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Profitability of Cement Industry

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Cement is a key infrastructure industry. India is the second largest cement producer in the world. In India Andhra Pradesh is the largest producer in India. The present study is focused on two major cement producing companies at Tamilnadu selected among top 10 listed companies that is; The India cements Ltd and The Ramco Cements. The period of study is continued 5 years starts from 2016-2017 to 2020-2021. This study is fully focussed mainly on secondary data which was collected through Moneycontrol.com. For analysis of data and interpretation of analysis, used descriptive statistical methods like percentage and mean have been applied. One way analysis of variance i.e., ANOVA is also applied to analyze the test of statistics. Further, correlation analysis has been applied to study the relationship between variables (Ratios). The Government announced many affordable housing schemes under the housing for all initiative. It provides financial assistance at low rate of interest and subsidies for build house to homeless people. These results to increase demand for cement not only this but other constructions too. So the company get ready to increase production level and maintain sufficient funds.

Key Words: Infrastructure; largest; affordable; demand; sufficient

Introduction

Cement is a key infrastructure industry. India is the second largest cement producer in the world. In India Andhra Pradesh is the largest producer in India. Cement is a global commodity manufactured at thousands of local plants. Cement is the basic material for construction of building, highways, Dams, bricks, bowl etc., Cement industry is the second most important primary and basic industry for the economic development of India. The cement industry is basic industry and makes an important contribution to the development of the other factory industry, to the construction and even to the development of agriculture. Cement is required by every industry cement is an important part of industrial infrastructure. It provides direct and indirect employment to a large number of persons and contributes a major part to Gross Domestic Product (GDP). At present cement demand is increasing day by day in various sectors such as housing, commercial construction and industrial construction and Government projects. Cement industry is expected to increase its production in future to meet out the domestic and cross border demands.

The cement industry is one of the most significant industries. The cement industry has been selected for the research due to several important reasons. Cement is a basic core product; essential for building our nation and its growth is intrinsically linked with the overall growth of the infrastructure sector. The profitability of the business depends on the cost incurred for the production of goods. If the cost increases, the return is reduced. The efficiency of the business is measured by the amount of profit earned during the particular financial year. The profit of a business may be measured by studying the profitability of investment by a company. Hence, an attempt has been made to study the profitability of cement industries in India. The present study is an attempt to evaluate the profitability of Cement Industry of located at Tamilnadu.

Profitability is the ability of a given investment to earn a return from its use. It is an important for measuring the efficiency of a company to earn the profit. The profitability of past record is helpful for decision making. On the other hand, profitability analysis provides an insight into the operating as well as financial efficiency of the company concerning different variables like operating profit, net profit, EBITDA, working capital ratio and debt to EBITDA of the concern. It shows whether the company is performing efficiently in its operations or not. Profitability ratios are used as a tool for all companies to measure their efficiency in business as well as helpful to the stake holders also.

The India cements Ltd

India cements Ltd was founded in the year 1946 by two men, Shri S N N Sankaralinga Iyer and Sri T S Narayanaswami. The company set up its first plant in 1949 at Sankarnagar (Talaiyuthu). India Cements has robustly grown in the last two decades to a total capacity of 15.5 million tonnes per annum. After the approval of a Scheme of Amalgamation and arrangement between Trinetra Cement Ltd and Trishul Concrete Products Ltd with The India Cements Ltd, all the cement assets have come under one roof in India Cements. India Cements has now 8 integrated cement plants in Tamil Nadu, Telangana, Andhra Pradesh and Rajasthan and two grinding units, one each in Tamil Nadu and Maharashtra. This year is the Golden jubilee year and recently the India cements have won the state factory safety award for 2021awarded by Rajasthan Government under the safety award policy. It is the eighth rank in the list of top 10 cement companies in India.

The Ramco cements Limited

Ramco Cements Ltd formerly known as Madras Cements Ltd. is the flagship company of Ramco group. Madras Cements Ltd was established in 1961. It is headquartered at Chennai. On September 30, 2013 the trade symbol of MADRASCEM changed into RAMCOCEM. It is a major player in the blended cement category in south India. The Ramco cements are the fifth largest cement producer in the country. The main product of the company is Portland cement manufactured in eight state-of-the art production facilities that include Integrated Cement plants and grinding units with a current total production capacity of 16.5 million MTPA with ten manufacturing facilities across India. The company has been the forerunner in promoting blended cements from 1997.

