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## AN EMPIRICAL STUDY OF PROFITABILITY ANALYSIS OF SELECTED COMPANIES IN INDIAN PAINT INDUSTRY

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#### ABSTRACT

Financial statement analysis is often divided into two sub-parts i.e. "Profitability Analysis" and "Risk Analysis". This is natural division since much of our thinking about any firm's performance is influence by our study of the relationship between risk and return in finance. This paper represents an empirical study which examines the profitability from different perspectives of paint industry in India with a data of 13 year from 2000-01 to 2012-13 major paint companies have been considered as sample units for this analytical study, the study is based on secondary data. Profitability position is analysed by using different profitability ratios and two way ANOVA of selected companies in Indian paint industry. Through ANOVA, we found that there is some difference in Return on Investment of selected companies in Indian paint industry.

#### **KEYWORDS**

Indian paint industry, profitability analysis.

#### **1. INTRODUCTION**

the paint industry in India is witnessing growth and expansion. The paint sector continues to stress on cost cutting through enhanced productivity, reduction in energy costs and logistic expenses to make profits. Maximisation of profits is the ultimate objective of any business enterprise. Analysis of profitability position of any company or industry is pre-requisite for optimizing investment and financing decisions. Profitability also affects goodwill, reputation and market positioning of the firm.

#### 2. OBJECTIVES OF THE STUDY

The study attempts to analyse the profitability of the selected paint companies in terms of operating profit ratio, net profit ratio, return on capital employed, return on total assets and return on net worth.

#### **3. RESEARCH METHODOLOGY**

#### 3.1 TYPES OF DATA

There are basically two types of data i.e. primary data and secondary data. Primary data are those data which are collected for the first time, to meet the objective of research only. Secondary data is data which has been already collected and used for any other purpose and can be used for this research also. This study is based on financial statements of companies, which is secondary data.

#### 3.2 METHODS OF DATA COLLECTION

For collecting secondary data, annual reports of companies will be used as well as financial reports available on PROWESS database, which is the most reliable and empowered corporate database of CMIE. The study is entirely descriptive and analytical. Secondary information is obtained by the medium of internet, journals, articles and magazines.

#### 3.3 DATA ANALYSIS & INTERPRETATION

Collected data is analysed and interpreted with the help of accounting and statistical tools and techniques, which are follows:

Accounting Techniques: Ratio analysis is used as an accounting technique in which major profitability ratios are used for analysis and interpretation such as Operating Profit ratio (OP), Net Profit ratio (NP), Return on Capital Employed (ROCE), Return on Total Asset (RTA), Return on Networth (RNW).

Statistical Techniques: Statistical tools such as mean, standard deviation, variance and coefficient of variations are used to ascertain the average position of profitability ratios. Then techniques of ANOVA is used to test if there is any difference in the profitability position of different companies of the same industry during the study period.

#### 3.4 SAMPLE DESIGN

Sampling Technique: The convenient sampling technique is used for the study. The selection of sample companies is on the basis of consumer preference and their position in the market.

Sample Size: Following is the list of 6 paint companies which are chosen from top ten paint companies in India as sample size for the study.

- 1. Akzo Nobel India Ltd
- 2. Asian Paints Ltd
- 3. Berger Paints India Ltd
- 4. Jenson & Nicholson (India) Ltd
- 5. Kansai Nerolac Paints Ltd
- 6. Shalimar Paints Ltd

Period of the study: The study has been conducted from 2000-01 to 2012-13 i.e. for 13 years

## 4. ANALYSIS OF PROFITABILITY

#### 4.1 OPERATING PROFIT MARGIN

Table 1 show a fluctuating trend in the operating profit margin ratio of the selected companies during the study period. The average operating profit margin ratio varied form one company to another. The highest average is for Akzo Nobel India Ltd (17.14 per cent) followed by Asian Paints Ltd (15.18 per cent), Kansai Nerolac Paints Ltd (12.62 per cent), Berger Paints India Ltd (9.98 per cent) and Shalimar Paints Ltd (5.45 per cent). The mean operating profit ratio is negative in the case of Jenson & Nicholson (India) Ltd (-46.35 per cent) during the study period. The average of operating profit ratio of Indian paint industry is 13.36 per cent. The

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analysis of CV value shows that Berger Paints India Ltd has consistent operating profit margin, Asian Paints Ltd and Kansai Nerolace Paints Ltd have fluctuating operating profit margin and Akzo Nobel India Ltd and Shalimar Paints Ltd have highly fluctuating trend of operating profit margin during the study period. However, operating profit margin of Jenson & Nicholson (India) Ltd was erotically fluctuated during the study period. The compound annual growth rate of this ratio is negative only in the case of Jenson & Nicholson (India) Ltd during the study period. The overall fluctuating trend of this ratio can be attributed to the factors like high operating expenses, market conditions and high rate of wages and salary. The t values reveal that the mean operating margin ratio significantly differ from the industry except for Akzo Nobel India Ltd and Kansai Nerolac Paints Ltd.

