

# A STUDY ON 'PERFORMANCE EVALUATION OF SUGAR COMPANIES: AN EMPIRICAL ANALYSIS'

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## INTRODUCTION

Accounting measures are believed to assess the firm's short term performance and reflects historical information of the firm. In order to evaluate the financial condition and performance of the sugar companies, one of the widely used tools is ratio analysis. Ratio analysis plays an important role in determining the financial strength, soundness and weakness of a company relative to that of other companies in the same industry. The primary objective of a business undertaking is to earn profits. Profit earning is considered essential for the survival of the business. A business needs profits not only for its existence but also for expansion and diversification. The analysis also reveals whether the company's financial position has been improving or deteriorating over time. Liquidity ratios, Profitability ratios, Solvency ratios, and Managerial Efficiency ratios were analyzed to ascertain the financial performance of the sugar companies in India.

## OVERVIEW OF SUGAR INDUSTRY

Sugar industry is an important agro-based industry that impacts rural livelihood of about 50 million sugarcane farmers and around 5 lakh workers directly employed in sugar mills. Employment is also generated in various ancillary activities relating to transport, trade servicing of machinery and supply of agriculture inputs. India is the second largest producer of sugar in the world after Brazil and is also the largest consumer. Today Indian sugar industry's annual output is worth approximately Rs.80,000 crores. Sugar mills (co-operative, private and public) have been instrumental in initiating a number of entrepreneurial activities in rural India. The Indian sugar industry uses sugarcane in the production of sugar where a sizeable rural population directly engaged in production and processing of sugar and its by-products. Revenues from the sugar industry in India are expected to expand to INR billion in Financial year 2020, growing with a CAGR of 4.1% during the year 2016 to 2020. The sugar industry not only boosted the economic status of individual farmers but also it pushed the GDP of Indian economy on the upper scale by the increase in the exports of sugar.

## SCOPE OF THE STUDY

This study "Performance Evaluation of Selected Sugar companies in India" is vital because just earning profit is not enough, a business should earn sufficient profit to cover its cost of capital and create surplus to grow. So finding the surplus profit is made essential. The analysis of financial statements helped to judge the financial strength of the firm.

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## OBJECTIVES

- To measure the financial performance of selected sugar companies during last five years.
- To make a comparative analysis of liquidity, solvency, profitability and managerial efficiency position of key sugar companies players in India.

## DATA COLLECTION

The study is based on secondary data. The required data for the study is collected and compiled from "Money Control.com". In addition to this, supportive data is collected from Annual reports of Sugar Companies, Management and Accounting Research, The Management Accountant, Books and Various Newspapers.

## PERIOD OF STUDY

The study covers a period of five years from the financial year 2013-14 to 2017-18

## METHODOLOGY OF THE STUDY

To measure the performance evaluation of selected sugar companies, in terms of Managerial efficiency, Liquidity, Profitability and Solvency position of the companies, ratio analysis has been used. Further one way ANOVA has been used to identify if there exist a significant difference in the mean and performance of different sugar companies.

## STATISTICAL TOOLS

- The analysis part is carried out with the help of the following variables
- Profitability position: Return on Capital Employed and Net profit Margin Ratio
  - Solvency Position: Debt to Equity Ratio
  - Liquidity position: Current Ratio

## ➤ Managerial Efficiency: Fixed Asset Turnover Ratio

**SAMPLE SIZE**

A finite sample size of five sugar companies was selected for the purpose of the study.

1. Shree Renuka sugars Ltd
2. Balrampur Chini Mills Ltd.
3. Bannari Amman Sugars Ltd
4. Dhampur Sugar Mills Ltd
5. Andhra sugars Ltd

**RETURN ON CAPITAL EMPLOYED**

Return on capital employed (ROCE) is a financial ratio that measures a company's profitability and the efficiency with which its capital is employed.

**Table -1 Return on capital employed (%)**

Years	Shree Renuka sugars Ltd	Balrampur Chini Mills Ltd	Bannari Amman Sugars Ltd	Dhampur Sugar Mills Ltd	Andhra Sugars Ltd
2013-14	11.92	9.03	0.07	3.77	21.64
2014-15	0.61	0.18	1.89	5.26	12.10
2015-16	0.52	-3.21	17.51	9.77	3.56
2016-17	-0.05	5.26	9.83	18.16	10.97
2017-18	2.58	32.56	5.86	14.02	16.39
Mean	3.12	8.76	7.03	10.20	12.93
SD	5.02	14.10	6.96	5.99	6.71

Source: Computed

The table-1 indicates that Balrampur Chini Mills, Bannari Amman Sugars, Dhampur Sugar Mills, Andhra Sugars and Shree Renuka sugars are earning over average industry return i.e.8.408. While that of Bannari Amman Sugars and Shree Renuka sugars Ltd is below industry average return. Moreover ROCE of Dhampur Sugar Mills, and Bannari Amman Sugars has increased since 2013-14 while the return of Andhra Sugars has fallen down. Shree Renuka sugars Ltd has depicted negative return in 2016-17 and Balrampur Chini Mills has depicted negative return in 2015-16.

