assets ratio can be treated as a positive action towards liquidity management assuming that the company was reducing its inventory level to the extent possible so as to free up the money tied up with the inventories.

The quick asset to current ratio has also registered a negative growth of 53.99 percent during the study period, which shows that company’s liquid assets position has also deteriorated subsequently during the period of study.

After analyzing all the aspects of liquidity, we can just say that the present liquidity position of the company is very much worse. Company should take serious steps to increase the level of working capital, to increase the current ratio and quick ratio. Current assets should be increased at a faster rate as compared to current liabilities. Company must ensure that it has enough liquid resources to meet the short term obligations as they fall due. If the company operates strictly or mostly on cash basis or it is able to pay its creditors after it collects from its debtors, then the situation is in favour of the company. Otherwise, any moment the present situation may create serious financial troubles for the company which may even lead the company towards bankruptcy.

INDIA CEMENTS: Table -3 gives an overview of the position of India Cements. It is evident from the table that in case of India cements, the current assets has shown a growth rate of around 106 percent whereas the current liabilities are grown around 335 percent which is more than three times of the growth rate of current assets in last 10 years. The standard deviation of the current assets was Rs.475.42 and the coefficient of variation was 26.51%, which shows a steady growth of current assets during the period of study. The growth rate of current liabilities was 335.12 percent with a standard deviation of Rs.448.29 crores and a CV of 57.88 percent. The growth rate of working capital shows positive, which was 27.36 percent. A CV rate of just 17.92 percent coupled with a positive growth in working capital indicates the company’s concern for liquidity management.

TABLE - 3

INDIA CEMENTS									
Rs. In Crores									
Year	Current Assets	Current Liabilities	Working Capital (CA-CL)	Quick Assets (C.A. - Inv.)	Current Ratio	Quick Ratio	Working Capital to Current Assets (%)	Stock/Inventory to Current Assets (%)	Quick Assets/Liquid Resources to Current Assets (%)
2001	1,406.14	359.44	1,046.70	1,209.66	3.91	3.37	74.44	13.97	86.03
2002	1,413.41	492.06	921.35	-172.99	2.87	-0.35	65.19	13.74	-12.24
2003	1,509.49	708.85	800.64	324.13	2.13	0.46	53.04	10.16	21.47
2004	1,518.42	454.04	1,064.38	-349.84	3.34	-0.77	70.10	10.48	-23.04
2005	1,556.01	541.14	1,014.87	-667.60	2.88	-1.23	65.22	12.96	-42.90
2006	1,585.74	495.09	1,090.65	1,044.91	3.20	2.11	68.78	13.48	65.89
2007	1,734.80	494.28	1,240.52	1,365.75	3.51	-2.76	71.51	14.32	-78.73
2008	2,149.41	1,209.25	940.16	2,615.07	1.78	2.16	43.74	16.31	121.66
2009	2,161.98	1,427.38	734.60	-331.97	1.51	-0.23	33.98	18.08	-15.35
2010	2,897.08	1,564.01	1,333.07	148.53	1.85	0.09	46.01	16.16	5.13
Mean	1,793.25	774.55	1,018.69	245.42	2.70	0.28	59.20	13.97	12.79
Growth	1,490.94	1,204.57	286.37	1,061.13	-2.06	-3.27	-28.42	2.19	-80.90

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Growth Rate (%)	106.03	335.12	27.36	-87.72	-52.65	-97.18	-38.18	15.66	-94.04
S.D	475.42	448.29	182.58	1,130.00	0.83	1.82	13.96	2.48	61.78
C.V.(%)	26.51	57.88	17.92	460.44	30.64	640.85	23.58	17.75	482.96

The quick assets also have registered a negative growth rate of -1061.13 percent with a SD of Rs. 1130 crores and a CV of 460.44 percent. This indicates a very worse liquidity position in the company and the variability quick assets are much more than the expected, which indicates a constant instability in the liquidity position in the company.

When the liquidity ratios of ACC Cements were analysed, we found that both current ratio and quick ratio have registered a negative growth i.e. -52.65 and -97.18 percent respectively. The negative growth in both the ratios indicates that the liquidity position of the company has been degraded over the years. The average current ratio of the company was 2.70 and average quick ratio was only 0.28, indicates that most of the current assets of the company are tied up with inventories. Though the current ratio seems to be good looking, yet the short term liquidity position was not satisfactory because of heavy investment in inventories. Moreover, a higher CV percentage i.e. in case of current ratio 30.64 percent and in quick ratio 640.85 percent is also an indication of instability in the liquidity position of the company. Hence the company should take necessary steps to reduce inventory level from current assets and to increase other liquid resources in current assets.