Review of Literature

Dr. Surjeet Kumar (2020) studied profitability of ACC Ltd, Ambuja Cement and Ultratech Cement companies. In this study he employed ANOVA and Regression analysis. The overall profitability position of Ambuja Cement were found high and increasing like operating profit, profit before interest and tax, gross profit ,cash profit and net profit.

Jigneshkumar Kantibhai Prajapati et.,al (2019) they have taken JK cement Ltd and Ultratech cement Ltd for their study. In this study they concluded the efficiency of a firm depends upon the working operations of the concern. Profit earning is considered essential for survival of the business. The Profitability ratios prove the efficiency of the select companies. The financial positions of the selected cement companies are satisfactory. But both the companies must improve their short term solvency position.

G.Amutha and Dr P.Stanly Joseph Maicheal Raj (2015), analysed asset structure using Ratios such as fixed assets to total assets, net current assets to total assets and capital work in progress to total assets, secondly they analysed risk and return of cement companies using operating profit to capital employed, gross profit to capital employed, profit before to capital employed and profit after to capital employed ratios. Five companies were taken for the study. Among all Madras cements, Chettinadu cements and India cements did well. Fixed assets to total assets ratio was higher for Madras cements, Net current assets to total assets ratio was higher for KCP cements, Net capital work in progress to total assets ratio was higher for Andhra cements in the third phase.

Objectives of the study

To analyse the sales and profit trend of selected cement companies

To study the profitability of selected cement companies

Statement of the problem

The cement industry is playing pivotal role in infrastructure and economic development. Prominence on viable development is a new measurement to consider while designing the plant. As per Statista 2021 industrial sector contributes 23.2% during the year 2020. Currently demand for cement is increasing every day because construction of continuous private construction as well as government projects. To meet out the increasing demand the industry may increase supply. For uninterrupted manufacturing and supply of cement the company needs sufficient balance of fund. If the profitability of the company is efficient one, the company can mobilise the fund themselves. So the profitability analysis of Cement Company is taken for the study.

Scope of the Study:

The present study is focused on two major cement producing companies at Tamilnadu selected among top 10 listed companies that is; The India cements Ltd and The Ramco Cements. The period of study is continued 5 years starts from 2016-2017 to 2020-2021. The required data has been extracted from various journals, websites and various previous studies have also been considered for the completion of the present study. Further data is processed with the help of MS Excel software .Only secondary data has been considered for the present study.

Methodology of the Study:

This study is fully focussed mainly on secondary data which was collected through Moneycontrol.com. For analysis of data and interpretation of analysis, used descriptive statistical methods like percentage and mean have been applied. One way analysis of variance i.e., ANOVA is also applied to analyze the test of statistics. Further, correlation analysis has been applied to study the relationship between variables (Ratios).

Analysis and Interpretation
The India cements Ltd

Table: 1

Year/Ratios	OPR (%)	NPR (%)	EPS (Rs)	WCR	EBITDA Margin (%)	Debt to EBITDA	ROE (%)	ROA (%)	ATR (Times)
2016-17	14.90	3.00	5.60	1.03	15.19	6.31	3.39	2.23	0.74
2017-18	12.97	1.88	3.27	1.24	13.34	7.76	1.93	1.23	0.65
2018-19	11.33	1.23	2.24	1.22	11.88	8.77	1.33	0.85	0.68
2019-20	11.57	-0.70	-1.15	1.26	10.14	11.77	-0.66	-0.42	0.59
2020-21	18.17	5.00	7.16	1.16	18.70	6.34	3.95	2.75	0.55
Mean	13.79	2.08	3.42	1.18	13.85	8.19	1.99	1.33	0.64
Max	18.17	5.00	7.16	1.26	18.70	11.77	3.95	2.75	0.74
Min	11.33	-0.70	-1.15	1.03	10.14	6.31	-0.66	-0.42	0.55

Source: Moneycontrol.com

Table 1 indicates the profitability ratios of India cements Ltd., during the study period. In the year 2020-21 India cements Ltd has high operating efficiency ratio. The mean value of operating ratio is 13.79 percent. In the study period 2018-19 the company operating ratio is low among five years.

The net profit ratio describes the relationship between profit after interest and taxes to net sales taken place in the business. The net profit ratio 5 percent is the highest during the study period 2020-21 and the overall mean value of study period is 2.08. During the study period 2019-20 the company suffered loss so the ratio is -0.70 percent. As much as it increase the company will be best in operation, meantime the non-operating expenses burden also low.

