"A STUDY OF PROFITABILITY ANALYSIS OF SELECTED CEMENT COMPANIES"

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ABSTRACT:

In this paper an attempt has been made so as to ascertain a study of Profitability of selected cement companies. Five companies are taken as sample. The reference period of the study is ten years and is completely based on secondary data which has been collected through various sources. In order to achieve the objectives of the study, the researcher have employed the analysis of various ratios and anova.

Key words: Net profit, Return on equity, Return on capital employed, Return on Asset.

1.1. INTRIDUCTION:

The word "profitability" is composed of two words viz, 'profit' and 'Ability.' As discussed earlier 'profit' can be defined in number of ways but the meaning of 'profit' changes as per the use and purpose of the figure. The term 'ability' shows the power of the business firm to earn profit. The term 'ability' is also referred to as 'earning power' or 'operating performance' of the concerned investment. Thus the term profitability can be defined as the earning power/ capacity of profit of a business firm. "The word 'profitability' may be defined as the ability of a given investment to earn a return from its use." It can be remarked that 'profitability' is helpful in providing a useful basis for measuring business performance and overall efficiency.

1.2. MEANING AND DEFINITION OF PROFITABILITY:

The word 'profitability' is composed of two words, namely; profit and ability. The term profit has already been discussed at length in detail. The term ability indicates the power of a firm to earn profits. The ability of an enterprise also denotes its earning power or operating performance. Also, that the business ability points towards the financial and operational ability of the business. So, on this basis profitability may be defined as —

"The ability of a given instrument to earn a return from its use'"

Profitability as "the net surplus of a large number of policies and decisions."

-WESTON AND BRIGHAM

"Profitability is the relationship of income to some balance sheet measure which indicates the relative ability to earn income on assets employed".

- HERMENSON EDWARD AND SALMONSON

1.3 REVIEW OF LITERATURE:

- **Dr. S.K. khartik titto Varghese, (2011)** they found the profitability more or less depends upon the better utilization of resources and to manpower. It is worthwhile to increase production capacity and use advance technology to cut down cost of production and wage cost in order to increase profitability, not only against the investment, but also for investor"s return points of view.

- **Khan (2016)** in his study entitled, "*Profitability of Textile Industry in India*- *An Analytical Study*" analysed the profitability of four major Indian textile companies namely Wardhman textiles, Arvind Mills, Bombay Dyeing, and Raymonds. The data has been analyzed by applying one way ANOVA. The analysis of the data shows that significant difference exists in selected textile companies with respect to gross profit ratio, net profit ratio, operating profit ratio, return on capital employed, and return on shareholder's fund.

- **Sami and Khan (2015**) in their research paper entitled, *"Financial Performance Appraisal of Paper Industry in India: A Study of Selected Paper Mills"* analyzed the financial performance of paper industries in India. The authors have selected two paper industries namely Ballarpur Industries Limited (BILT) and Tamil Nadu Newsprint & Papers Limited (TNPL) and collected data from the annual reports of Selected cement companies in India since 2012-13 to 2014-15. Gross profit ratio, net profit ratio, current ratio, quick ratio and debt equity ratio are the variables taken by the researchers for measuring the financial performance of the selected paper industries. Besides, independent sample t-test has been applied to analyze the results. The analysis of the data shows that there is a significant difference in the selected industries on the variables gross profit ratio, net profit ratio, current ratio, quick ratio and debt equity ratio.

- **A. M. Goyal (2014)** in their study entitled "The Relationship between Capital Structure & Profitability of Public Sector Banks in India" examines the impact of capital structure on the performance of Indian public sector banks as measured from their Return on Equity. The study covers sample size of 19 public sector banks during the year 2008 to 2012. The study shows that a positive relationship between short term debt to capital and profitability as measured by Return on Equity. Long term debt to capital, Total debt to capital and Total assets are found to have a negative relationship with Return on Equity. Results also indicated that there exists a positive relationship between Size and profitability of Indian public sector banks.