When we tried to find out the overall liquidity position of the company by applying Motaal's Comprehensive Test of Liquidity, we found that working capital to current assets ratio has shown a negative growth of 38.18 percent. This indicates that the growth rate of current liabilities was more as compared to the growth rate of current assets and hence the working capital is decreasing slowly and slowly. This aggressive approach in the working capital might be the policy of the firm to enhance the profitability but no doubt it endangers the liquidity position of the company.

The positive growth in stock to current assets ratio which is 15.66 percent is a bad sign for the company because it indicates that investment in inventories are increasing gradually, which has to be stopped.

The quick asset to current ratio has also registered a negative growth of 94.04 percent during the study period, which shows that company's liquid assets position has also deteriorated subsequently during the period of study, though the current assets position is satisfactory.

After analyzing all the aspects of liquidity, it can be said that the company should take serious steps to increase the level of quick ratio by investing money in liquid resources and investment in inventories should be curtailed to the extent possible.

MADRAS CEMENTS: Table -4 gives an overview of the position of Madras Cements.

TABLE - 4									
MADRAS CEMENTS									
Rs. In Crores									
Year	Current Assets	Current Liabilities	Working Capital (CA-CL)	Quick Assets (C.A. - Inv.)	Current Ratio	Quick Ratio	Working Capital to Current Assets (%)	Stock/Inventory to Current Assets (%)	Quick Assets/Liquid Resources to Current Assets (%)
2001	242.14	118.12	124.02	176.01	2.05	1.49	51.22	27.31	72.69
2002	228.97	295.22	-66.25	163.00	0.78	0.55	-28.93	28.81	71.19
2003	234.41	306.32	-71.91	164.46	0.77	0.54	-30.68	29.84	70.16
2004	244.17	343.89	-99.72	191.43	0.71	0.56	-40.84	21.60	78.40
2005	314.97	357.93	-42.96	183.84	0.88	0.51	-13.64	41.63	58.37
2006	327.08	424.50	-97.42	226.13	0.77	0.53	-29.78	30.86	69.14
2007	614.75	620.31	-5.56	486.51	0.99	0.78	-0.90	20.86	79.14
2008	779.23	764.11	15.12	536.53	1.02	0.70	1.94	31.15	68.85
2009	913.80	930.27	-16.47	584.91	0.98	0.63	-1.80	35.99	64.01
2010	1135.66	1131.34	4.32	723.12	1.00	0.64	0.38	36.33	63.67
Mean	503.52	529.20	-25.68	343.59	0.99	0.69	-9.30	30.44	69.56
Growth	893.52	1013.22	-119.70	547.11	-1.05	-0.85	-50.84	9.02	-9.02
Growth Rate (%)	369.01	857.79	-96.52	310.84	-51.03	-57.11	-99.26	33.01	-12.40
S.D	334.40	322.31	66.81	214.78	0.39	0.29	26.43	6.45	6.45
C.V.(%)	66.41	60.91	-260.14	62.51	39.07	42.21	-284.02	21.18	9.27

It is evident from the table that in case of Madras cements, the current assets has shown a growth rate of around 369 percent whereas the current liabilities are grown around 858 percent which is more than double of the growth rate of current assets in last 10 years. The standard deviation of the current assets was Rs.334.40 and the coefficient of variation was 66.41 percent, which shows a steady and fast growth of current assets during the period of study. The growth rate of current liabilities was 857.79 percent with a standard deviation of Rs.322.31 crores and a CV of 60.91 percent. The growth rate of working capital was negative to the extent of -96.52 percent with a SD of Rs.66.81.79 crores and a CV of -260.14 percent. A negative growth in working capital and a higher negative CV rate indicates a faster growth of current liabilities as compared to current assets with a greater variation during the period. The quick assets have registered a positive growth rate of 310.84 percent with a SD of Rs. 214.78 crores and a CV of 62.51 percent indicates that during the period company has invested enough money in liquid resources.