Earnings per share are net profit divided by number of equity shares. This is a tool to measure the corporate value. It designates how much profit is distributed to each share. The Company's highest earnings during the year 2020-21 and the lowest EPS during the year 2019-20. The overall mean value throughout the study period is Rs.3.42.

Working capital ratio measures liquidity of a company, it discloses whether the company is able to meet its short term obligations or not. The ideal ratio is 2:1, indicates good short term liquidity. Based on the ideal ratio suggested by experts the India cements Ltd., The working capital ratio is more than 1 but less than 2 in all the years. The highest ratio during the year 2019-20 and the lowest is 1.03. The mean value of the ratio is Rs.1.18.

EBITDA margin denotes percentage of total revenue. EBITDA stands for earnings before interest, taxes, depreciation and amortisation. Higher the ratio the company is preferable and able to produce more efficiently by keeping costs low. The company achieved higher (18.70 percent) the ratio in the year 2020-21. The lowest EBITDA margin is in the year 2019-20 and the mean value is 13.85 percent.

Debt to EBITDA considerable and acceptable ratio is less than 3. As much as lower the ratio indicates higher the profitability of the company and able to pay off its debt. Ratio more than 3 specifies the company may be financially troubled in the future. None of the year got the ratio less than 3. None of the years less than 3, but lower ratio in the year 2016-17. During the year 2019-20 the ratio is high of 11.77. So the company pay more attention to increase return or reduce the debt burden gradually.

Return on Equity denotes the percentage of return on the investment which is received from its shareholders. Normally the negative return on investment affects the firm's reputation. The overall return on equity during the study period is 1.99. During the year 2020-21 the return is high because this year operating profit, net profit and other profitability ratios are higher. But the year 2019-20 there is negative ROE.

The ideal ratio of Return on Assets is usually 5%. Commonly higher the return on assets are more efficient in generating return of a company. From the above table exhibits very low rate of return on assets during the year 2018-19 and 2019-20 because even not more than 1. However the highest ratio in the year 2020-21.

Assets turnover ratio assesses the productivity of company's assets. Normally higher the ratio indicates optimum utilisation of assets in generating sales. Assets turnover ratio is also very low in overall performance during the period. In the year 2016-17 the ratio is high (0.74). During the year 2020-21 the assets turnover ratio is 0.55.

The Ramco Cements Ltd

Table: 2

Year/Ratios	OPR (%)	NPR (%)	EPS (Rs)	WCR	EBITDA Margin(%)	Debt to EBITDA	ROE (%)	ROA (%)	ATR (Times)
2016-17	30.25	16.44	27.27	0.73	31.35	2.64	17.35	13.31	0.81
2017-18	24.95	12.61	23.59	0.71	25.78	2.68	13.75	11.02	0.87
2018-19	19.94	9.83	21.47	0.76	20.69	3.43	11.34	8.61	0.88
2019-20	20.99	11.2	25.52	0.79	21.87	4.37	12.22	7.96	0.71
2020-21	29.38	14.45	32.26	0.70	30.04	3.61	13.53	8.72	0.60
Mean	25.10	12.90	26.02	0.74	25.95	3.35	13.63	9.92	0.85
Max	30.25	16.44	32.26	0.79	31.35	4.37	17.35	13.31	0.88
Min	19.94	9.83	21.47	0.71	20.69	2.64	11.34	7.96	0.60

Source: Moneycontrol.com

Table 2 indicates the profitability ratios of Ramco cements Ltd., during the study period. In the year 2016-17 Ramco Cements Ltd has high operating efficiency ratio. The mean value of operating ratio is 25.10 percent. In the study period 2018-19 the company operating ratio is low among five years.

The net profit ratio of 16.44 percent is the highest during the study period 2016-17 and the overall mean value of study period is 12.90. During the study period 2018-19 the company net profit ratio is 9.83 percent. As much as it increase the company will be best in operation, meantime the non-operating expenses burden also low.

The highest Earning per share is Rs.32.26 during the year 2020-21 and the lowest EPS during the year 2018-19. The overall mean value throughout the study period is Rs.26.02.

Working capital ratio is not satisfactory even a year. The overall mean value also is less than 1. So the company must increase its liquidity position to meet out its short term obligations. The company may have sufficient balance of cash and short term assets leads to continuous production without any interruption. .

EBITDA margin achieved higher (31.35 percent) the ratio in the year 2016-17. The lowest EBITDA margin is in the year 2018-19 and the mean value is 25.95 percent. During the year 2016-17 and 2017-18 Debt to EBITDA ratio are less than 3. But in rest of the years it is more than 3.Ratio more than 3 specifies the company may be financially troubled in the future. But low ratio in the year 2016-17.

