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A Study on Financial Ratio Analysis of Vellore Cooperative Sugar Mills at Ammundi, Vellore

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Abstract— The research paper "a study on financial ratio analysis of Vellore cooperative sugar mills ltd" as entitled. To evaluate and analyze the sugar industry of its financial performance and its position by using ratio analysis. The company's financial performance has been thoroughly examined during the years from 2013-2017. And the data was collected from the secondary sources. The research includes analyzing the balance sheet and profit & loss account for the period of five years. It shows the company's financial position over the year which is useful for decision making. It helps to alter the company in profit direction. This paper gives the guiding principle about the Activity Ratios, Liquidity Ratios, Solvency Ratios and Profitability Ratios analysis of Vellore cooperative sugar mills Ltd, Vellore district.

Keywords— Ratio analysis, financial performance, financial position, Activity Ratios, Liquidity Ratios, Solvency Ratios and Profitability Ratios

I. INTRODUCTION

The Vellore Cooperative sugar Mills Ltd. Is located at Ammundi was registered and established under Tamil Nadu Co-operative societies act in May 1970. It was commenced its erection during 1976 and commissioned with a crushing capacity of 1250 TCD in March 1977. Trial crushing was taken from March 1977 to may1977 by crushing 15,000 M.T. as a maiden crushing season. Based on the cane potentiality and are as per the recommendation of the government of India, the crushing of mills was expanded from 1250 TCD to 2500 TCD with a view to having the uniform and standard economical crushing capacity of 2500 TCD during the year 1989-1990 [annual report]. Now the sugar mill is still running more than 38 yrs and above.
The sugar industry has made the significant contribution to India's' export.

Table 1: Company Profile of VCSM.

Name of the company	**Vellore Cooperative Sugar Mills**
Status of Company	Public trading concern.
Constitution of the firm	Registered under companies act 1956
Products	Sugar (L30, M30, S30)Molasses, Press Mud, Bagasse. Electricity.
Press Mud / Filter cake	This is also another type of product. It is sold for Rs.250 Per Ton.
Sugar Storing Capacity	2 lakhs Bags.

II. REVIEW OF LITERATURE

Malyadri, and B. Sudheer Kumar (2013) Found 15 at Indian sugar industry is highly fragmented with organized and unorganized players. The unorganized players mainly produce gur and khandsari, the fess refined forms sugar. The sector has a number of transformational opportunities. These opportunities have remained largely untapped. The industry has the potential to cater to the large and growing domestic sugar consumption and emerge as a significant carbon credit and power producer. Further, the industry can improve its cost competitiveness through higher farm productivity and by managing the domestic production variation through international trade with a focus on countries in the Indian Ocean. Thus, transformed sector would be less cyclical with greater alignment between sugar cane and sugar prices, and will have stable diversified sources of revenue. This study we have used analysis of Indian Sugar Industry from Ratio's Port Of View, Profitability Ratio, Turnover Ratio.

Attwood, D. W. (1995) found the reasons why cooperative sugar factories in Maharashtra, India are given: (1) successful are examined. Two contradictory explanations are generally the cooperative spirit already prevalent in the village communities provided a sound basis for formal cooperatives; (2) village life is governed by a few wealthy and powerful leaders who also control the cooperatives. Both explanations are rejected. It is argued that despite a high level of inequality in the past and the present, informal cooperation has flourished in the villages. The success of the sugar cooperatives rests on the longstanding habit forming selective alliances to overcome serious technical obstacles in production. The large farmers depend on the cane supplied by the small farmers to maintain full capacity utilization, which enables the factories to pay high cane prices.

III. RESEARCH PROBLEM

The principal goal of a business undertaking is to make profits. Profit earning is considered important for the survival of the business. A business needs profits not only for its existence but also for growth and diversification the investors want a satisfactory return on their investment as well as workers, creditors. And a business enterprise can discharge its responsibility to various segments of the society only through earning of profit. Financial performance is prepared to review the state of investment in a business and result achieved during a specific period, financial performance analyses are also of great importance to the financial lenders.