When the liquidity ratios of Madras Cements were analysed, we found that both current ratio and quick ratio have registered a negative growth i.e. -51.03 and -57.11 percent respectively. The negative growth in both the ratios indicates that the liquidity position of the company has been degraded over the years. The average current ratio of the company was 0.99 and average quick ratio was 0.69, which is far less than the ideal rule of thumb i.e. 2 and 1, indicates an unsatisfactory liquidity position of the company during the years of study. The interesting fact is that though the quick assets have registered a high positive growth, the quick ratio shows a negative growth the reason being a fast growth in current liabilities.

When we tried to find out the overall liquidity position of the company by applying Motaal's Comprehensive Test of Liquidity, we found that working capital to current assets ratio has shown a negative growth of 99.26 percent. This indicates that the growth rate of current liabilities was more as compared to the growth rate of current assets and hence the working capital was decreasing slowly and slowly. This aggressive approach in the working capital might be the policy of the firm to enhance the profitability but no doubt it endangers the liquidity position of the company.

The positive growth in stock to current assets ratio which is 33.01 percent is a bad sign for the company because it indicates that investment in inventories are increasing gradually, which has to be stopped. The quick asset to current ratio has also registered a negative growth of 12.40 percent during the study period, which shows that company's liquid assets position as a part of current assets has also deteriorated subsequently during the period of study.

After analyzing all the aspects of liquidity, we suggest that the company should take serious steps to control the increase in current liabilities. Steps should be taken to increase liquid assets as a part of current assets.

SHREE CEMENTS: Table - 5 gives an overview of the position of Shree Cements.

TABLE - 5									
SHREE CEMENTS									
Rs. In Crores									
Year	Current Assets	Current Liabilities	Working Capital (CA-CL)	Quick Assets (C.A. - Inv.)	Current Ratio	Quick Ratio	Working Capital to Current Assets (%)	Stock/Inventory to Current Assets (%)	Quick Assets/Liquid Resources to Current Assets (%)
2001	159.42	60.00	99.42	124.70	2.66	2.08	62.36	21.78	78.22
2002	140.82	114.55	26.27	99.79	1.23	0.87	18.66	29.14	70.86
2003	145.45	118.33	27.12	83.26	1.23	0.70	18.65	42.76	57.24
2004	171.76	121.05	50.71	112.98	1.42	0.93	29.52	34.22	65.78
2005	152.63	151.79	0.84	80.04	1.01	0.53	0.55	47.56	52.44
2006	218.37	247.22	-28.85	105.43	0.88	0.43	-13.21	51.72	48.28
2007	780.67	339.24	441.43	624.60	2.30	1.84	56.55	19.99	80.01
2008	1114.53	540.53	574.00	937.96	2.06	1.74	51.50	15.84	84.16
2009	1439.77	746.03	693.74	1285.31	1.93	1.72	48.18	10.73	89.27
2010	1637.10	1108.23	528.87	1278.97	1.48	1.15	32.31	21.88	78.12
Mean	596.05	354.70	241.36	473.30	1.62	1.20	30.51	29.56	70.44
Growth	1477.68	1048.23	429.45	1154.27	-1.18	-0.92	-30.06	0.10	-0.10
Growth Rate (%)	926.91	1747.05	431.96	925.64	-44.40	-44.47	-48.20	0.45	-0.12
S.D	598.03	343.74	282.35	514.27	0.59	0.60	24.81	14.00	14.00
C.V.(%)	100.33	96.91	116.99	108.65	36.34	49.88	81.33	47.37	19.88

It is evident from the table that in case of Madras cements, the current assets has shown a growth rate of 926.91 percent whereas the current liabilities are grown to the extent of 1747.05 percent in last 10 years. The standard deviation of the current assets was Rs.598.03 and the coefficient of variation was 100.33 percent, which shows a

steady and fast growth of current assets during the period of study. The working capital has also registered a positive growth of 431.96 percent indicates that the company has always tried to maintain the required amount of working capital. The quick assets have registered a positive growth rate of 925.64 percent with a SD of Rs. 514.27 crores and a CV of 108.65 percent indicates that during the period company has invested enough money in liquid resources.