In order to test the hypothesis, analysis of variance is applied for all the companies and between the years and the result is presented in Table 2. Table 2 shows that since the calculated value of F(4.72) is higher than the table value of F (2.53) at 5 per cent level of significance between the companies, the null hypothesis is rejected. There is a significant difference between the companies in this ratio. The calculated value of F (1.00) between the years is less than the table value of F (1.92), and hence, the null hypothesis is accepted. The acceptance of null hypothesis would indicate that there is no significant difference in this ratio between the years. This was due to high fluctuations of net sales of Shalimar Paints Ltd and increase of selling and administrative expenses of Jenson & Nicholson (India) Ltd during the study period.

#### 4.2 NET PROFIT MARGIN

Table 1 clears the position regarding the net profit margin ratio of selected companies in Indian paint industry during the study period. The net profit ratio of all the selected companies witnessed a fluctuating trend during the study period. The average net profit margin also varied from one company to another. The highest average was 11.14 percent for Akzo Nobel India Ltd followed by Asian Paints Ltd (8.51 per cent), Kansai Nerolac Paints Ltd (6.86 per cent), Berger Paints India Ltd (5.74 per cent) and Shalimar Paints Ltd (1.59 per cent). The mean net profit ratio was negative in the case of Jenson & Nicholson (India) Ltd (-132.80 per cent). The analysis of CV value showed that Berger Paints India Ltd had consistent net profit margin, Asian Paints Ltd and Kansai Nerolac Paints Ltd had highly fluctuating trend of net profit margin. However, net profit margin of Akzo Nobel India Ltd and Jenson & Nicholson (India) Ltd showed erratically fluctuating trend during the study period. The compound annual growth rates of all the selected companies of this ratio were positive, except for Jenson & Nicholson (India) Ltd. Further, the analysis of t value revealed that the mean net profit margin of all the selected companies except Kansai Nerolac Paints Ltd significantly differed from the industry.

The analysis of variance results showed in Table 2 shows that there were significant differences in net profit margin ratio between the companies as calculated value of F (5.64) is more than the table value of F (2.53) at 5 per cent level of significance. However, there were no significant differences in net profit margin ratio between the years during the study period as calculated value of F (1.01) is lower than the table value of (1.92) at 5 per cent level. This was due to a decrease in operating profit of Jenson & Nicholson (India) Ltd and increase in employee cost of Akzo Nobel India Ltd during the study period.

#### 4.3 RETURN ON CAPITAL EMPLOYED

Table 3 show that the return on capital employed ratio of the selected companies in Indian paint industry fluctuated during the study period. The average return on capital employed varied from one company to another. The mean average of India paint industry was 43.29 per cent of return on capital employed. The highest average of 136.16 per cent was in Asian Paints Ltd followed by Akzo Nobel India Ltd (98.52 per cent), Kansai Neroac Paints Ltd (40.86 per cent), Berger Paints India Ltd (24.85 per cent) and Shalimar Paints India Ltd (11.43 per cent), whereas there is negative average ratio of Jenson & Nicholson (India) Ltd (-15.43 per cent). The analysis of CV value shows that Berger Paint India Ltd had fluctuating trend of return on capital employed during the study period. The compound annual growth rate of return on capital employed ratio was positive in all the selected companies except for Jenson & Nicholson (India) Ltd. It is clear from the analysis of t values that the mean return on capital employed was significant from the industry in all the selected companies except for Asian Paints Ltd and Paints Ltd and Asian Paints India Ltd.

Table 4 of analysis of variance of ROCE shows that the calculated values of F (0.72 and 0.99) were lower than the table value of F (2.53 and 1.92) at 5 per cent level of significance both between the years and companies, the null hypotheses is accepted. It is concluded that there are significant differences between the return on capital employed ratio among the selected companies and between the years during the study period.

