FINANCIAL RATIO ANALYSIS OF PRIVATE AND COOPERATIVE SUGAR FACTORIES OF BELAGAUM DISTRICT

Prof. Mohammadjaffar M. Bagban
Department Of Accountancy
Devchand College, Arjunnagar

ABSTRACT: Capital structure of an enterprise refers to the financial plan, according to which its assets are financed. The left hand side of the balance sheet which represents total liabilities of an enterprise is known as financial structure. It indicates the combination of various types of long-term and short-term sources through which the assets of the enterprises are financed. The part of the financial structure, which represents long-term sources, is known as 'capital structure'. Financial Structure refers to the way the firm's assets are financed. It is the entire right hand side of the balance sheet. Capital structure is the permanent financing of the firm, repented primarily by the long-term debt, preferred stock and common equity, but excluding all short-term credit. Thus, a firm's capital structure is only a part of its 'financial structure'.

Introduction: India is one of the largest sugar producing countries in the world, surpassing Russia, Brazil and Cuba. Sugar Factory is an important component of the organized industrial sector in India. It is the second major agro-based factories in the country, next to cotton factories and is the third largest factories in terms of its contribution to value-addition by manufacture, with a total capital investment of more than Rs. 1,350 crores. It provides employment to nearly 3.25 lakh workers directly and to 25 million sugarcane cultivators indirectly. The sugar factories' contribution is estimated at Rs. 400 crores annually to the Union and State exchequers and also earnsvaluable foreign exchange for the country.In India, the sugar factories are dominated by the cooperative sector. Out of the 491 licensed sugar factories in the country, 268 factories are in the cooperative sector. Of these, 219 have already been installed. The sugar factories in the cooperative sector contribute about 60 per cent of the total production of sugar in the country.

Statement of the Problem and Title of the Study: The sugar factories in Belgaum District are facing different problems such as under-utilization of production capacity, incompetent management and uncertain control policy of the Government, low productivity and efficiency. The Researcher has found that there are many research gaps in the various studies already conducted on the sugar factories. It may generally be observed that the financial problems currently being faced by the sugar factories are due to the lack of professionalism. Accordingly,

it is high time to undertake the present studyentitled, "Financial Management of Sugar Factories: A Comparative Study of Cooperativeand Private Sugar Factories with Special Reference to Belgaum District".

Objectives of the Study:

1. To study the financial structure and present financial position of selected cooperative and private sugar factories in Belgaum District.
2. To analyze and compare the working capital trends in selected cooperative and private sugar factories in Belgaum District.
3. To analyze the financial and operational performance of selected cooperative and private sugar factories in Belgaum District.
4. To evaluate the liquidity, capital structure, inventory and receivable management and profitability of selected cooperative and private sugar factories in Belgaum District through ratio analysis.

Research Design and Methodology: The sampling method for the study used is purposive sampling which is based on specific criteria. It is decided by purposive sampling on the basis of their age, crushing capacities as indicated in the above tables, two factories from cooperative sector that are atleast **10 years old** and have cane crushing capacity of minimum **5000 tonnes per day** as the sample units selected for the present comparative study. Similarly two factories from private sector that are atleast 10 years old and have cane crushing capacity of minimum 5000 tonnes per day as the sample units selected for the proposed comparative study.

Accordingly, the following factories meeting the age and capacity criteria have been selected for comparative study.

Cooperative Sugar Factories:

1. Shree HiranykeshiSahakariSakkareKarkhaneNiyamit, Sankeshwar, Tal.Hukkeri, Estd. 1955 (Cap. 5000 tonnes per day)
2. Shree Dudhaganga Krishna SahakariSakkareKarkhaneNiyamit, Chikodi, Tal.Chikodi, Estd. 1970 (Cap. 5000 tonnes per day)

Private Sugar Factories:

1. The Ugar Sugar Works Ltd.,Ugar-Khurd (Taluka Athani) Estd. 1939
   (Cap. 5,000 tonnes per day)
2. Shri. Renuka Sugars Ltd., Buralatti (Taluka Athani) Estd. 1995
   (Cap. 5000 tonnes per day)

Methods of Data Collection:

Primary Data:

Structured Questionnaire Method: The data has been collected through Questionnaire Method and selected respondents were interviewed.