When the liquidity ratios of Shree Cements were analysed, we found that both current ratio and quick ratio have registered a negative growth i.e. -44.40 and -44.47 percent respectively. The negative growth in both the ratios indicates that the liquidity position of the company has been degraded over the years. The average current ratio of the company was 1.62 and average quick ratio was 1.20, which indicates that though the company maintains sufficient liquid resources, yet the current assets position is not up to the expectation. But, the overall position is satisfactory as compared to other companies under study.

When we tried to find out the overall liquidity position of the company by applying Motaal's Comprehensive Test of Liquidity, we found that working capital to current assets ratio has shown a negative growth of 48.20 percent. This indicates that the growth rate of current liabilities was more as compared to the growth rate of current assets and hence the working capital was decreasing slowly and slowly. This aggressive approach in the working capital might be the policy of the firm to enhance the profitability but no doubt it endangers the liquidity position of the company.

The positive growth in stock to current assets ratio which is 0.45 percent is though bad a sign for the company, yet the rate is very low.

The quick asset to current ratio has also registered a negative growth of 0.12 percent during the study period, which shows that company's liquid assets position as a part of current assets has also deteriorated subsequently during the period of study. But it is very low.

After analyzing all the aspects of liquidity, we can say that the overall liquidity position of the company is good. As a part of suggestion, we can only say that company should try to increase its current assets level at par with increase in current liabilities.

Motaal's Comprehensive Test of Liquidity

Motaal prescribes a comprehensive test for determining the soundness of a firm as regards liquidity position. According to him, a process of ranking is used to arrive at a more comprehensive measure of liquidity in which the following three ratios are combined in a point score:

i) Working Capital (WC) to Current Asset Ratio = $\frac{\text{Working Capital} \times 100}{\text{Current Assets}}$

ii) Stock to Current Asset Ratio = $\frac{\text{Inventory or Stock} \times 100}{\text{Current Assets}}$

iii) Liquid Resources (LR) to Current Asset Ratio = $\frac{\text{Liquid Resources or Quick Assets} \times 100}{\text{Current Assets}}$

The higher the value of both working capitals to current asset ratio and liquid resources to current asset ratio, relatively the more favorable will be the liquidity position of a firm and vice-versa. On the other hand, lower the value of stock to current assets ratio, relatively the more favorable will be the liquidity position of the firm. The ranking of the above three ratios of a firm over a period of time is done in their order of preferences. Finally, the ultimate ranking is done on the basis of the principle that the lower the points score, the more favorable will be the liquidity position and vice-versa.

TABLE - 6

Motaal's Comprehensive Test of Liquidity									
Sl. No.	Company	Working Capital to Current Assets Ratio (%)	Rank	Stock to Current Assets Ratio (%)	Rank	Liquid Resources to Current Assets Ratio (%)	Rank	Total Rank	Ultimate Rank
1	AMBUJA CEMENTS	3.83	3	37.18	5	62.82	3	11	4
2	ACC CEMENTS	-17.76	5	35.29	4	16.06	4	13	5
3	INDIA CEMENTS	59.20	1	13.97	1	12.79	5	7	2

4	MADRAS CEMENTS	-9.30	4	30.44	3	69.56	2	9	3
5	SHREE CEMENTS	30.51	2	29.56	2	70.44	1	5	1

Table - 6 which shows Motaal's Comprehensive Test of Liquidity reveals that on the basis of Motaal's ultimate rank test of Liquidity Shree Cements is awarded Rank – I, indicating the most liquid company among the five. India Cements has ranked - II, Madras Cements - III, Ambuja Cements - IV and ACC Cements - V, indicates the most unfavorable liquidity position.

V. Conclusion

In conclusion we can say that:

- In all the cases the growth rate of current liabilities are much more than the growth rate of current assets, which in long run will affect the working capital position of the company adversely ultimately affecting the liquidity position of the companies. Hence, companies should ensure that the current assets and current liabilities grow at a similar rate.
- In some cases we have come across with negative working capital. No doubt, in these days many companies are using negative working capital and getting a good amount of profits and good return on capital also. Negative working capital indicates lower cost of working capital (another way is higher profitability), but at the same time, it indicates poor liquidity (worried situation for the creditors, etc.) or we can say company is overburdened with current liabilities, which is not good for any situation (specially in a period of recession, etc).
- Companies should always see that they maintain the ideal current and liquid ratio, which is not there in case with the companies we have studied.
- Last but not the least, companies should ensure that the percentage of inventories in current assets is as low as possible.

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