#### **4.4 RETURN ON TOTAL ASSETS**

Table 3 provide the fluctuating trend in return on assets ratio of selected companies in Indian paint industry. The average return on assets ratio varied highly from one company to another. The highest average was 16.43 per cent for Asian Paints Ltd followed by 13.17 per cent for Akzo Nobel India Ltd, 12.68 per cent for Kansai Nerolac Paints Ltd, 12.57 per cent for Berger Paints India Ltd and 3.02 percent for Shalimar Paints Ltd. It is also evident from the table that Jenson & Nicholson (India) Ltd showed negative mean return on total assets ratio during the study period. The analysis of CV value showed that Asian Paints Ltd, Berger Paints India Ltd and freturn on total assets, Akzo Nobel India Ltd, Jenson & Nicholson (India) Ltd and Shalimar Paints Ltd had erratically fluctuated during the study period. The compound annual growth rate of this ratio was negative in the case of Akzo Nobel India Ltd and Shalimar Paints Ltd, Jenson & Nicholson (India) Ltd during the study period. The analysis of t values shows that the return on assets of Asian Paints Ltd, Jenson & Nicholson (India) Ltd and Shalimar Paints Ltd were significantly different from the industry.

Table 4 shows that differences in the return on assets ratio between the companies are significant as the calculated value of F (12.83) is greater than the table value of F (2.53) at per cent level of significance. Thus, the null hypothesis ss rejected. The differences in return on assets ratio between the years are not significant as the calculated value of F (0.96) is less than the table value of F (1.92). The framed hypothesis was accepted. This was due to poor return earned by the companies from their operating activities.

#### 4.5 RETURN ON NET WORTH

Table 3 depict a fluctuating trend in the return on networth ratio of the selected companies in India paint industry. The average return on networth varied from one company to another. The average mean of Indian paint industry was 27.64 per cent of return on networth. The highest average of return on networth was 37.23 per cent for Asian Paints Ltd, followed by Berger Paints India Ltd (25.00 per cent), Kansai Nerolac Paints Ltd (22.49 per cent), Akzo Nobel India Ltd (21.48 per cent), Shalimar Paints Ltd (15.50 per cent). However, the average mean of the lowest and negative variation of Jenson & Nicholson (India) Ltd (12.00 per cent). The analysis of CV value shows that Asian Paints Ltd, Berger Paints India Ltd and Kansai Nerolac Paints Ltd had fluctuating trend of return on networth, Aczo Nobel India Ltd, Jenson & Nicholson (India) Ltd and Shalimar Paints Itd had erratically fluctuating trend of return on networth, Aczo Nobel India Ltd, Jenson & Nicholson (India) Ltd, Kansai Nerolac Paints Ltd were significantly different from the industry.

Analysis of variance has been applied among the selected companies and between the years in order to test the hypothesis framed. The calculated values of F (29.08 and 2.48) are more than the table values of F (2.53 and 1.92) at 5 per cent level of significance both between the years and companies. Thus, the null hypotheses is rejected. It is concluded that there are significant differences between the return on networth ratio among the selected companies and between the years during the study period.

#### 5. FINDINGS

All study units reflects good operating profit ratio over the study period. Akzo Nobel India Ltd has the highest operating profit ratio which is good sign of operating performance of the company. Jenson & Nicholson (India) Ltd has the lowest operating profit ratio which reveals poor sales and higher administrative expenses. The highest Net Profit ratio of Akzo Nobel India Ltd indicates better performance in terms of financial and operational efficiency. Net profit ratio of Jenson & Nicholson (India) Ltd indicates better performance in terms of the deteriorating performance of business. Asian Paints Ltd stood second in terms of net profit margin because of good turnover and less maintenance expenses.

The ratio like, Return on Capital Employed, Return on Total Asset and Return on Networth are also the highest for Asian Paints Ltd and the lowest for Jenson & Nicholson (India) Ltd. This shows that Asian Paints Ltd is maintaining a good level of return requires review of investment perspectives for efficient profitability

#### 6. SUGGESTIONS

Asian Paints Ltd and Asian Paints Ltd can maintain its position in terms of profitability by concentrating on various aspects such as innovation, competition, goodwill, market share, risk management etc.

Jenson & Nicholson (India) Ltd is the poorest performer. So it is required to curb manufacturing, administrative and selling expenses. This organisation needs improvements on all financial parameters taken in the study. Otherwise there may be a threat of losses in the near future.

Other three companies Berger Paints India Ltd, Kansai Nerolac Paints Ltd, Shalimar Paints Ltd should retain their profitability position by making efficient employment of their available resources.

#### 7. CONCLUSIONS

From the study we can conducted that Indian paint industry's performance is not similar in terms of their profit levels. Here, profitability analysis is considered as a measure of credit worthiness of the owners, proper usage of resources and efficiency of management of the company. After analysing the six paint companies of India of empirical study by comparing different ratios over a period of time which provides a good sense to the management of the company as well as to the relevant shareholders. Asian Paints Ltd performed very well with the use of new technology and skilled manpower. Jenson & Nicholson (India) Ltd is poor performer due to increased manufacturing overheads and cutthroat competition. All selected companies are maintaining different level of return on their investment.

