ANALYSIS OF FINANCIAL ASSET PERFORMANCE AND PRODUCTION QUANTITY OF SUGAR INDUSTRY IN INDIA

JAKIRSHAREEF BAGAWAN

Research Scholar, Dept. of Commerce,

Sri Satya Sai University of Technology & Medical Sciences,

Sehore, Bhopal-Indore Road, MadhyaPradesh, India

Dr. Gajraj Singh

Research Guide, Dept. of Commerce,

Sri Satya Sai University of Technology & Medical Sciences,

Sehore, Bhopal Indore Road,Madhya Pradesh, India

ABSTRACT

The study was conducted to analyze the financial performance of sugar companies in India. Sugar industry is volatile in nature and commercially utilizes the rural resources to meet the demand for sugar and also generates surplus energy to meet the increasing energy needs. Totally forty companies were taken for the study. Ten companies from each zone were selected based on annual volume of sales and market capitalization. Profitability ratios are calculated to measure the overall efficiency of the business. Profitability ratio analysis will not be complete by just computing return on equity (ROE). It is essential to find out the factors that have an impact on the ROE. For this purpose DuPont analysis and Path analysis are used in the study. From the results, there was a significant difference between the return on equity and the DuPont variables and also there is no significant difference between the equity multiplier and the return on equity.

KEYWORDS: DuPont Variables, Earnings per Share, Path Analysis Financial statements, Analysis, Ratio analysis

INTRODUCTION

The basis for financial analysis, planning and decision making reflects in scientific analytical financial statement which mainly consists of Balance Sheet and Profit & Loss account of a sugar factory. This summarized financial report provides the operating result and financial position of a sugar factory and detailed analytical information contained therein is useful for assessing the operational efficiency and financial soundness of a sugar factory.

According to Barney (1997) accounting based financial measures are most popular in strategic management because managers use them to make strategic decisions. 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. According to Rowe and Morrow (1999), financial ratios are used to compare the risk and return of different firms in order to help equity investors and creditors make intelligent investment and credit decisions. Such decisions require both an evaluation of changes in performance over time for a particular investment and a comparison among all the companies within a single industry at a specific point of time. The analysis also reveals whether the company's financial position has been improving or deteriorating over time. Liquidity ratios, Leverage ratios, Turnover ratios, Profitability ratios and Shareholder ratios were analyzed to ascertain the financial performance of the sugar industry in the four zones of the country namely North, East, West and South. 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 investors want an adequate return on their investments, workers want higher wages, creditors want higher security for theirinterest and loan and so on. A business enterprise can discharge its obligation to the various segments of the society only through earning of profits. Profits are thus a useful measure of overall efficiency of a business. Profitability ratios are calculated to measure the overall efficiency of the business. Generally, profitability ratios are calculated either in relation to sales or in relation to investment. Profitability ratio analysis will not be complete by just computing return on equity (ROE). It is essential to find out the factors that have an impact on the ROE. For this purpose DuPont analysis and Path analysis are used in the study.

What is Financial Statement?

Financial statements are structured representation of the financial position and financial performance of an entity. Financial statements provide information about an entity's i) Assets ii) Equity & Liabilities iii) Income and expenses, including gains and losses and iv) Cash flows.

Significance of Analysis of Financial Statements

Financial analysis is useful and significant to different users in the following ways:

(a) Finance Manager: Financial analysis techniques enable the finance manager to make constant reviews of the actual financial operations of the sugar factory for analyzing the causes of major deviations, which may help in taking corrective action.

(b) Top Management: Financial analysis helps the Top Management in measuring the success of the company's operations, appraising the individual's performance and evaluating the system of internal control.

(c) Trade Payables: The traders are particularly interested in sugar factory's ability to meet their claims over a very short period of time, which evaluate factory's liquidity position.

(d) Lenders: Banks and Financial Institutions are concerned about the sugar factory's long term solvency and survival. They analyze the historical financial statements to assess its future solvency and profitability.

(e) Investors: Investors, who have invested their money in the sugar factory's shares, are interested in the sugar factory's earnings and present and future profitability to ascertain its effects on sugar factory's earning.

(f) Others: Economists, Researchers, Government etc., analyze the financial statements to study the economic conditions for price regulations, taxation and other similar purposes.

