Chapter - VI

Findings, Suggestions and Conclusion
CHAPTER VI

CONCLUSION

6.1 SUMMARY

Sugarcane is one of the most important commercial crops of the country and the sugar industry occupies an important place in the economy of India. India is the second major sugar producing country in the world next to Brazil. Sugar industry occupies an important place among organized industries in India. Sugar industry is second largest agro-based industry in India next to cotton industry. It has been instrumental in resource mobilization, employment generation, income generation and creating social infrastructure in rural areas.

Significantly, the sugar industry is scattered mostly all over rural India. One sugar factory provides employment to 1.4 to 1.5 lakh people directly and indirectly through allied activities. This shows the potent scope of the sugar industry. It has changed the socio-economic condition of the rural area initiating commercialization in the agriculture. Indeed, sugar industry has facilitated and accelerated the pace of rural industrialization. More than 4.50 crore farmers are engaged in sugarcane cultivation and about 5 lakh rural people have got direct employment in the industry. The Sugar industry plays a major role in the development of national economy. Therefore, the expansion of sugar industry in India is an indispensable factor for the socio-economic development of rural mass and national economy of India.
India has been known as the original home of sugarcane and sugar. India is the largest producer and consumer of sugar in the world with Maharashtra contributing over one-third of country's sugar output. Indians had known the art of making sugar even in the fourth century itself.

However, the advent of modern sugar industry in India dates back to mid 1930's when a few vacuum pan units were established in the sub-tropical belts of Uttar Pradesh and Bihar. Until the mid 50's, the sugar industry was almost wholly confined to the states of Uttar Pradesh and Bihar. At late fifties or early sixties the industry dispersed slowly to Southern India, Western India and other parts of Northern India. The sufficient and well distributed monsoon rains, rapid population growth and substantial increases in sugar production capacity have combined to make India the largest consumer and second largest producer of sugar in the world.

Indians by nature have a sweet tooth and sugar is a prime requirement in every household. Almost 75% of the sugar available in the open market is consumed by bulk consumers like bakers, candy makers, sweet makers and soft drink manufacturers. Khand-san sugar is less refined and is typically consumed by sweet makers. Gur, an unrefined form of lumpy brown sugar, is mostly consumed in rural areas, with some quantities illegally diverted for alcohol production. A rising trend in the usage of sugar is visualized because of greater urbanization and rising standard of living in India. Industrial consumption for sugar is also growing rapidly particularly in the food processing sector and sugar based bulk consumers such as soft drink and ice cream manufacturers. The per capita consumption of total sugar (sugar, gur & khand-san) in the country has been increasing at a phenomenal rate.
The sugar industry in India is subjected to numerous controls at various levels starting from procurement of sugarcane to sugar distribution, pricing and the use of end-product sugar. Sugar prices are closely monitored by the government and controlled by a set of measures like the release mechanism and levy allocation.

The sugarcane prices are fixed by the Central or State Governments to ensure a remunerative return to the farmers. The Government of India fixes Statutory Minimum Price (SMP) for sugarcane. Moreover, certain State Governments like Uttar Pradesh insist on an even higher Procurement price in the form of State Advised Price (SAP). In the seasons 2006-07 and 2007-08 sugar production skyrocketed to record levels due to the irrational and unchecked increase in sugarcane prices by the State Government in Uttar Pradesh due to political considerations. A unique situation existed where the cost component of raw materials was more than the selling price of sugar. Acknowledging the financial difficulties being faced by the sugar industry, the Government of India took a number of initiatives to help the industry tide over the financial crisis.

At present Indian sugar industry contributes 15% of global sugar production. But its share in global sugar consumption is around 13.4%. India has exported around 4.23 million tonnes of sugar in 2007-08. This year, for the first time, sizeable quantities of raw sugar was exported by India. Major destinations were Dubai, Bangladesh, Malaysia and China. Though India is the second largest sugar producer in the world, it is not a regular exporter of sugar due to the famous Indian sugar cycles and sharp volatility in production levels.
India's share in global sugar trade is below 3%. Indian sugar industry has been facing raw material, and resource as well as infrastructural problems. Though globalization has increased number of employment opportunities it has at the same time posed certain challenges before sugar industry. Most of the sugar units in India utilize only 50% of their production capacity much below there installed capacity.