1.4 OBJECTIVE OF THE STUDY:

1) To study the concept of Profitability.
2) To identify the Profitability of cement companies over the period of study.

1.5 HYPOTHESIS OF THE STUDY:

H_0: There is no significant difference between selected Profitability Ratios of selected cement companies during the period of the study.

H_1: There is significant difference between selected Profitability Ratios of selected cement companies during the period of the study.

1.6 SAMPLE OF THE STUDY:

All the sample cement companies are selected by the researchers on the basis of convenience sampling technique. The companies J.K.Cement, Jk Lakshmi Cement, Deccan Cement, , Ultratech Cement, Shree Cement which all companies are well established and well developed.

1.7 DATA COLLECTION:

For this study, the researcher has taken mainly secondary data of cement companies annual reports from 2009 to 2018. And it was tabulated objectively for making comprehensive research of profitability. Secondary data sources includes annual reports of the company, company press releases, online database, Magazine, Journals, Newspapers, Reference Books and Websites are taken for the purpose of study.

1.8 TOOLS & TECHNIQUES USED FOR THE STUDY:

- **Accounting techniques:-**
  - → Ratio Analysis
- **Statistical techniques:-**
  - → Mean
  - → S.D.
  - → Minimum
  - → maximum
  - → **F-test**

1.9 DATA ANALYSIS:

- **Descriptive Statistics**

The descriptive statistics of study are given in table no. 1.1. . The value of Mean, Minimum, Maximum and Standard Deviation of net profit ratio, return on equity ratio, return on capital employed ratio , return on asset ratio of sample of 5 cement companies are calculated from 2009 to 2018.

Table No. 1.1 Descriptive Statistics

Variables	Minimum	Maximum	Mean	Std. Deviation
NPR	6.21	13.89	9.99	3.86
ROER	6.73	21.11	13.22	6.34
ROCER	4.89	52.44	22.60	20.63
ROAR	4.29	11.51	7.35	3.49

In the above table, mean value of variable with its standard deviation is depicted.

Under this study, Profitability ratios measured by net profit ratio with mean 9.99 % and S.D. is 3.56, return on equity ratio with mean 13.22% and S.D. is 6.34, return on capital employed ratio is 22.60% and S.D. is 20.63, return on asset ratio with mean 7.35% and S.D. 3.49.

✷ **Profitability Ratio Analysis:**

[A] NET PROFIT RATIO:

Net Profit Ratio expresses net profit as a percentage of sales. It can be computed as follows:

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Sales}}$$

This ratio indicates the profitability and efficiency of the business. However, the ratio would be more useful if studied with operating ratio. At this stage, it is important to differentiate between operating profit ratio and net profit ratio.

Operating profit ratio offers from the net profit ratio in as much as it is calculated after adding non-operating expenses to the net profit and deducting non-operating expenses to the net profit.

Table: 1.2. Net Profit Ratio

Name of Units	J.K.	J.K.L	Deccan	Ultratech	Shree
2009	9.50	14.58	18.45	15.30	21.32
2010	12.37	16.17	1.46	15.50	18.61
2011	3.07	4.48	0.58	10.63	6.07
2012	6.83	6.33	9.36	13.47	10.48
2013	7.88	8.55	1.46	13.26	17.95
2014	3.41	4.52	1.28	10.68	13.37
2015	4.60	4.14	4.53	8.89	6.60
2016	2.81	-0.22	7.86	8.64	8.17
2017	6.13	2.72	15.64	14.84	17.81
2018	7.89	0.86	10.89	15.78	18.58
Avg	6.45	6.21	7.15	12.70	13.89

(Source: Annual Report of selected Cement Companies)

Interpretation:

The above table represents the net profit ratio of selected 5 cement companies. The net profit ratio shows the mixed trends in all selected cement companies.it is clear that Ultratech cement and Shree cement having maximum net profit ratio with mean 12.70 and 13.89 respectively as compared to other companies taken under study which indicates that these companies are in better position to cope up market challenges like price, competition, low demand and innovation in product etc., and also implies that these companies enjoy high profitability taking into reflection other companies, These all companies having the good profit position and provides high return to the shareholders. J.K.L. cement is having minimum net profit ratio with the mean of 6.21 comparing the other companies with prevailing economic conditions because of its low profitability because due to high interest pay to debt holders of the company. And J.K.L. cements having controlling the cost of production and increases the sales to increase the net profit.