Total Asset Turnover Ratio

 Total asset turnover ratio measures how efficiently the firm utilizes its assets to generate sales. It establishes the relationship between total asset and net sales. This ratio indicates whether the firms operations are financially efficient or not. Zone wise total asset turnover of sugar companies were analyzed and given in annexure 1. The zonal average of total asset turnover of the sugar companies in North zone (0.81) was better than the zonalaverage (0.72). Total asset turnover ratio of East and South zone companies (0.69 and 0.68) was not in the ideal level which reflected the inefficient management of assets. In North zone, KM sugars and SEBC sugars performed well in maintaining their assets. Mawana sugars (1.03), Kesar sugars (1.05), SEBC sugars (1.38) KM sugars (1.59), Shadilal sugar (1.06) and Ravalgaon sugars (1.05) showed higher total asset turnover ratio which indicated that these companies operations were financially efficient and their assets were employed well. Higher ratio provided a measure of overall investment efficiency by aggregating the joint impact of both short and long-term assets. Piccadily sugars (0.29), Monnet sugar (0.41) Bajaj hindusthan sugars (0.35), Jeypore sugars (0.48), Belapur sugar (0.10) and Parry's sugars (0.41) showed lower ratio which indicated the lower interest of these companies in management of its assets to generate sales. The average total asset turnover ratio of 33 companies out of 40 companies were greater than the optimum level for the study period which indicated the sample sugar companies operations were financially efficient.

Net Profit Ratio

Net profit ratio establishes a relationship between net profit (after taxes) and sales, and indicates the efficiency of the management in manufacturing, selling, administrative and other activities of the firm. The zonal average of net profit ratio of the sugar companies in South and North zone were found to be higher (0.07 and 0.03) than the zonal average. Companies in East and West zone showed negative net profit ratio (-0.01 and -0.19) which indicated that poor capacity to face adverse economic conditions such as price competition, low demand. Monnet sugars in North zone and EID parry's sugars in South zone performed well in terms of net profit ratio. Monnet sugars (0.26), Renuka sugars (0.06), Girdharilal sugars (0.15), Andhra sugars (0.09),

Dalmia sugars (0.09) Bannari Amman sugars (0.11) and EID parry sugars (0.23) showed positive high net profit ratio which indicated the effectiveness of these companies in converting revenue into actual profit. Net profit margin provides clues to the company's pricing policies, cost structure and production efficiency. Different strategies and product mix cause the net profit margin to vary among different companies.(Annexure 2.) KM sugars (-0.06), Uttam sugars (-0.05), Kesar sugars (-.01), Shadilal sugars (-0.04), Upper Ganesh sugars (- 0.04), Belapur sugars (-1.95), India sugars (-0.12), Parry's sugars (-.06), Oudh sugars (-0.04), JK sugars (-0.03) and Venus sugars (-0.11) showed negative profit margin which indicated the inefficient management of the companies in operation and in controlling costs. Hence, these companies have to improve its operating profit margin through reducing the expenses. Most of the sample sugar companies showed negative net profit ratio which indicated the inefficient management in operations of these companies. The profitability of the companies should be improved through better inventory management and asset management practices. Suganthi and Santhi (2010) studied the operational efficiency profitability of banks and found that return on assets had significant relationship with the profit margin. Dave (2011) studied the Pharma sector determinants of profitability for the period of 10 years. The results showed that total asset turnover, inventory turnover, debtor's turnover had positive relationship with the profitability.
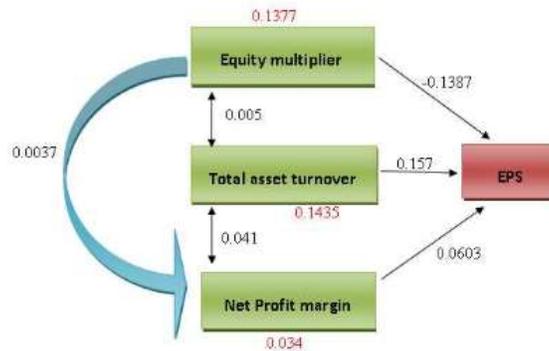
Earnings per Share (EPS)