Mounting losses and decreasing net worth of sugar factories have been responsible for sickness of sugar industry. Sickness in sugar industry has reached to an alarming proportion. Indian sugar industry has been cash striven for decades. Low cash inflow due to piling stocks leads to serious financial crisis and finally to closing sugar factories. Sugar prices have been a political issue rather than economical issue. Many a times it worsens economy of sugar factories. The main concern of sugar industry in India is fluctuations in sugarcane production due to inadequate irrigation facilities, lower sugarcane yield, and frequent droughts in tropical and sub-tropical areas where sugarcane is grown on large scale. In addition, sugarcane yield has been lower (59 Mts per hectare). Sugar recovery is also lower in comparison with other sugar manufacturing countries. This leads to escalation of production costs and weakness competitive edge of the industry. Most of sugar mills in India are having daily sugarcane crushing capacity of 1250 tonnes. These mills cannot have economies of scale so they have to incur high production costs. Indian sugar industry is characterized by high production costs.
The sugar industry seems to be finally coming out of the worst ever recession that it had seen over the past few decades. After successive years of surplus production and uninhibited capacity addition, the sugar output in India has started declining. While it may be still premature to comment on the production estimates for 2008-09, it is evident that production will not exceed consumption as area under sugarcane plantation has fallen significantly. This development has witnessed a smart rally in sugar prices that have come back to the levels that were prevailing in 2006.

There is still uncertainty about the sugarcane prices as the matter is under litigation and will have a significant impact on the profitability of the industry. The sugarcane price for 2008-09 is yet to be determined. Furthermore, with the fall in sugarcane production, prices of byproducts such as molasses and bagasse have also started strengthening. The growth of sugar demand by food industries and other non-household users, estimated to account for about 45% of total consumption, could provide additional impetus to longer-term market growth. Although gur and khandsari are still consumed in rural areas, demand for white sugar is expected to continue to increase. Indian sugar industry can be a global leader provided it comes out of the vicious cycle of acute shortages and surplus of sugarcane. A stable long term policy is needed in which the shackles are removed which constrain this industry from growing in a healthy manner.

Indian sugar industries are also not able to compete with other countries in the global market in spite of hard work. The leading producers of sugar in India are the state of Uttar Pradesh, Bihar and Tamil Nadu. Tamil Nadu is one of the leading producers of sugar in India next to Uttar Pradesh and Bihar.
The production of sugar by Tamil Nadu is about 10% of the country’s production. Income generated from sugarcane sale proceeds in Tamil Nadu exceeds approximately Rs. 400 crores a year. At present 31 sugar mills were functioning in the state. Of these, 14 were in private sector, 3 in public sector and 14 in cooperative sector.

The average area under sugarcane in Tamil Nadu during the period from 1983-84 to 2003-04 was 187 thousand hectares, which accounts for nearly 6% of the country’s sugarcane area. The annual growth rate of sugarcane area in Tamil Nadu is 2.44% which is more than all India growth rate (1.37%).

The average annual sugarcane production in Tamil Nadu during the same period was 18,930 thousand tonnes which accounts for nearly 10% of the Indian sugarcane production. The average yield of cane per hectare in Tamil Nadu is 100.5 tonnes which is almost 1.5 times the country’s average yield. But, however, the growth rate in Tamil Nadu is below the all India level. It would also be seen that acreage and production of sugarcane in Tamil Nadu fluctuated more widely than the all India level. The state of Tamil Nadu in India also faces almost all the earlier mentioned problems in addition to other difficulties such as inadequate power supply, in sufficient supply of raw material, water management, perennial labour problems, and non-utilization of modern methods of crushing and technology. In Tamil Nadu, Thanjavur district, agro based area, contributes significant share in the production of sugars. The Thanjavur district is situated in the fertile soil of Cauvery delta of Tamil Nadu state is one of leading producers of sugar in the state. Thanjavur district, which is a prime delta area in cavery basin,
faces problems in the production of sugar. The existing four mills in general, both
private and public sector, suffer from various problems.

A number of micro and macro studies have undertaken by the researchers
and scholars on various aspect of sugar industries. Much more has been spoken on
the difficulties that are being faced by this industry. Finance is the major problem
now a day. The Central Government has given, to some extent, relief in the form
of new package to this industry in order to overcome this problem. This is the
luring problems at present. However very few attempts have made to explore
the performance of sugar industries in Tamil Nadu particularly in Thanjavur
district. In the light of this the researcher has made an attempt to analyze the
performance of sugar industry in Tamil Nadu in general and financial performance
in particular.

The objectives of the study are to analyze the performance of the sugar
industry in India; to evaluate the financial performance of selected sample study
units; to understand the present position of selected sample study units; to identify
and examine the problems of sugar industry in study area; to suggest appropriate
measures for further development of sugar industry in India. The study is based on
the primary as well as secondary data. The secondary data is collected from the
record of various departments of the study units and in addition to this, the annual
reports of the selected sample units are used as the source of secondary data. The
personal interview and observation techniques have been used for collection of the
primary data.