ANOVA ANALYSIS:

Ho: There is no significant difference between Net Profit Ratio of selected cement companies during the period of study.

H1: There is significant difference between Net Profit Ratio of selected cement companies during the period of study.

Table: 1.3. ANOVA of Net Profit Ratio

Source of Variation	*SS*	*df*	*MS*	*F*	*F crit*
Between Groups	549.3853	4	137.3463	5.718701	2.578739
Within Groups	1080.767	45	24.01705		
Total	1630.152	49			

Here in the above table the calculated value is 5.71 and the table value at 5 % significance level is 2.57. Here the calculated value is more than the table value so the null hypothesis is rejected i. e. There is significant difference between Net Profit Ratio of selected cement companies during the period of study.

[B] RETURN ON EQUITY:

$$\text{Return on Equity Ratio} = \frac{\text{Net Profit Before Interest and Tax}}{\text{Networth}} \times 100$$

Net worth = Equity Capital + Reserves and surplus

This ratio expresses the net profit in terms of the equity shareholders' funds. This ratio is an important yardstick of performance for equity shareholders since it indicates the return on the funds employed by them. However, this measure is based on the historical net worth and will be high for old plants and low for new plants. This is also known as "*Return on Proprietors' funds*" and "*Return on Equity"*. It is used to ascertain the earning power of shareholders' investment.

The factor which motivates shareholders to invest in a company is the expectation of an adequate rate of return on their funds and periodically, they will want to assess the rate of return earned in order to decide whether to continue with their investment. This ratio is useful in measuring the rate of return as a percentage of the book value of shareholders equity. The further modification of this ratio is made by considering the profitability from equity shareholders point of view can also be worked out by taking the profits after preference dividend and comparing against capital employed after deducting both long-term loans and preference capital.

Table : 1.4. Return on Equity Ratio

Name of Units	J.K.	J.K.L	Deccan	Ultratech	Shree
2009	12.00	21.48	6.88	27.13	47.76
2010	16.69	23.62	0.85	23.73	36.88
2011	4.57	5.65	0.44	13.17	10.55
2012	11.59	9.25	10.78	19.02	22.62
2013	13.75	13.95	1.69	17.43	26.12
2014	5.51	7.13	1.25	12.54	16.71
2015	9.53	7.18	5.50	10.68	8.07
2016	5.92	-0.50	13.76	8.86	7.36
2017	10.43	6.44	15.16	11.72	18.41
2018	15.5	3.06	11.05	8.77	16.68
Avg	10.55	9.72	6.73	15.30	21.11

(Source: Annual Report of selected Cement Companies)

Interpretation:

The above table represents the interest return on equity ratio of selected 5 cement companies. The ratio shows the mixed trends in all selected cement companies. it is observed that Shree cement having maximum return on equity with the mean of 21.11. It indicates that this company earned higher rate of return on their funds as compare to other companies over the period of the study. Company was able to successfully utilize the resources provided by its equity investors and the company's accumulated profits in generating income. On the contrary, the companies namely Deccan cement is having minimum return on equity with mean of 6.73 indicates that this company earned lower rate of return on their funds over the period of the study.

ANOVA ANALYSIS:

Ho: There is no significant difference between Return on Equity Ratio of selected cement companies during the period of study.

H1: There is significant difference between Return on Equity Ratio of selected cement companies during the period of study.

Table : 1.5. ANOVA of Return on Equity Ratio

Source of Variation	*SS*	*df*	*MS*	*F*	*F crit*
Between Groups	1266.408	4	316.6019	5.003174	2.578739
Within Groups	2847.61	45	63.28021		
Total	4114.017	49			

Here in the above table the calculated value is 5.00 and the table value at 5 % significance level is 2.57 Here the calculated value is more than the table value so the null hypothesis is rejected i. e. There is significant difference between Return on Equity Ratio of selected cement companies during the period of study.