Personal Discussions: To elicit interview of information about the financial performance adopted by the cooperative and private sugar factories and to get information about the same, a detailed discussion with relevant persons, i.e. chairman, M.D., Managers, Head of the Department, has been held.

Keen Observation: The other useful information has been collected not only through discussions,interview, and Questionnaire method but also through keen observation during the study period.

Secondary Data:

The present study mainly depends upon the secondary data. The secondary data was collected from the concerned accounts departments of the sugar factories of Belgaum district. The data was extracted fromTrading and Profit & Loss Account and Annual Balance Sheets covering the time period of 2005-06 to 2016-17. The sugar factories covered areRenukaSugars,UgarSugars,Hiranyakshi and Doodh Ganga. Out of the four, two are private and two are cooperative sugar factories in order to make meaningful comparison which satisfies the objectives of the study.

Limitations of the Study:

i) The difficulty in getting the financial data, particularly from the private sugar factories.

ii) The financial position reflected by the annual accounts from which the data has been collected is true only on the last day of the accounting year and it may not be relevant for

rest of the year. Hence, the inferences drawn on the basis of the data from such annual accounts should be taken in light of these deficiencies of data.

iii) Among the factories, there is no uniformity in the method of valuation of inventory, system of charging the depreciation and treatment of deferred revenue expenditure, etc. This affects the accuracy of comparison of their financial aspect.

iv) It is common to find that an enterprise has some favourable and some unfavourable ratios. In such a situation it goes difficult to draw overall judgment about its financial strength or weakness.

v) The various accounting and statistical tools and techniques used in the present study are not free from limitations. Hence, these limitations certainly have their impact on the inferences of the research.

Data Analysis

Ratio analysis involves the construction of ratios using specific elements from the financial statements in ways that help identify the strengths and weaknesses of the firm group financial ratios into five broad categories: Liquidity Ratios, Solvency Ratios, Operational Ratios, Profitability Ratios and Valuation Ratios. This chapter is concerned with comparative analysis of private and cooperative sugar factories through these ratios for the period 2005-06 to 2009-10.

Table

Operating Profit Ratio

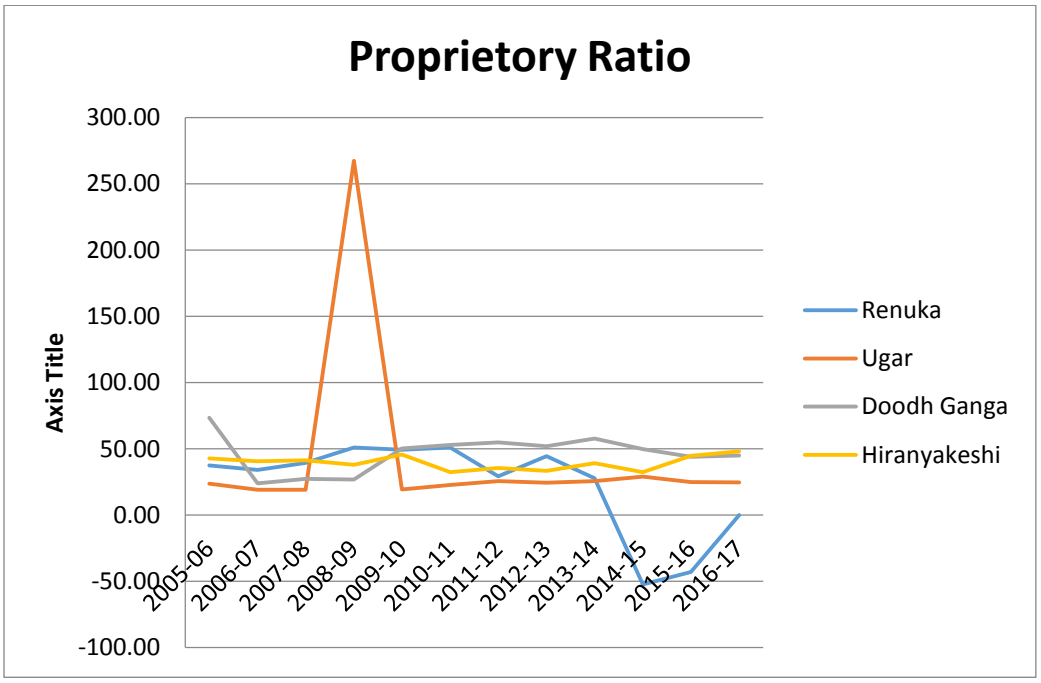
	2005-06	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**
Renuka	37.47	34.16	39.33	50.91	49.31	50.91	29.24
Ugar	23.81	19.15	19.19	267.43	19.36	22.70	25.74
Doodh Ganga	73.34	23.95	27.33	26.92	50.20	52.99	54.95
Hiranyakeshi	42.70	40.66	41.43	37.93	45.68	32.36	35.57
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Mean**	**CV**
Renuka	44.54	27.91	-52.37	-42.90	0.00	22.38	159.01
Ugar	24.52	25.63	28.95	24.90	24.75	43.84	160.74