IV. RESEARCH OBJECTIVES

To assess the financial analysis and planning, forecasting of VCSM project with the help of various financial statement analysis tools and techniques over the period of study I.e. from 2013-14 to 2016-17.

1. To help the management in its planning and forecasting activities.
2. To evaluate operational efficiency, liquidity, and solvency of VCSM.
3. To help the management in having effective control over the activities of different departments.
4. To compare the previous five years and present year performance of the company.
5. To give suggestion and recommendation based on the study.

V. THE SCOPE OF THE STUDY

- This study clearly defines the financial status of the concern during the working period.
- The study report being made here brings out the financial structure and the position of the VCSM comparing from different years.
- The financial study helps us to analyze the financial background and the utilization of the income earned through the organization process.

VI. DATA COLLECTION AND TOOLS USED

Collection of data from the annual report of the company during the years of 2013 to 2017and the required and relevant data has been collected from the literature, journal and through search engines. This present study ratio analysis method used for performance analysis.

The last 5 years annual report of the company is compiled and tabulated for the purpose of the study. The techniques used are:

- Comparative study of Balance sheet
- Comparative study of Profit and loss account for the FY 2013-14 to 2016-2017.
- Ratio Analysis

VII. DATA ANALYSIS AND INTERPRETATION

Analysis of the data means studying the tabulated material in order to determine if he rent facts or meaning. It involves breaking down existing complex factors into simpler parts and putting the part together in new arrangement for purpose of interpretation. A plan of analysis can and should be prepared in advance before the actual collection materials. A preliminary analysis on the skeleton plan should, as the investigation proceeds, develop in to a complete, final analysis enlarge and reworked as and when necessary. The process requires flexible and open mind. No similarities, differences, trends and outstanding should go unnoticed, large division of materials should be broken down in to smaller unit and rearranged in new combinations to discover new factors and relationship. Data should studied from as many angles as possible to find out and news facts. When the plan of analysis has not been made before hand, there are four helpful modes to start with the analysis of data:

- To examine carefully the statement of the problem and the earlier analysis and to study the original records of the data.
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Activity Ratio

Inventory turnover cost of goods sold ÷ average inventory

Receivables turnover net revenue ÷ average receivables

Asset turnover net revenues ÷ average total assets

Table 2: Activity Ratios for VCSM (2013 to 2017)

Year	Inventory Turnover	Total Asset Turnover Ratio	Receivables Turnover
2013	1.54	1.14	14.6
2014	1.38	0.92	10.6
2015	2.23	0.95	10.7
2016	1.16	0.23	3.6
2017	1.65	0.26	3.1

Inference

The Total assets turnover of the company is highest in (1.14) in the year 2013.The Inventory turnover of the company is highest in (2.23) in the year 2015. The receivables turnover of the company is highest in (14.6) in the year 2013.

Liquidity Ratios

Current ratio	current assets ÷ current liabilities
Quick ratio	(cash + short-term marketable securities + accounts receivable) ÷ current liabilities
Cash ratio	(cash + short-term marketable securities) ÷ current liabilities

Table 3: Liquidity Ratios for VCSM (2013 to 2017)

Year	Current ratio	Quick ratio	Cash ratio
2013	0.81	0.26	0.376
2014	0.71	0.24	0.393
2015	0.62	0.12	0.629
2016	0.49	0.33	0.296
2017	0.51	0.38	3.643

Inference

The Current assets ratio of the company is highest in (.81) in the year 2013.The Quick ratio of the company is highest in (0.38) in the year 2017. The cash ratio of the company is highest in (3.64) in the year 2017.

The current ratio was fluctuating during the period 2013 to 2017. The company had the fluctuation of 16% increase in current assets and 11% in current liabilities. in the year 2017 the current assets has decreased by -28% and 18% in current liabilities in the year 2016.The current ratio determines margin of safety for creditors, there has been decrease in the ratio during 2016 compared with 2014.