The overall return on equity during the study period is 13.63 percent. During the year 2016-17 the return is high because this year operating profit and net profit ratios are higher. Commonly higher the return on assets are more efficient in generating return of a company. From the above table exhibits high rate of return on assets in the year 2016-17 and lowest ratio are 7.96.

Assets turnover ratio assesses the productivity of company's assets. Normally higher the ratio indicates optimum utilisation of assets in generating sales. Assets turnover ratio is very low in overall performance during the period. In the year 2018-19 the ratio is high (0.88). During the year 2020-21 the assets turnover ratio is 0.60.

Test of statistics

Null hypothesis H_0: There was no significant difference in profitability and turnover ratio between the selected companies during the study period.

Alternative Hypothesis H_1: There was a significant difference in profitability and turnover ratio between the selected companies during the study period.

Table 3 reveals that F value of One-way ANOVA is greater than F critical value is 11.26 at 1% level of significance for the profitability ratios. So the null hypothesis is getting rejected. The table concludes that there was significant difference in operating ratio among the selected cement companies during the study period.

Table: 3

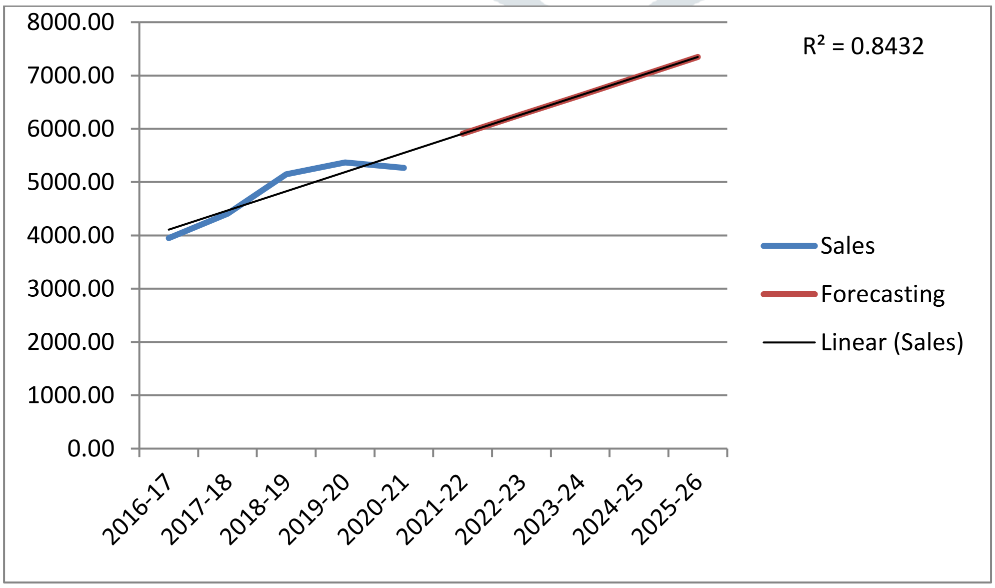
ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*	Result
Between Groups	320.0743	1	320.0743	21.28915	0.001724	11.25862	
Within Groups	120.2769	8	15.03462				Rejected
Total	440.3512	9					
Between Groups	292.705	1	292.705	51.77999	9.28E-05	11.25862	

Within Groups	45.22288	8	5.652859				Rejected
Total	337.9279	9					
Between Groups	0.49284	1	0.49284	98.66667	8.92E-06	11.25862	
Within Groups	0.03996	8	0.004995				Rejected
Total	0.5328	9					
Between Groups	365.8062	1	365.8062	21.9391	0.001574	11.25862	Rejected
Within Groups	133.3897	8	16.67371				
Total	499.1959	9					
Between Groups	58.62101	1	58.62101	20.94389	0.00181	11.25862	
Within Groups	22.39164	8	2.798956				Rejected
Total	81.01265	9					
Between Groups	339.1955	1	339.1955	78.94992	2.04E-05	11.25862	
Within Groups	34.3707	8	4.296337				Rejected
Total	373.5662	9					
Between Groups	0.018474	1	0.018474	57.28118	6.49E-05	11.25862	
Within Groups	0.00258	8	0.000323				Rejected
Total	0.021054	9					
Between Groups	0.10609	1	0.10609	31.2489	0.000516	11.25862	
Within Groups	0.02716	8	0.003395				Rejected
Total	0.13325	9					

Trend and forecasting of sales

The Ramco cements Ltd.,



Source: Moneycontrol.com

The first trend line indicates that actual sales line and second line indicates forecasted trend. It reveals that R square value (0.8432) indicates the relationship between the values. All the values are highly correlated. Based on the trend equation y = 359.99x + 3747.8 forecast the sales for next five years. The above trend line shows that there will be increasing trend in the next five years.