**NET PROFIT MARGIN**

Net profit margin, or net margin, is equal to net income or a profit divided by total revenue and represents how much profit each dollar of sales generates. Net profit margin is the ratio of net profits or net income to revenues for a company, business segment or product.

**Table-2 Net Profit Margin (%)**

Years	Shree Renuka sugars Ltd	Balrampur Chini Mills Ltd	Bannari Amman Sugars Ltd	Dhampur Sugar Mills Ltd	Andhra Sugars Ltd
2013-14	0.81	4.94	0.11	-0.5	0.94
2014-15	-7.14	0.13	2.17	1.46	0.81
2015-16	-5.13	-1.93	8.28	9.26	0.83
2016-17	-4.86	3.63	5.89	4.79	1.76
2017-18	1.59	17.11	5.89	4.79	1.31
Mean	-2.95	4.78	4.47	3.96	1.13
SD	3.89	7.42	3.27	3.73	0.41

Source: Computed

Table 2 indicate that only Balrampur Chini Mills Ltd, Bannari Amman Sugars Ltd, Dhampur Sugar Mills Ltd and Andhra Sugars Ltd has average net profit margin above industry return i.e.3.58, while rest of the company has net profit margin below the average industry net profit margin and even Shree Renuka sugars has negative profit margins. Comparing with previous year's performance, only Bannari Amman Sugars Ltd and Andhra Sugars Ltd have shown positive and growing during the period from 2013-14 to 2017-18.

**CURRENT RATIO**

The current ratio is a liquidity ratio that measures a company's ability to pay short-term and long-term obligations.

**Table-3 Current Ratio (%)**

Years	Shree Renuka sugars Ltd	Balrampur Chini Mills Ltd	Bannari Amman Sugars Ltd	Dhampur Sugar Mills Ltd	Andhra Sugars Ltd
2013-14	0.56	0.99	1.27	0.84	1.06
2014-15	0.31	1.08	1.36	0.84	1.11
2015-16	0.38	1.05	1.43	0.97	0.98
2016-17	0.58	1.22	1.57	0.89	1.23
2017-18	0.87	1.16	1.57	0.89	1.16
Mean	0.54	1.1	1.44	0.89	1.11
SD	0.22	0.09	0.13	0.05	0.09

Source: Computed

Table 3 Depict that none of the companies has been able to maintain ideal current asset ratio i.e. 2:1 Balrampur Chini Mills Ltd, Bannari Amman Sugars Ltd and Andhra Sugars Ltd has been in position to maintain their current assets above their current liabilities but in rest of the companies, current liabilities are more than current assets creating liquidity crunches for them.

### DEBT EQUITY RATIO

Debt/Equity (D/E) Ratio, calculated by dividing a company's total liabilities by its stockholders' equity, is a debt ratio used to measure a company's financial leverage.

**Table-4 Debt Equity Ratio (%)**

Years	Shree Renuka sugars Ltd	Balrampur Chini Mills Ltd	Bannari Amman Sugars Ltd	Dhampur Sugar Mills Ltd	Andhra Sugars Ltd
2013-14	1.11	1.12	1.07	3.20	8.99
2014-15	2.53	1.11	1.24	3.95	7.51
2015-16	2.05	1.43	1.49	3.61	0.43
2016-17	2.61	1.21	0.85	1.97	5.33
2017-18	1.12	1.10	0.41	1.33	13.29
Mean	1.88	1.19	1.01	2.81	7.11
SD	0.73	0.14	0.41	1.12	4.73

Source: Computed

Table 4 indicates that Dhampur Sugar Mills Ltd and Andhra Sugars Ltd have leveraged their portfolio by including more of debts along with equities. Proportion of debts varies from 60% to 85% in their portfolio. While the same for Shree Renuka sugars Ltd, Balrampur Chini Mills Ltd and Bannari Amman Sugars Ltd is below 50% indicating less involvement of debts than equity.

### FIXED ASSETS TURNOVER RATIO

The fixed-asset turnover ratio is, in general, used by analysts to measure operating performance. It is a ratio of net sales to fixed assets. This ratio specifically measures a company's ability to generate net sales from fixed-asset investments, namely property, plant and equipment (PP&E), net of depreciation.