There are three private sector and one public sector sugar factory are
existed in the study area of which one public sector factory namely Arignar Anna
Sugar Mill, Kurungulam and one private sector factory namely Thiru Arooran
Sugai Mill, Thrumandankudi have been purposively selected. The study covers mainly the following aspects of their financial performance analysis: analyzing the short-term solvency position, long-term solvency position, and profitability.

The study is confined to 5 years’ (2002-2006) performance of the study units. This period is not very sufficient to reach a confirmed decision. The data used in this study are collected from published annual reports of the company. These data are grouped and sub-grouped according to the requirement. Ratio analyses techniques of financial management have been used for analysis and interpretation of the data. Past performance of the selected sample units may or may not be sustained in the future.

The study is limited as it is carried out in two sugar companies in Thanjavur district, namely Arignar Anna sugar mill, Kurungulam and Thiru Arooran sugar mill, Thrumandankudi. Thus, its findings cannot be generalized. The sample size and purposive sampling strategy limit the generalizability of the study. The present study is restricted to sugar industry only and it has not focused on cane growers and cultivators in the study area.

This study has been divided into six chapters. Chapter I describes the empirical aspect of this study, including objectives, methodology which are used to collect data, sample parameters and limitations. Chapter II examines the state of the existing literature. This chapter reviews the literature relating to sugar industry. Chapter III describes the overview of the sugar industry in India. Chapter IV analyzes the financial performance of the selected study units. Chapter V investigates the problems of sugar industry in the study area. Chapter VI summarizes the findings of the study and presents suggestions to take appropriate measures for further development of the sugar industry in India.
6.2 FINDINGS OF THE STUDY

The findings of the study are

It is found that the global market of sugar is very thin because the major producers of sugar are also its major consumers. Only about 17 per cent of world total sugar production enters into the international market. Sometimes, even a small change in global demand or supply situation results in a wild fluctuation in international market price. Still the global market is quite far from a competitive structure.

Among Russia, Turkey, America, Japan, Zambia and other African and Asian Countries, Japan tops the list in wholesale and retail prices with Rs.54.40 per kg and Rs.79.70 per kg respectively. Turkey stands second with Rs.47.50 per kg in the wholesale market Rs.62.35 per kg in the retail market. Zambia comes third.

It is found that many countries have an average consumption of sugar 32 to 35 kg. per head. Netherlands tops the list with 95 kg and above. In a few countries like Afghanistan and China their consumption ratio is less than the world average consumption.

From the study, it can be observed that Brazil ranks first in the production of sugar in the world with an annual production of 281 million tonnes in 2005. India comes second with nearly 200 million tonnes up to 2003. European Union also produces as much as 216 million tonnes, USA and Mexico stand fourth and fifth with 70 million tonnes and 50 million tonnes on an average respectively.

Major producers of sugar in the world are Brazil, India, EU, China, USA, Thailand, Mexico, Australia, Cuba and Pakistan, which together account for 68% of world production. Brazil, India and EU are the top three producers of sugar and account for almost one third of total production followed by China, Thailand and
the USA, Brazil being the dominant producer of sugar and ethanol strongly influences world prices.

It is evident from the study that the Indian sugar industry is dominated by co-operative sugar mills which contribute over 54 per cent of the total sugar production in India. The situation is expected to tilt in favour of the private players, as it is believed that they would be able to wrest substantial chunk of market from the cooperatives.

Indian sugar industry contributes 15% of global sugar production. While its share in global sugar consumption is around 13.4%, India is exporting around 4.23 million tonnes of sugar in 2007-08. This year, for the first time, sizeable quantities of raw sugar was exported by India. Major destinations were Dubai, Bangladesh, Malaysia and China. Though India is second largest sugar producer in the world, it is not a regular exporter of sugar due to the famous Indian sugar cycles and sharp volatility in production levels.

India share in the in global sugar trade is below 3%. Indian sugar industry has been facing raw material, and resource as well as infrastructural problems. Globalization has brought a number of opportunities but at the same time posed certain challenges before sugar industry. Most of sugar units in India utilize production capacity below 50%.

Mounting losses and decreasing net worth of sugar factories have been responsible for sickness of sugar industry. Sickness in sugar industry has reached to an alarming proportion. Indian sugar industry has been cash starved for decades. Low cash inflow due to piling stocks leads to serious financial crisis and finally to closing sugar factories.
The area under sugarcane has gradually increased over the years mainly because of much larger diversion of land from other crop to sugarcane by farmers for economic reasons. The sugarcane area has however declined in the year 2003-04 mainly due to drought and pest attacks.