Table: 4

Correlation Analysis

Sample units	Profitability Ratios	OPR	NPR	EBITDA Margin	Debt to EBITDA	ROE	ROA
India cements	Operating profit ratio	1					
	Netprofit Ratio	0.929017	1				
	EBITDA margin	0.881541	0.984736	1			
	Debt to EBITDA	0.973227	0.989068	0.959555	1		
	ROE	-0.75379	-0.91878	-0.97022	-0.8677	1	
	ROA	0.859002	0.971331	0.997865	0.941849	-0.98142	1
Ramco Cements	Operating profit ratio	1					
	Netprofit Ratio	0.971133	1				
	EBITDA margin	0.765324	0.689791	1			
	Debt to EBITDA	0.999435	0.978301	0.752126	1		
	ROE	-0.51909	-0.51714	0.129219	-0.52834	1	
	ROA	0.840484	0.932987	0.393426	0.857972	-0.66082	1

Source: Computed

Table 4 concluded there is high positive correlation between operating profit ratio and Net profit ratio, EBITDA margin, debt to EBITDA ratio and return on assets ratio. The high negative correlation is with Return on Equity in India cements and Ramco cements Limited.

Net profit ratio is highly correlated with EBITDA margin, Debt to EBITDA ratio, Return on assets and there is negative correlation with Return on Equity.

EBITDA Margin is positively correlated with all the profitability ratios except India Cements Return on Equity. Debt to EBITDA ratio is also highly correlated with each ratio with the exception of ROE.

There is a high negative correlation between Return on Equity with Return on Assets. Return on Assets ratio is positively correlated. So there exists strong relationship between all the ratios excluding ROE and ROA.

Findings and Discussion:

- The India cements Ltd has high operating efficiency ratio, net profit ratio and Earnings per Share during the year 2020-21. The Ramco Cements has high Operating ratio and net profit ratio in the year 2016-17
- The Ramco cements highest Earning per share is Rs.32.26 during the year 2020-21.
- The working capital ratio of India cements is not satisfactory because in all the years it is less than 2. The Ramco Cements is highly not satisfactory, very difficult to meet out its short term obligations.
- The India Cements EBITDA margin achieved higher (18.70 percent) the ratio in the year 2020-21. The Ramco Cements achieved higher (31.35 percent) the ratio in the year 2016-17.
- Debt to EBITDA ideal ratio is less than 3. None of the years less than 3 in India Cements, but Lower ratio in the year 2016-17. During the year 2016-17 and 2017-18 Debt to EBITDA ratio of Ramco Cements is less than 3. However not that much high of India Cements.
- During the year 2020-21 the India cements return on equity is high. During the year 2016-17 the Ramco cements return is high.
- Higher rate of return on assets during the year 2020-21 in India cements but it is not in satisfactory ratio. Return on Assets of Ramco cements is satisfactory and higher ratio in the year 2016-17.
- Optimum utilisation of total assets of India cements also very low when comparing Ramco cements Limited.
- One-way ANOVA resulted there was significant difference in operating ratio among the selected cement companies during the study period.
- The Ramco Cement sales will be increasing trend in the next five years.
- There exists strong relationship between all the ratios of the India Cements as well as The Ramco Cements excluding ROE and ROA.

Discussion

- The India Cements may pay more attention to increase its sales. If the company will increase the sales automatically increase its profit.
- The companies must increase its liquidity position to meet out its short term obligations for continuous production without any interruption.

- The India cements debt burden is decreasing year by year, it indicates well in usage of funds. The Ramco cements debt is increasing it is reflected in interest burden and affects profitability. So the company concentrate to reduce the debt burden by using of its own fund.
- The companies would ensure optimum utilisation of its assets especially India cements Limited.

Conclusion

The Government announced many affordable housing schemes under the housing for all initiative. It provides financial assistance at low rate of interest and subsidies for build house to homeless people. These results to increase demand for cement not only this but other constructions too. So the company get ready to increase production level and maintain sufficient funds. From the above study the Ramco Cements Limited profitability is high when compared to the India cements Limited. All the profitability ratios are positively correlated except return on equity and return on assets. However both the companies may try to increase its operating efficiency in order to enhance its reputation.

End notes:

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