Doodh Ganga	51.98	57.88	49.75	43.92	45.09	46.52	30.99
Hiranyakeshi	33.29	39.06	32.43	44.85	48.08	39.50	13.51

(Source: Annual Reports of the SRS Ltd., USW Ltd., SHSSK Ltd. And SDKSSK Ltd. from F.Y. 2005-06 to 2016-17)

Graph 5.17

Operating Profit Ratio



As per Table and Graph , Operating Profit is the profit earned from a firm's normal core business operations. This value does not include any profit earned from the firm's investments, such as earnings from firms in which the company has partial interest, and before the deductions of applicable interest and taxes owed. Operating Profit Ratio is calculated by dividing the operating profit by sales. This ratio helps in determining the ability of the management in running the business.

During 2005-06, RenukaSugars and HiranyakeshiSugars were having operating profit ratios as 37.47 percent and 23.81 percent. It means for every one rupee sale, these two factories were earning Rs. 37.47 and Rs. 23.81 as profit. RenukaSugars' ratio became negative from 2014-15 onwards. However, an extreme performance was observed in UgarSugars for the year 2008-09 where the ratio was 267.43 percentDoodh Ganga's ratio was negative indicating an operating loss.

On an average, the Operating Profit Ratio of Doodh Ganga Sugars was high and that of RenukaSugars was low at 46.52 percent and 22.38 percent respectively. However, more fluctuation in the ratio is observed in Ugar Sugars and low variation in Doodh Ganga.