[C] RETURN ON CAPITAL EMPLOYED:

The strategic aim of a business enterprise is to earn a return on capital. If in any particular case, the return in the long-run is not satisfactory, then the deficiency should be corrected or the activity be abandoned for a more favourable one. Measuring the historical performance of an investment centre calls for a comparison of the profit that has been earned with capital employed. The rate of return on investment is determined by dividing net profit or income by the capital employed or investment made to achieve that profit.

ROCE consists of two components viz. (a) Profit Margin, and (b) Investment Turnover, as shown below:

$$\text{ROCE} = \frac{\text{Net Profit}}{\text{Capital Employe}} \times 100$$

Table : 1.6 Return on Capital employed Ratio

Name of Units	J.K.	J.K.L	Deccan	Ultratech	Shree
2009	37.54	4.92	60.95	23.71	26.71
2010	13.77	6.37	74.98	25.56	22.03
2011	3.01	2.86	62.83	12.06	3.19
2012	11.31	5.35	62.26	20.55	19.36
2013	12.85	5.81	57.12	19.99	26.11
2014	3.63	3.95	58.78	12.85	15.80

2015	4.18	4.24	55.90	12.29	7.05
2016	3.55	-0.42	53.79	13.16	6.78
2017	11.84	8.46	21.1	13.79	19.86
2018	13.42	7.34	16.66	11.53	18.43
Avg	11.51	4.89	52.44	16.55	16.53

(Source: Annual Report of selected Cement Companies)

Interpretation:

The above table represents the return on capital employed ratio of selected 5 cement companies. The return on capital employed ratio shows the mixed trends in all selected cement companies. It is observed that Deccan cement is having highest return on capital employed with mean of 52.44 indicates that this company are employing their invested capital more efficiently and economically. This company is obtaining a satisfactory return on their capital over the period of the study. This can also be help in judging the performance efficiency of different firms in different industries.it also help to Management for decision making purpose. On the other contrary the companies like J.K.L. cement obtaining less return on their invested capital over the period of the study with mean 4.89 indicates that theis company are very weak as compared to other companies. When it comes to earnings of profit on the capital employed the mean of other companies namely J.K. cement, Ultratech cement and Shree cement with mean of 11.51, 16.5 and 16.53 indicates that these companies are spending their capital and are earning a reasonable return on their capital.

ANOVA ANALYSIS:

Ho: There is no significant difference between Return on Capital employed Ratio of selected cement companies during the period of study.

H1: There is significant difference between Return on Capital employed Ratio of selected cement companies during the period of study.

Table : 1.7 ANOVA of Return on Capital employed Ratio

Source of Variation	***SS***	***df***	***MS***	***F***	***F crit***
Between Groups	13758.28	4	3439.571	31.0341	2.578739
Within Groups	4987.44	45	110.832		
Total	18745.72	49			

Here in the above table the calculated value is 31.03 and the table value at 5 % significance level is 2.57 . here the calculated value is more than the table value so the null hypothesis is rejected i. e. There is significant difference between Return on Capital employed Ratio of selected cement companies during the period of study.

[D] RETURN ON ASSETS:

The profitability of the firm is measured by establishing relation of net profit with the total assets of the organization. This ratio indicates the efficiency of utilization of assets in generating revenue. This ratio is calculated as follows:

$$\text{Return on Aseet Ratio} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

Table : 1.8. Return on Asset Ratio

Name of Units	J.K.	J.K.L	Deccan	Ultratech	Shree
2009	7.69	11.38	6.46	15.11	21.36
2010	8.64	11.85	0.79	15.52	17.16
2011	2.13	2.72	0.33	8.49	4.24
2012	4.95	3.90	7.79	10.66	10.36
2013	5.98	5.59	1.27	9.68	16.30
2014	1.90	2.60	0.85	7.20	10.74
2015	2.93	2.33	3.61	5.72	5.33
2016	1.78	-0.16	9.24	6.26	5.17
2017	2.73	1.82	9.13	6.51	13.56
2018	4.41	0.86	7.05	4.48	10.95
Avg	4.31	4.29	4.65	8.96	11.51