The company had fluctuation 28% decrease in quick asset and 11% increase in current liabilities and in the year 2017 there was an increase in quick asset -59% and -16% decreases in current liabilities in the year 2015.

This ratio measures firm's ability to serve short-term liabilities. The ideal quick ratio is".1". A low quick ratio represents that firm's liquidity poison is not good.

Solvency Ratios

Debt-to-assets ratio	total liabilities ÷ total assets
Debt-to-capital ratio	total debt* ÷ (total debt* + total shareholder's equity)
Debt-to-equity ratio	total debt* ÷ total shareholder's equity
Interest coverage ratio	earnings before interest and taxes* ÷ interest payments

Table 4: Solvency Ratios for VCSM (2013 to 2017)

year	Debt To Assets Ratio	Debt/ Equity Ratio	Debt-To-Capital Ratio	Interest Coverage Ratio
2013	.59	.41	.57	0.04
2014	.61	.57	.59	.62
2015	0.68	2.16	0.66	0.69
2016	0.71	2.44	0.69	0.76
2017	0.73	2.69	0.71	0.41

The debt to asset ratio of the company is highest in (0.73) in the year 2017. The debt/equity ratio of the company is highest in (2.69) in the year 2017. The debt to capital- ratio of the company is highest in (0.71) in the year 2017. The interest coverage ratio of the company is highest in (0.76) in the year 2016.

Profitability Ratios

Gross profit margin	gross income ÷ net revenue
Operating profit margin	operating income ÷ net revenue
Net profit margin	net income ÷ net revenue
Return on assets (ROA)	net income ÷ total assets
Return on equity (ROE)	net income ÷ total stockholder's equity

Year	GPM	OPM	NPM	ROA	ROE
2013	1.00	1.19	100.3	1.15	2.7
2014	1.07	-15.36	100.7	0.93	2.3
2015	1.00	-16.38	100.4	0.95	2.7
2016	1.00	-78.70	100.2	0.23	0.8
2017	1.01	-15.35	100.6	0.26	0.9

Table 5: Profitability Ratios for VCSM (2013 to 2017)

Inference

The Gross profit ratio of the company is highest in (1.007) in the year 2014. The Operating profit margin of the company is highest in (1.19) in the year 2013. The Net profit margin of the company is highest in (100.7) in the year 2014. The Return on assets ratio of the company is highest in (1.15) in the year 2013. The return on equity ratio of the company is highest in (1.007) in the year 2014. The company had fluctuated by an increase of 22% in gross profit and decrease by -72 % in the year 2017 and in the year 2016 there is a decrease in gross profit by -72 % and increase in sales by 21%. The gross profit indicates the degree to which the selling price of goods per unit may decline without resulting in losses on the operation of the firm. It reflects the efficiency with which firm produces its products.

The Operating Profit Margin trend is fluctuating trend. The periods are 2013 to 2017. A decrease in the ratio over a previous period is an indication of not an improvement in an operational efficiency of a concern the higher the ratio is more successful the business is, but a lower ratio indicates a large number of manufacturing expenses.

VIII. FINDINGS AND DISCUSSION

Liquidity Ratios

1. The current ratio was lower than the ratio's standards of 2:1 in all the five years. The current ratio is not at the satisfactory level so the company needs to increase the current assets or by decreasing current liabilities.
2.
3. The **quick ratio** was found very low in all the years so that the firm must keep the proper level of bank balance, cash at hand, and short-term investment in current assets.
4. The cash ratio/cash coverage ratio is a liquidity ratio was lower than the standard ratio of 1:1 in the firm. the company must decrease liquid liability or else increase liquid assets,