Table 2

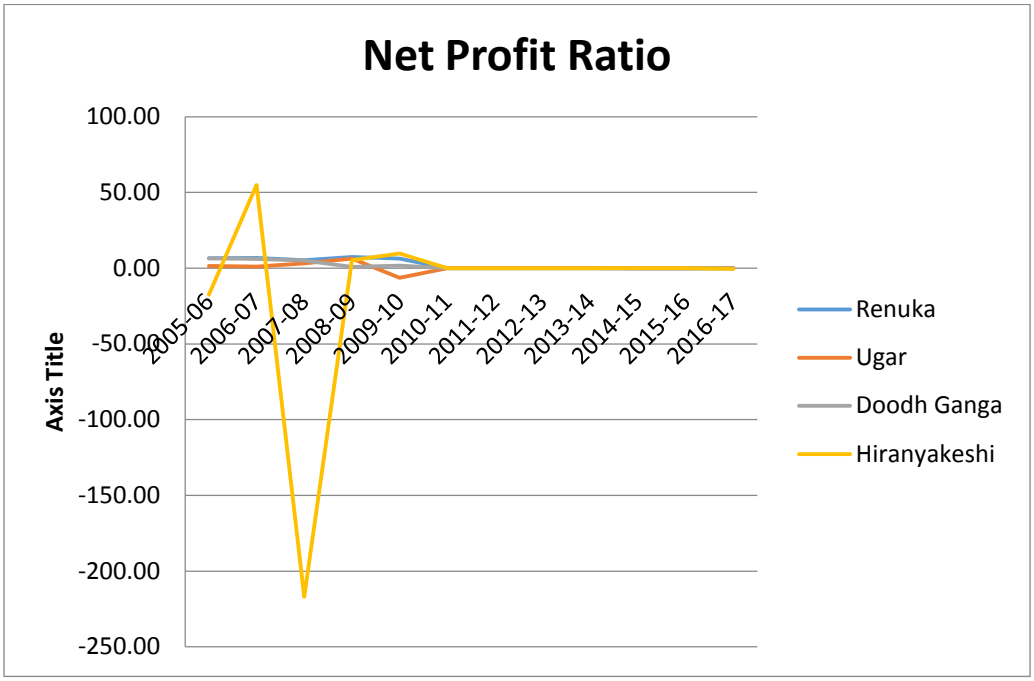
Net Profit Ratio

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Renuka	6.48	6.82	5.28	7.44	6.42	0.06	0.04
Ugar	1.45	0.96	3.10	6.42	-6.31	0.01	0.03
Doodh Ganga	6.48	6.11	5.06	0.89	1.63	0.01	0.02
Hiranyakeshi	-17.56	54.94	-216.89	5.33	9.76	0.01	0.01
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Mean**	**CV**
Renuka	0.01	-0.07	-0.18	-0.18	0.00	2.68	126.97
Ugar	0.02	0.04	0.00	0.01	0.04	0.48	599.04
Doodh Ganga	-0.01	-0.02	-0.05	0.00	-0.07	-13.71	-482.93
Hiranyakeshi	-0.03	0.01	0.06	0.07	-0.38	1.66	157.88

(Source: Annual Reports of the SRS Ltd., USW Ltd., SHSSK Ltd. And SDKSSK Ltd. from F.Y. 2005-06 to 2016-17)

Graph 2

Net Profit Ratio



As per Table 2 and Graph 2, the net profit percentage is the ratio of after-tax profits to net sales. It reveals the remaining profit after all costs of production, administration and financing have been deducted from sales, and income taxes recognized. As such, it is one of the best measures of the overall results of a firm, especially when combined with an evaluation of how well it is using its working capital. The measure is commonly reported on a trend line, to judge performance over time. It is also used to compare the results of a business with its competitors.

The Net Profit Ratio is really a short-term measurement, because it does not reveal a company's actions to maintain profitability over the long term as may be indicated by the level of capital investment or expenditures for advertising, training or research and development.

The net profit ratio of Renuka Sugars was positive during 2005-06 to 2012-13 and varied from 0.01 to 7.44. The ratio of Hiranyakeshi was also positive but lower when compared to Hiranyakeshi Sugars faced a negative ratio in 2005-06 at -17.56 perccent.

On an average, the performance of Renuka Sugars found to be good at 2.68 percent and that of Doodh Ganga was very bad at -13.71 percent. The more fluctuated position in net profit ratio was observed in Ugar Sugars with 599.09 percent.