(Source: Annual Report of selected Cement Companies)

Interpretation:

The above table represents the return on asset ratio of selected 5 cement companies. The return on asset ratio shows the mixed trends in all selected cement companies. As per table we can clearly see that Ultratech cement and Shree cement having maximum return on assets with the mean of 8.96 and 11.51. It is explaining that these companies are very efficient use of the assets of the companies. Moreover, these companies have earned much return on their assets as compared to other companies under study. In case of J.K cement, J.K.L.cement and Deccan cement are having least return on their assets with the mean of 4.31, 4.29 and 4.65 respectively. It indicates that this company are not very much efficient in earning that much of return on their assets as compare to other compare under study.

ANOVA ANALYSIS:

Ho: There is no significant difference between Return on Asset Ratio of selected cement companies during the period of study.

H1: There is significant difference between Return on Asset Ratio of selected cement companies during the period of study.

Table : 1.9. ANOVA of Return on Asset Ratio

Source of Variation	*SS*	*df*	*MS*	*F*	*F crit*
Between Groups	439.8691	4	109.9673	6.579043	2.578739
Within Groups	752.1652	45	16.71478		
Total	1192.034	49			

Here in the above table the calculated value is 6.57 and the table value at 5 % significance level is 2.57. here the calculated value is more than the table value so the null hypothesis is rejected i. e. : There is significant difference between Return on Asset Ratio of selected cement companies during the period of study.

1.10 FINDINGS OF THE STUDY :

2 Ultratech cement and Shree cement having maximum net profit ratio so these companies are in better position to cope up market challenges and these companies having the good profit position and provides high return to the shareholders.

3 Shree cement having maximum return on equity with the mean of 21.11. It indicates that this company earned higher rate of return on their funds

4 Deccan cement is having highest return on capital employed so This Company is obtaining a satisfactory return on their capital. This can also be help in judging the performance efficiency of different firms in different industries.it also help to Management for decision making purpose.

5 Ultratech cement and Shree cement having maximum return on assets so these companies are very efficient use of the assets of the companies.

1.11. SIGNIFICANCE OF THE STUDY:

- Through this study know the performance of cement industries.
- The knowledge particularly regarding various ratios will improve.
- The knowledge regarding various statistical tools and techniques and statistical tests will improve.
- It is also necessary to find out some important factor which effect internal decision of industry. So research will be useful to cement industry itself.

1.12. LIMITATIONS OF THE STUDY:

The researcher is very much aware of the following limitations of the study.

- The study is based on secondary data taken from published annual report and website.
- The individual effort will be limited so it also limitation of the study.
- The study is mainly based on ratio analysis which has its own limitations that also applies to the study.
- Analytical tools which are used in the study, if there are any related limitation; they automatically applied to the study.
- It may be personal view differ from others

1.13. FUTURE SCOPE OF THE STUDY:

- There is a vast scope for the future research as this area needs a lot work.
- The same research can be enriched by using the extended parametric tests statistical tools.
- This study is based on the limited sample size only, so the same may be extended by taken more sample.

1.14. CONCLUSION:

The contribution of Indian cement industry to the Indian economy is significant because the construction industry in India relies heavily on the cement industry. The present paper analyses the Profitability of five major cement companies namelyJ.K. Cement, J.K. Laxmi Cement, Deccan Cement, UltraTech Cement and Shree Cement. The data has been collected from the annual reports of the cement companies since 2009 to 2018 and analyzed by applying one way ANOVA as the statistical tool. All the null hypotheses have been rejected meaning thereby acceptance of alternative hypotheses. The analysis of the data shows that there is a significant difference in selected cement companies in India with respect to net profit ratio, return on equity ratio, return on capital employed ratio and return on asset ratio.

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