Profitability Ratios

1. The **GP ratio** reflects the profit margin on its trading and manufacturing. The firm must maintain this ratio in higher level and try to reduce the COGS and increase the sales.
2. **Operating margin ratio** is used to calculate the company's pricing strategy & operating efficiency. It gives a suggestion of how much a company makes (EBIT) on each ONE rupee of sales. The firm must try to maintain this ratio at a high level, need to increase operating income by net sales or increase operating efficiency and also reduce the external funds.
3. **Net profit** ratio indicates the company's capacity to face unfavorable economic conditions such as price competition, low demand, etc. Obviously, higher the ratio the better is the profitability. Hence, try to sustain this ratio at a higher level because this ratio reflects the operating efficiency and performance of the company. As we know this ratio is very useful for the investors.
4. **Return on assets** ratio must be maintained at a higher level because it's beneficial for the company.
5. **Return on equity** should try to preserve a higher level as it indicates that efficient use of equity capital and reserves. If this ratio is to be found at a higher level means the company has to be invested in funds in a profitable manner.

Solvency Ratios

1. The company should try to sustain **debt to assets turnover** ratio at the lowest level as it indicates not the well-organized use of funds.
2. Lowe value of **the debt-equity ratio** is favorable because it indicates less risk and less depends on external. Hence, the company should try to maintain a lower level as it's favorable for the company. As far concerned of **capital turnover ratio**, the company can be preserved up to 20 times but consistency is to be required per year.
3. The company should have to maintain **interest coverage ratio** at a higher level because it indicates the greater ability of the company to handle fixed charge liabilities. Also, try to obtain funds at low interest or less use of external funds.

Activity Ratios

1. For maintain, **inventory turnover** ratio company can be decided purchasing policy. If purchasing policy is to be planned it means to avoid the unnecessary investment in inventory. In the same way, a company should have to increase operating efficiency. Therefore, the company can be maintained inventory turnover ratio at a higher level as it desirable for the company.
2. The higher level of **total asset turnover** ratio is preferable for the company as it indicates that the efficient and well-organized management of the current asset. The higher ratio means current assets is to be easily converted into cash and a working capital cycle is to be smooth going.
3. **Receivables turnover ratio** measures **company's efficiency in collecting its sales on credit** and

collection policies. This ratio takes into consideration only the credit sales. If the cash sales are included, the ratio will be affected and may lose its significance.

*Table 5: **Trend analyses***

Year	**Net sales**	**X2**	**XY**
2013	878603087	4	1757206174
2014	735311699	1	735311699
2015	870715100	0	0
2016	246400748	1	-246400748
2017	299014064	4	-598028128
Total	∑Y=3030044698	∑X2 =10	∑xY=1648088997
	3030044698/ 5(years)		1648088997/10(X_2)
	=606008939		= 164808899.7

Table 6: Trend values for VCSM (2018 to 2023)

Year	**Trend values**
2018	**111582240.5**
2019	**-93143215.6**
2020	**-331846754.2**
2021	**-418194268.7**
2022	**-649871284.8**
2023	**1202071826**

INFERENCE:

The trend analysis shows that there is an increase in the sales in the year 2018. This shows there is a good sales position in the company.

SALES FORECAST OF VCSM

******Sales forecasts are usually based on the analysis of historical data.
******An accurate sale forecast is critical to the firm's profitability:

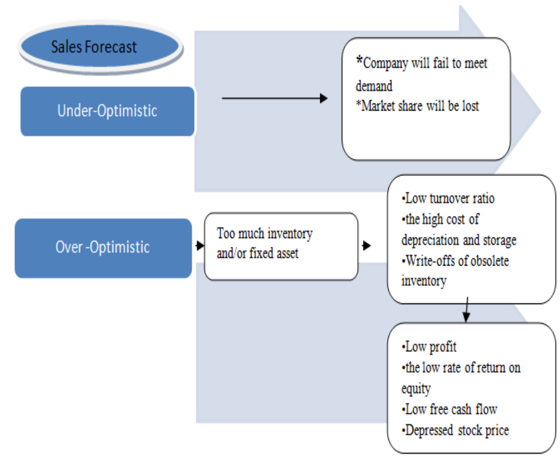

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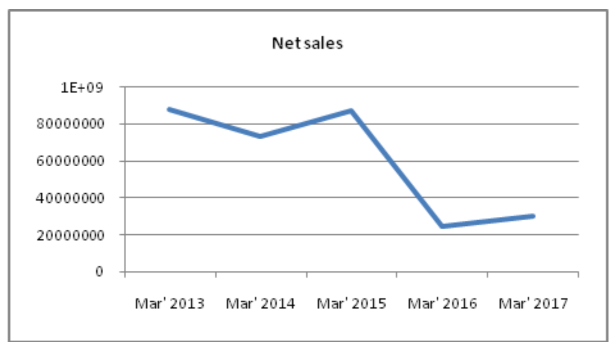
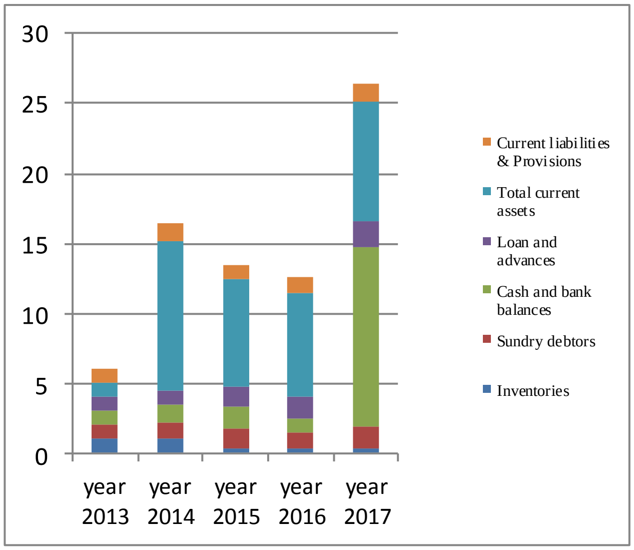
Figure **et sales**	Figure 13. 78603087	Figure 14. 35311699	Figure 15. 70715100	Figure 16 46400748	Figure 17. 99014064



WORKING CAPITAL ANALYSIS

Table 7: Scheduling Of Change in Working Capital during the Year 2016 -2017

Particulars	2013 %	2014 %	2015 %	2016 %	2017 %
current assets					
Inventories	100%	104%	35%	36%	33%
Sundry debtors	100%	115%	135%	115%	162%
Cash and bank balances	100%	126%	169%	94%	1283%
Loan and advances	100%	109%	143%	160%	179%
Total current assets [A]	100%	1063%	769%	734%	850%
Current Liabilities & Provisions[b]	100%	121%	101%	119%	132%



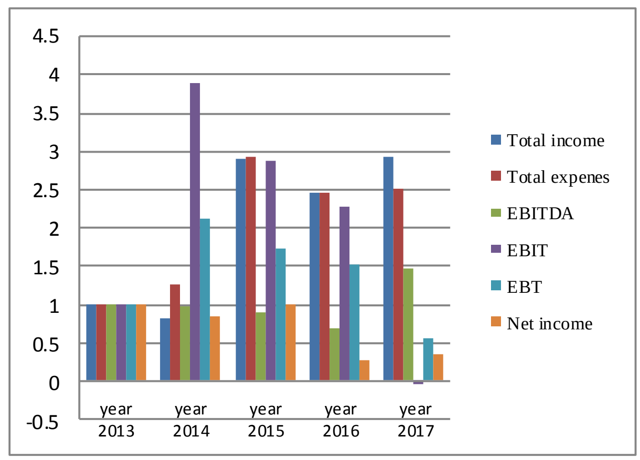
Interpretation

The above table shows that percentage in the change in working capital during the year 2013-2017. The working capital is fluctuating over the five years, there is no steady growth shown but there is some increase in over the years when compared to previous year. The highest is in the year 2017 and lowest is in the year 2013.