**Table-5 Fixed Assets Turnover Ratio (%)**

Years	Shree Renuka sugars Ltd	Balrampur Chini Mills Ltd	Bannari Amman Sugars Ltd	Dhampur Sugar Mills Ltd	Andhra Sugars Ltd
2013-14	1.96	1.30	0.55	1.06	0.38
2014-15	1.93	1.00	0.61	0.92	0.41
2015-16	1.69	1.12	1.12	0.97	0.52
2016-17	1.09	1.01	1.31	1.11	0.33
2017-18	1.44	2.14	1.07	1.34	0.33
Mean	1.62	1.31	0.93	1.08	0.39
SD	0.36	0.47	0.33	0.16	0.08

Source: Computed

The above table states that only Shree Renuka sugars Ltd (1.62) and Balrampur Chini Mills Ltd (1.31) have been able to maintain their fixed asset turnover ratio above industry average fixed asset turnover ratio i.e. 1.07 indicating good managerial efficiency position.

### COMPARATIVE ANALYSIS OF THE PERFORMANCE OF SELECTED SUGAR COMPANIES IN INDIA

Ho: There is no significance difference among the mean return on capital employed, Net Profit Margin, Current Ratio, Debt to Equity Ratio, and Fixed Asset turnover ratio pertaining to Balrampur Chini Mills Ltd, Bannari Amman Sugars Ltd, Dhampur Sugar Mills Ltd and Andhra Sugars Ltd

Table-6

One Way-ANOVA						
		Sum of Squares	df	Mean Squares	F	Sig
Return on Capital Employed Ratio	Between Groups	268.444	4	67.111	0.948	0.456
	Within Groups	1414.452	20	70.722		
	Total	1682.896	24			
Net Profit Margin	Between Groups	212.366	4	53.092	2.795	0.054*
	Within Groups	379.845	20	18.992		
	Total	592.21	24			
Current Ratio	Between Groups	2.194	4	0.548	32.338	1.791
	Within Groups	0.339	20	0.017		
	Total	2.533	24			
Debt Equity Ratio	Between Groups	125.957	4	31.489	6.455	0.001**
	Within Groups	97.569	20	4.878		
	Total	223.527	24			
Fixed Assets Turnover Ratio	Between Groups	4.202	4	1.05	10.405	0.000**
	Within Groups	2.019	20	0.101		
	Total	6.221	24			

Source: Computed

\*Significant @5%, \*\*Significant @1%

### Inference

- Return on Capital Employed Ratio: As p value > 0.05 (0.456), this shows that there is no significant difference between return on capital employed for selected sugar companies.
- Net Profit Margin: p value < 0.05 (0.054), so there is significant difference.
- In Current Ratio, As p value > 0.05 (1.791), this shows that there is no significant difference between current ratio for selected sugar companies.
- Debt to Equity Ratio and Fixed Asset Turnover Ratio, p value is 0.000 which shows a significant difference in values of all companies. Further as the calculated value of F varies in between 0.948 to 32.338 for groups which is greater than table value of F crit = 2.86 (4, 20), there is significance difference in the Return on Capital Employed, Net Profit Margin, Current Ratio, Debt to Equity Ratio, and Fixed Asset turnover ratio of sample sugar companies at 5% level of significance, thereby rejecting the null hypothesis.

### CONCLUSION

The study concludes that there is significant difference in the performance evaluation of the selected sugar companies in terms of their liquidity, solvency, profitability and managerial efficiency position. Balrampur Chini Mills has been leading all the sugar companies in terms of profitability followed by Bannari Amman Sugars, Dhampur Sugar Mills, Andhra Sugars and Shree Renuka sugars while Only Balrampur Chini Mills Ltd, Bannari Amman Sugars Ltd and Andhra Sugars Ltd have maintained comparative better liquidity position by keeping current assets level above current liabilities. Dhampur Sugar Mills Ltd and Andhra Sugars Ltd are highly leveraged firms indicating less profits and high risk while Balrampur Chini Mills Ltd has debt proportion equalant to industry's average debt equity proportion. Considering managerial efficiency, only Shree Renuka sugars Ltd (1.62) and Balrampur Chini Mills Ltd (1.31) have been able to maintain their fixed asset turnover ratio above industry average fixed asset turnover ratio i.e. 1.07 indicating good managerial efficiency position.

The market for sugar industry in India is well established and is growing at a slow rate. Technological advancements in the production process, increasing sugarcane yield and rising number of sugar companies in the country as well as the competitive pressures have been significantly changing the market.

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