It is generally of interest to present on prospective stockholders and management. EPS represents amount ofrupees earned during the period on behalf of each outstanding share of common stock. North zone companies showed negative EPS (-1.21). The EPS of Ravalgaon sugars was found to be higher in West zone companies. The EPS of Bannari Amman sugars and Andhra sugars were higher in South zone companies. It could be understood that Vishnu sugars (61.27), Girdharilal sugars (6.09), Ravalgaon sugars (341.95), Dalmia sugars (13.38), Andhra sugars (22.32) and Bannari Amman sugars (82.25) had positive higher EPS during the study period. Higher the EPS is the better of the investors, as more dividends will be distributed for the shares owned. Investors also need to be aware of the impossibilities of manipulating the earnings that would in turn affect the share price movements in the stock market. (Annexure.4). It is important not to rely on any one financial measure, but to use them in conjunction with statement analysis and other measures. The negative earnings per share ratio was observed in Shadilal sugars, Upper ganesh sugars, Oudh sugars, Parry's sugars, Dwarikesh sugars and Uttam sugars. The average earning per share of 23 companies, out of 40 companies were positive. The remaining companies had negative earnings per share.

Path Analysis

Path analysis was adopted to analyze the correlation co-efficient into direct and indirect effects as suggested by Dewey and Lu (1959). The path analysis takes into account the cause and effect relationship between the variables by partitioning the association into direct and indirect effects through other independent variables. It

was used for the analysis of sugar companies for the impact on DuPont variables and Equity multiplier with the Earning per share of the sugar share price. It is essential to identify the factors which had impact on EPS.

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Figure 1: Path Diagram for DuPont Variables

The simple correlation co-efficients of Earnings per share (EPS) with other variables were further partitioned into direct and indirect effects and the results are presented below.

Direct Effects of DuPont Variables and EquityMultiplier on EPS

In the present study, the residual effect of path analysis was found to be 0.9. From this study, it was evident that Asset turnover (0.15) recorded positive direct effect on EPS followed by Net profit margin (0.06). The path diagram (figure.1) showed positive relationship among the Du Pont variables and EPS. The co efficient value indicated the extent of influence of DuPont variables on EPS. The results showed that Equity multiplier negatively influenced the EPS.

Indirect Effects of DuPont Variables and Equity Multiplier on EPS

• Equity Multiplier Equity multiplier showed low positive indirect effect with the DuPont variables which was negligible.

• Asset Turnover Asset turnover showed low positive indirect effect on equity multiplier and optimum positive indirect effect on Net profit margin.

• Net Profit Margin Net Profit margin showed low positive indirect effect on the equity multiplier which was negligible

The direct and indirect effect of the path analysis revealed that the DuPont variables like Asset turnover and Net profit margin was considered as important variables for the Earning per share of the Sugar firms. Similar results were obtained by Kasilingam and Jayabal (2012). They found that there was a positive relationship among the DuPont variables and EPS.

Tools of Analysis of Financial Statements

The most commonly used techniques of financial analysis are as follows:

A) Comparative Statements: The comparative Profit & Loss account gives an idea of the progress of business over a period of time. The changes in absolute money values and percentages can be determined to analyze the profitability of the business. This analysis is also known as 'horizontal analysis or Intra sugar factory analysis. Horizontal analysis compares each item with an item for a selected base year.

<p align="center">"One cannot be the finest without comparing with rest"</p>

SUMMERISED COMPARATIVE PROFIT AND LOSS ACCOUNT FOR THE YEAR 2014-15 & 2015-16

YEAR	CANE CRUSHING	PRODUCTION			
2014-15	674765.310 MT	894855 QTLS			
2015-16	731132.950 MT	967000 QTLS	Rs.Lakhs		
1) INCOME		2014-15	2015-16	Diff. (+/-)	Change%
1.1) Sugar Realization		26109.58	27801.88	1692.30	6.48
1.2) Bagasse		279.15	542.60	263.45	94.37
1.3) Molasses		948.16	1312.77	364.61	38.46
1.4) Other Income		163.29	485.05	321.76	197.06
TOTAL (1)		27500.18	30142.30	2642.12	9.61
2) COST OF PRODUCTION					
2.1) Raw Material Cost		20677.80	24070.15	3392.35	16.41
2.2) Manufacturing Overheads		2921.23	1685.72	(1235.51)	(42.29)
2.3) Salary & Wages		1393.13	1643.43	250.30	17.97
2.4) Administrative Exp.		444.12	525.19	81.07	18.26
TOTAL (2)		25436.28	27924.49	2488.21	9.78
GROSS PROFIT		2063.91	2217.81	153.91	7.46
3) Depreciation		269.91	309.51	39.60	14.67
4) Interest		1760.75	1848.54	87.79	4.99
5) TOTAL COST OF PRODUCTION (2+3+4)		27466.94	30082.54	2615.60	9.52
6) NET PROFIT (1-5)		33.24	59.76		