Table 3

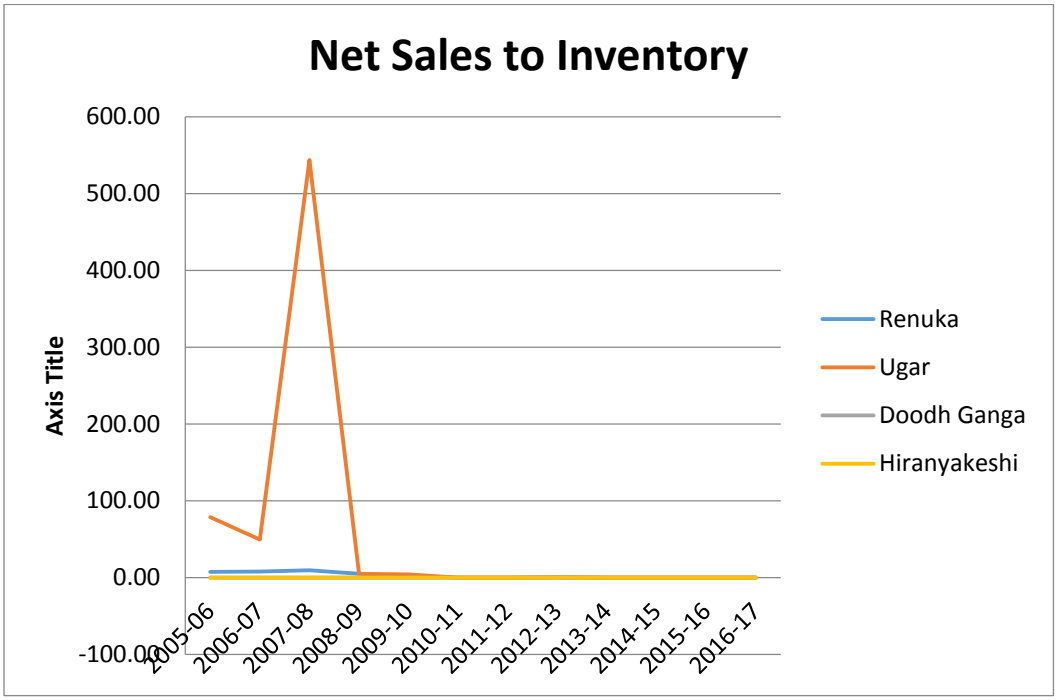
Net Sales to Inventory Ratio

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Renuka	7.64	7.97	9.40	4.85	2.23	0.06	0.04
Ugar	78.71	49.49	543.60	4.95	4.15	0.01	0.03
Doodh Ganga	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hiranyakeshi	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Mean**	**CV**
Renuka	0.32	-0.07	-0.18	-0.18	0.00	2.67	139.57
Ugar	0.47	0.04	0.00	0.01	0.04	56.79	273.56
Doodh Ganga	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hiranyakeshi	0.00	0.00	0.00	0.00	0.00	0.00	0.00

(Source: Annual Reports of the SRS Ltd., USW Ltd., SHSSK Ltd. And SDKSSK Ltd. from F.Y. 2005-06 to 2016-17)

Graph 3

Net Sales to Inventory Ratio



As per Table 3 and Graph 3, both internal and external stakeholders in a business closely watch the relationship between sales and inventory levels. The ratio of sales to inventories provides critical clues about whether the firm is keeping storage costs under control and achieving the targeted revenues.

As a general rule the higher the inventory turnover ratio, the more efficient the operation. A firm with a high inventory turnover ratio will pay less storage fees and have fewer rupees tied up in stock.

During 2005-06, 2006-07 and 2007-08, the net sales turnover ratio was found to be very high in Ugar Sugars than Renuka. In 2008-09 and 2009-10 also, the ratio of Ugar was high but gradually declined thereafter.

On an average, the ratio of Ugar is 56.79 percent which indicates the firm is able to control the storage costs efficiently than that of Renuka.