Table 8 Summarized Comparative Profit And Loss Account for the Year 2013-2017

	2013	2014	2015	2016	2017
INCOME					
Sales	100%	82%	291%	246%	294%
Other Income	100%	172%	284%	486%	263%
Non trading income	100%	-191%	28%	4%	-28%
Release of reserves &provisions	100%	0	0	0	0
Total Income	100%	82%	291%	246%	293%
EXPENSES					
Stock Adjustments	100%	484%	3103%	-229%	937%
Raw Material Consumed	100%	110%	245%	334%	290%
Power and Fuel	100%	305%	251%	212%	152%
Water charges	100%	69%	79%	90%	83%
Process material	100%	92%	210%	320%	297%
Packaging expenses	100%	109%	346%	610%	833%
Other manufacturing expenses	100%	124%	169%	176%	99%
Salaries and wages	100%	117%	134%	137%	126%
Repairs and maintenance	100%	375%	430%	546%	477%
Administrative salaries	100%	112%	124%	122%	112%
Administrative overheads	100%	125%	146%	135%	131%
Excise duty	100%	76%	203%	138%	137%
Selling and distribution expenses	100%	17%	22%	56%	11%
Reserves and provisions					
TOTAL EXPENSES	100%	127%	293%	246%	251%
Operating Profit	100%	422%	311%	246%	-23%
EBITDA					
Depreciation	100%	98%	90%	68%	146%
EBIT	100%	388%	288%	227%	-5%
Interest and finance charges	100%	88%	93%	100%	101%
EBT	100%	213%	174%	153%	57%
Taxes					
prior year adjustments	100%	15319%	-166%	-1175%	996%
Profit and Loss for the Year	100%	225%	173%	152%	58%
Net income	100%	84%	99%	28%	34%

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



Interpretation

During the financial year 2016-17 the factory crushed 67338 MT of sugar crane & produced 60740 quintals of sugar as per the Balance Sheet of March 2017, the factory has to hold sugar stock of Rs. 23.4Cr. This was mainly because of lower production during the financial year 2017-16. The above table gives an idea about deviation in absolute figures in rupees as compared to the year 2015-16. The financial statements indicated in above table is prepared for successive periods 2015-16 & 2016-17, where it shows the changes in percentages over a period of time.

IX. SUGGESTIONS

The company may decrease its inventory turnover on basis of the order for sales and market potential. The company may reduce the variable expenses raw material consumed, power and fuel, employee expenses, administration, and selling expenses it will lead to more operating profit. In order to increase the profitability of the companies, it is suggested to control the cost of goods sold and operating expenses

- The management should try to adopt cost reduction techniques in their companies to get over this critical situation. In the same way, to reduce power and fuel Cost Company should find out other alternatives for this.
- The company may continuously maintain its proper planning and control techniques in order to regulate and optimize the use of cash balance.
- The company may be maintained in the current assets properly so that it will lead to a better position of working capital. The company may reduce the creditor's position by repaying the loans in short-period for in better position in future.
- The company should try to match the amount of working with the sales trends. Where there is a deficit of working capital, they should try to build on an adequate amount of working capital. Where there is an excessive working capital, it should be invested either in trade securities or should be used to repay borrowings.
- The management should try to utilize their production capacity fully in order to reduce factory overheads and to utilize their fixed assets properly.
- To strengthen the financial efficiency, long-term funds have to be used to finance core current assets and a part of temporary current assets. It is better if the company can reduce the oversized short-term loans and an advance eliminates the risk of arranging finance regularly.
- For a regular supply of raw materials and the final product infrastructure facilities are required further improvement, improper planning and delays in implementation of projects lead to a rising in their cost. So properly planning should be made. the company should try to use properly their operating assets and should try to minimize their non-operating expenses

'With the help of these suggestions the company tries to improve their financial Performance'.

X. CONCLUSION

Financial performance is basic instruments, which provides all information about the financial position and operational efficiency of the company. The current ratio, quick ratio, gross profit may increase in this respect. It is concluded that the overall financial performance was not satisfactory as per analysis. The company has to take appropriate steps to control the cost, increase the volume of sales, profit in the future years.

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Authors Profile

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