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#### ANNEXURE

TABLE 1: STATISTICAL VALUES OF RATIOS RELATING TO THE PROFITABILITY INDICATORS (For the period 2000-2001 to 2012-2013)

Particulars	Statis- tics	Akzo Nobel India Ltd	Asian Paints Ltd	Berger Paints India Ltd	Jenson & Nicholson (India) Ltd	Kansai Nerolac Paints Ltd	Shalimar Paints Ltd	Whole In- dustry
Operating Profit	Mean	17.14	15.18	9.98	- 46.35	12.62	5.45	13.36
Operating Profit Margin Ratio	CV	0.48	0.12	0.07	-2.09	0.18	0.26	0.12
(in %)	CAGR	0.33	0.99	1.61	-24.64	3.37	2.24	1.45
(111 76)	t value	1.89	3.81*	-8.07*	-2.23*	-0.98	-16.56*	
	Mean	11.14	8.51	5.74	-132.80	6.86	1.59	6.98
Net Profit Margin	CV	0.60	0.22	0.09	-1.58	0.29	0.50	0.31
Ratio (in %)	CAGR	1.58	2.85	1.81	-4.10	8.18	10.14	4.63
(111 /0)	t value	2.67*	3.73*	-2.36*	-2.40*	-0.17	-10.97*	

\* Significant at 0.01 level

Source: Computed from the annual reports of the respective companies

#### TABLE 2: ANOVA RESULTS - RATIO RELATING TO PROFITABILITY - COMPARISON

S. No.	Profitability Ratio	Between th	ne Companies	Between the Years	
	Profitability Ratio	F Ratio	H₀	F Ratio	H₀
1	Operating Profit Margin Ratio	4.72	Rejected	1.00	Accepted
2	Net Profit Margin Ratio	5.64	Rejected	1.01	Accepted

Critical Value 'F' at 0.05 level (between company) = 2.53; (between year) = 1.92

Source: Computed

#### TABLE 3: STATISTICAL VALUES OF RATIOS RELATING TO THE RETURN ON INVESTMENT (For the period 2000-2001 to 2012-2013)

Particulars	Statis- tics	Akzo Nobel India Ltd	Asian Paints Ltd	Berger Paints India Ltd	Jenson & Nichol- son (India) Ltd	Kansai Nerolac Paints Ltd	Shalimar Paints Ltd	Whole In- dustry
	Mean	98.52	136.16	24.85	-15.43	40.86	11.43	43.29
Return on Capital	CV	1.00	3.95	0.22	-2.29	1.11	0.47	0.57
Employed (in %)	CAGR	15.79	6.00	7.67	-2.33	5.40	6.57	7.37
(111 76)	t value	2.16*	0.62	-3.03*	-5.45*	-0.17	-5.37*	
Detum on Total	Mean	13.17	16.43	12.57	-30.01	12.68	3.02	11.81
Return on Total	CV	0.72	0.18	0.12	-1.37	0.30	0.55	0.35
Assets (in %)	CAGR	-0.68	3.76	2.18	-1.87	8.07	9.72	5.84
(111 76)	t value	0.62	5.80*	-0.20	-3.80*	0.68	-9.57*	
Detune on Net	Mean	21.48	37.23	25.00	-12.00	22.49	15.50	27.64
Return on Net-	CV	0.67	0.23	0.16	-2.44	0.30	0.58	0.24
worth (in %)	CAGR	-1.45	2.65	0.61	0	6.15	12.31	4.56
(111 76)	t value	-1.74	6.13*	-1.47	-5.62*	-2.22*	-6.58*	

\* Significant at 0.01 level

Source: Computed from the annual reports of the respective companies

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TABLE 4: ANOVA RESULTS – RATIO RELATING TO RETURN ON INVESTMENT – COMPARISON
TABLE 4. ANOVA REJULTS - RATIO RELATING TO RETURN ON INVESTMENT - COMPARISON

S. No.	Profitability Ratio	Between t	he Companies	Between the Years			
5. NO.		F Ratio	H₀	F Ratio	H₀		
1	Return on Capital Employed	0.72	Accepted	0.99	Accepted		
2	Return on Total Assets	12.83	Rejected	0.96	Accepted		
3	Return on Net Worth	29.08	Rejected	2.48	Rejected		

Critical Value 'F' at 0.05 level (between company) = 2.53; Critical Value 'F' at 0.05 level (between year) = 1.92

Source: Computed

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