Table 4

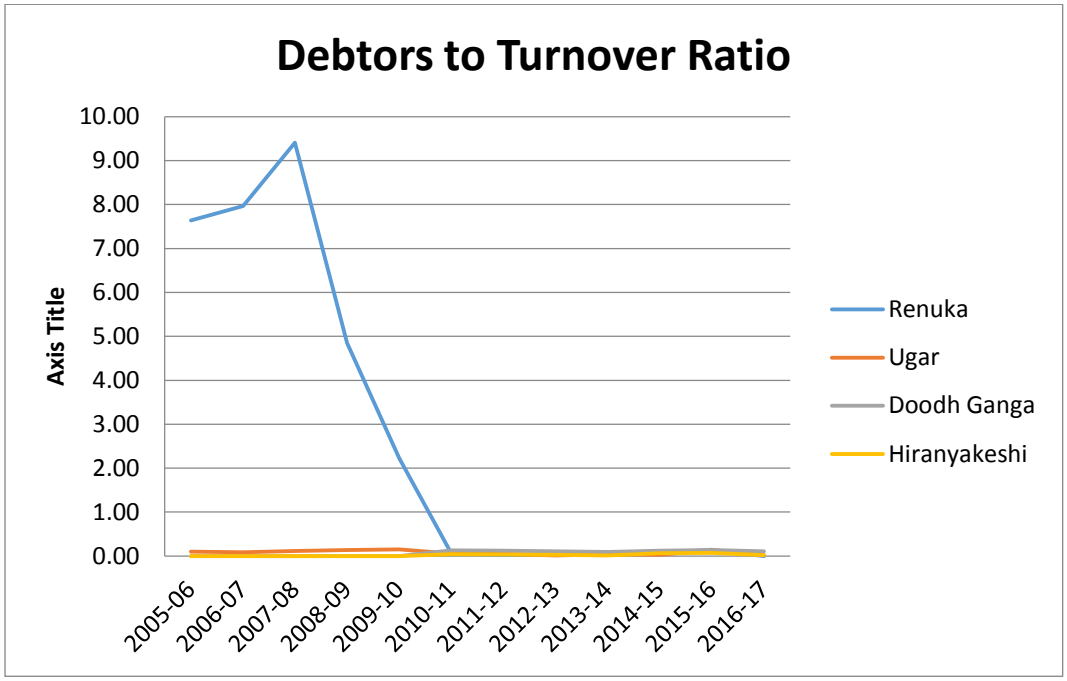
Debtors Turnover Ratio

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Renuka	7.64	7.97	9.40	4.85	2.23	0.06	0.03
Ugar	0.10	0.09	0.11	0.14	0.15	0.06	0.05
Doodh Ganga	0.00	0.00	0.00	0.00	0.00	0.13	0.12
Hiranyakeshi	0.00	0.00	0.00	0.00	0.00	0.04	0.04
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Mean**	**CV**
Renuka	0.03	0.04	0.06	0.14	--	2.70	137.09
Ugar	0.01	0.04	0.02	0.14	0.02	0.08	63.87
Doodh Ganga	0.11	0.09	0.12	0.14	0.11	0.07	89.67
Hiranyakeshi	0.03	0.01	0.06	0.07	0.02	0.02	111.67

(Source: Annual Reports of the SRS Ltd., USW Ltd., SHSSK Ltd. And SDKSSK Ltd. from F.Y. 2005-06 to 2016-17)

Graph 4

Debtors Turnover Ratio



As per Table 4 and Graph 4, Ratio of net credit sales to average trade debtors is called Debtors Turnover Ratio. It is also known as Receivables Turnover Ratio. This ratio is expressed in times.

Accounts Receivables is the term which includes trade debtors and bills receivable. It is a component of current assets, and as such, has direct influence on working capital position (liquidity) of the business. Perhaps, no business can afford to make cash sales only. Thus, extending credit to the customers is a necessary evil. But care must be taken to collect book debts quickly and within the period of credit allowed. Normally higher the Debtors Turnover Ratio, better it is. Higher turnover signifies speedy and effective collection. Lower turnover indicates sluggish and inefficient collection leading to the doubts that receivables might contain significant doubtful debts.

The Debtors Turnover Ratios of Renuka Sugars were high throughout the years when compared to Ugar Sugars. But the ratio of Renuka was declined from 7.64 in 2005-06 to 0.14 percent in 2015-16. However, the ratio of Ugar Sugars was less than 1 percent.