Interpretation: During the financial year 2015-16 the factory crushed 7.31 lac MT of sugar crane & produced 9.67 lakh quintals of sugar as per the Balance Sheet of March 2016, the factory has holding sugar stock of Rs. 321.74Cr., this was mainly because of lower market price during financial year 2015-16. The sugar prices have gone far below the FRP, therefore sugar factory was compelled to carry over stock in an anticipation of better price in future. The above table gives idea about deviation in absolute figures in rupees as compared to year 2014-15. The financial statements indicated in above table, is prepared for successive periods 2014-15 & 2015-16, where it shows the changes in percentages over a period of time.

B) Common Size Statements: The common size statements analysis compares each item with a base item of two different factories to realize where we actually stand as compared to other sugar factories and what the

exact reasons of deviation are. This analysis is also known as 'Vertical analysis or Inter sugar factory analyses.

"The difference between running and ruining the business is high cost"

Name of The Company	Financial Year	Variable Cost Rs. PMT	Fixed Cost Rs. Lakh	Income Rs. PMT	Contribution PMT
1	2	3	4	5	6 =(5-3)
X Sugar Mill	2015-2016	3786.54	2397.90	4122.69	336.14
Y Sugar Mill	2015-2016	3546.00	2425.10	4242.91	696.91

C) Trend Analysis: Trend analysis studies the financial history, operational results & financial position of a sugar factory over a series of years using the historical data to observe the percentage changes in selected data.

"Costing is strange racing where falling considered wining"

Trend Analysis

SUMMARISED COMPARATIVE PROFIT AND LOSS ACCOUNT FOR THE YEAR 2013-14 & 2015-16

	Rs. Lakhs			TREND%		
1) INCOME	**2013-14**	**2014-15**	**2015-16**	**2013-14**	**2014-15**	**2015-16**
1.1) Sugar Realization	21264.26	26109.58	27801.88	100.00	122.79	130.74
1.2) Bagasse	491.04	279.15	542.6	100.00	56.85	110.5
1.3) Molasses	1006.51	948.16	1312.77	100.00	94.2	130.43
1.4) Other Income	219.93	163.29	485.05	100.00	74.24	220.55
TOTAL (1)	**22981.74**	**27500.18**	**30142.3**	100.00	119.66	131.16
2) COST OF PRODUCTION						
2.1) Raw Material Cost	18138.73	20677.8	24070.15	100.00	114	132.7
2.2) Manufacturing Overheads	1226.14	2921.23	1685.72	100.00	238.25	137.48
2.3) Salary & Wages	1330.54	1393.13	1643.43	100.00	104.7	123.52
2.4) Administrative Exp.	263.7	444.12	525.19	100.00	168.42	199.16
TOTAL (2)	**20959.11**	**25436.28**	**27924.49**	100.00	121.36	133.23
GROSS PROFIT	**2022.63**	**2063.91**	**2217.81**	100.00	102.04	109.65
3) Depreciation	276.56	269.91	309.51	100.00	97.6	111.91
4) Interest	1727.26	1760.75	1848.54	100.00	101.94	107.02
COST OF PRODUCTION (2+3+4)	**22962.93**	**27466.94**	**30082.54**	100.00	119.56	130.95
NET PROFIT	18.81	33.24	59.76	100.00	176.91	316.51

The above table indicates financial trend is positive and the better financial management of the sugar factory year to year.

CONCLUSION

Financial ratio analysis and common-size analysis help to gauge the financial performance and condition of a sugar factory through an examination of relationships among these many financial items. A thorough financial analysis of a sugar factory requires examining its efficiency in putting its assets to work, its liquidity position, its solvency, and its profitability. We can use the tools of common-size analysis and financial ratio analysis, to help understand where a company has been. We then use relationships among financial statement accounts in pro forma analysis, forecasting the sugar factory's income statements and balance sheets for future periods, to see how the sugar factory's performance is likely to evolve. The above various types of financial analysis indicate the positive performance of sugar factory which is now a day's essential to turnaround the financial position of the sick units.

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