The average Debtors Turnover Ratio of Renuka was 2.70 percent which is very high as compared to others.

Table 5

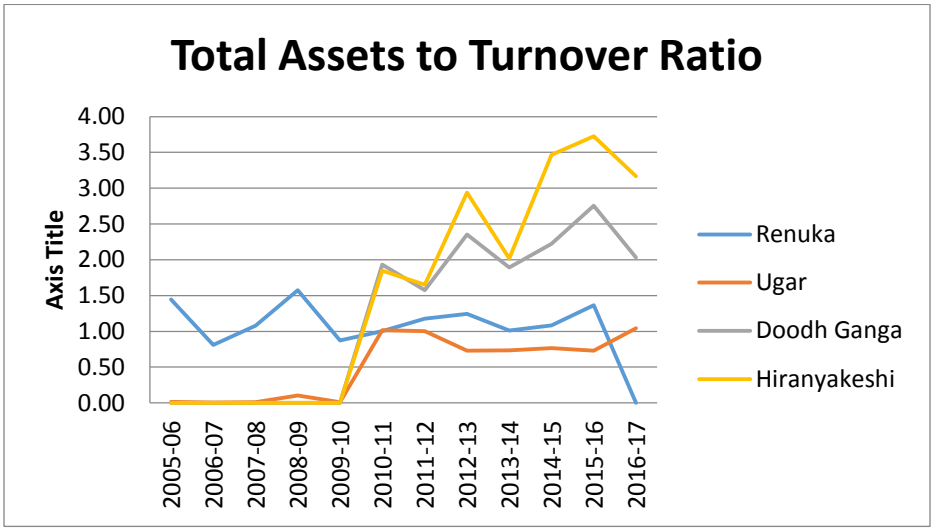
Total Assets to Turnover Ratio

	2005-06	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**
Renuka	1.44	0.81	1.08	1.58	0.87	1.00	1.18
Ugar	0.02	0.01	0.01	0.11	0.01	1.02	1.00
Doodh Ganga	0.00	0.00	0.00	0.00	0.00	1.93	1.58
Hiranyakeshi	0.00	0.00	0.00	0.00	0.00	1.85	1.65
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Mean**	**CV**
Renuka	1.25	1.01	1.08	1.36	0.00	1.06	38.127
Ugar	0.73	0.73	0.77	0.73	1.04	0.51	86.104
Doodh Ganga	2.35	1.89	2.22	2.76	2.03	1.23	91.145
Hiranyakeshi	2.94	2.02	3.47	3.72	3.17	1.57	96.686

(Source: Annual Reports of the SRS Ltd., USW Ltd., SHSSK Ltd. And SDKSSK Ltd. from F.Y. 2005-06 to 2016-17)

Graph 5

Total Assets to Turnover Ratio



As per Table 5 and Graph 5, Assets Turnover Ratio is the ratio of the value of a company's salesor revenues generated relative to the value of its assets. The Asset Turnover Ratio can often be used as an indicator of the efficiency with which a company is deploying its assets in generating revenue. Generally speaking, the higher the Asset Turnover Ratio, the better the company is performing, since higher ratios imply that the company is generating more revenue per dollar of assets.

The ratio of Renuka Sugars was high at 1.44 percent in 2005-06 when compared to Ugar Sugars. However, in 2016-17, the ratio of Hiranyakeshi is high and Ugar is low at 3.17 percent and 1.04 percent respectively. At the average level Hiranyakeshi is efficient and Ugar is less efficient.

Table 6

Return on Total Resources

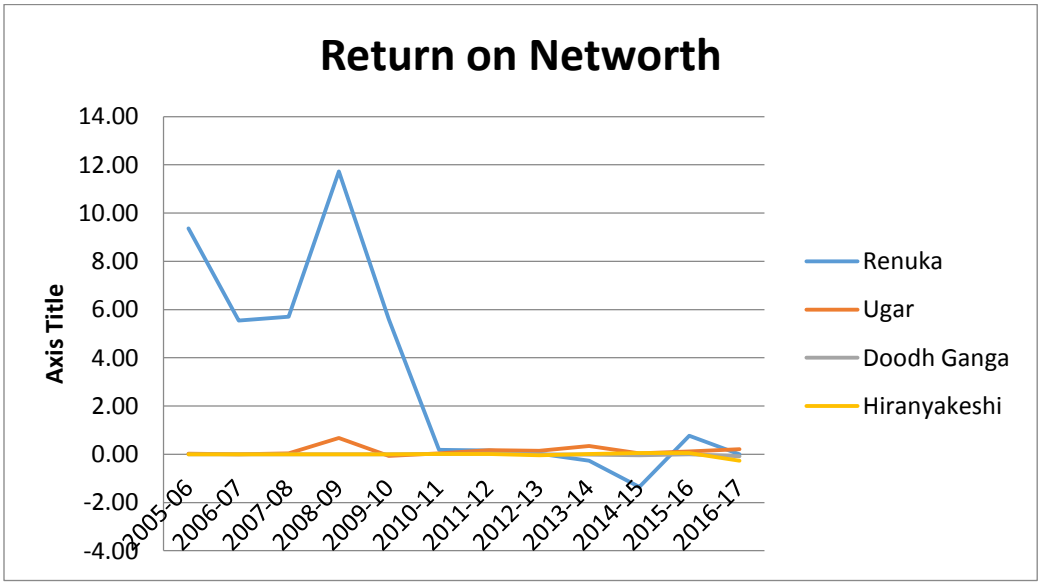
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12

Renuka	9.36	5.54	5.70	11.73	5.60	0.18	0.16
Ugar	0.02	0.01	0.03	0.68	-0.06	0.05	0.17
Doodh Ganga	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Hiranyakeshi	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Mean**	**CV**
Renuka	0.03	-0.26	-1.36	0.77	--	3.12	138.45
Ugar	0.15	0.34	0.04	0.12	0.21	0.15	136.87
Doodh Ganga	-0.01	-0.02	-0.04	0.00	-0.08	-0.01	-263.80
Hiranyakeshi	-0.03	0.01	0.05	0.05	-0.26	-0.01	-637.30

(Source: Annual Reports of the SRS Ltd., USW Ltd., SHSSK Ltd. And SDKSSK Ltd. from F.Y. 2005-06 to 2016-17

Graph 6

Return on Total Resources



As per Table 6 and Graph 6, the Return on Total Assets (ROTA) is a ratio that measures a company's earnings before interest and taxes (EBIT) against its total net assets. The ratio is considered to be an indicator of how effectively a company is using its assets to generate earnings before contractual obligations must bepaid.

The greater a company's earnings in proportion to its assets (and the greater the coefficient from this calculation), the more effectively that company is said to be using its assets.

From the above table, it is observed that Renuka Sugars is only one which is effectively using the assets than that of Ugar Sugars during 2005-06 to 2010-11. On an average also Renuka

Sugars is only falls on the effective use of assets. However, the return on total resources ratio of Hiranyakeshi is much volatile with a CV of 637.30% and that of Doodh Ganga is 263.80 %.

Conclusions: Several authorities on finance, however, do not make distinction between the term capital structure and financial structure. The terms capital structure and financial structure are used interchangeably. The phrase "the capital structure of the firm means the total of all liabilities, and ownership claims the sum of what is usually the credit side of the balance sheet". The term 'capital structure' has been used to mean long term sources of funds consisting of equity share capital (cane-grower's capital), preference share capital, reserves and surplus and long-term and medium-term loans raised through financial institutions.

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- The term 'Quick Assets' refer to current assets which can be converted into cash immediately or within a reasonable time without loss of value. Prepaid expenses and inventories are excluded from current assets to derive quick assets because these assets cannot be easily converted into cash to meet current obligations.

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