Sugarcane occupies about 4.2% of the total kharif area under cultivated area and it is one of the most important cash crops in the country. The area under sugarcane has gradually increased from 2.7 million hectares in 1980-’81 to 4.3 million hectares in 2005-06, mainly because of much larger diversion of land from other crops to sugarcane by the farmers for economic reasons.

The Indian sugar data reveal that from a level of 154.25 million tonnes in 1980-81 the sugarcane production increased to 241.05 million tonnes in 1990-91 and further to 295.96 million tonnes in 2000-01. Since than it has been hovering sugarcane production declined to 233.86 million tonnes mainly due to the good rainfall cane production increased upto 278.40 million tonnes.

Among the sugarcane producing states in India, Uttar Pradesh has highest cane area 2.16 million hectare, i.e 51 percent of total cane area whereas Maharastra and Tamil Nadu has second and third position with 13 per cent and 8 per cent cane area respectively during the year 2005-2006.

The productivity of sugarcane is remain higher in Tamil Nadu i.e 110.60 tonne/ha, whereas Karnataka has second position in productivity with 77.90 tonnes/ hectare, in the year 2005-2006. Sugarcane production is highest in Uttar Pradesh with 125.50 million tonne i.e. 45 per cent of the total production. Although the Maharashhra has second highest cane area but due to higher productivity Tamil Nadu has second position in the sugarcane production with 38 million tonne, i.e 14 per cent of total production during the year 2005-06.
The total cane crushed in India was declined in the year 2003-2004 and 2004-2005 due to drought conditions. The total crushing increased 63.90 million tonne in the year 2005-2006 in comparison to the year 2004-2005. Uttar Pradesh has the first position in cane crushing with 60.81 million tonne, which is 32 per cent of the total crushing in India during 2006-06. Maharashtra is in second position with 44.58 million tonne cane crushing which is 23.63 per cent of the total crushing in India.

The effective total daily cane crushing capacity has increased from 1.27 million tones in 2004-2005 to 1.6 million tones in 2006-07 as increases of 25 per cent in the last two years. A sizable capacity of 750 MW of co-generated power has been set up. This can be regarded as a good beginning as the sugar industry has the potential to generate 7000 MW of power. Sugar mills also have an ethanol production capacity of 1.3 billion litres, which is sufficient to meet India’s demand for 10 per cent blending with petrol.

Rising production for four successive years, from 1999-2000 to 2002-2003 but stocks has increased during period from 1999-2000 to 2002-2003. However, in 2003-2004 and 2004-2005 the total sugar output has declined to 14 million tones and 12.70 million tonnes this is due to adverse natural factors. But during the year 2006-2007 the production of sugar has increased to 28 million tonnes. Due to the bumper sugar production in the year 2006-2007, the availability of sugar for export was more in the season 2006-2007.

It is understood from the study, Uttar Pradesh & Uttaranchal is leading sugar producer in India followed by Maharashtra and Tamil Nadu & Pondicherry. State wise, Uttar Pradesh and Maharashtra together contribute over 58 per cent of the production. In the sugar production, Uttar Pradesh is the leading state with...
57.8 million tonne of sugar production which contributes about 30% of the total sugar production in India. Maharashtra has the second position in the sugar production with the production of 8.20 million tonne which contributes 27% of the total production in India during the year 2005-06.

In 2006-07, India produced 28.5 million tonne of sugar. Uttar Pradesh and Maharashtra together contributed more than 67% to the total production. Maharashtra overtaking UP became the largest producer of sugar. Maharashtra’s production increased from 5.9 million tonne to 9.6 million tonne this year. Higher yields and greater cane acreage contributed to this increase.

The opening sugar stock of India has declined to 39.02 lac tones in 2006-2007 because of the decrease in production during the year 2003-04 and 2004-05 but due to the bumper sugar production 280 lac tones in the year 2006-07 the availability of sugar for export was more in the season 2006-2007. The internal consumption of sugar is slightly increasing year after year. Due to the low production, high sugar rates and increased internal consumption i.e., 185 lac tones in the year 2004-05, 21.38 lac tonne sugar was imported for making equilibrium and the sugar export in the same year was only 0.04 lac tones. The import of sugar was nil in the year 2005-06 and 2006-07 because of the high sugar production and low sugar rates. For the existence of sugar industries, the government allowed for export to the sugar industries. In the year 2005-06, the export of sugar increased to 11.30 lac tones.

The average area under sugarcane in Tamil Nadu during the period from 1983-84 to 2003-04 was 187 thousand hectares, which accounts for nearly 6% of the India’s sugarcane area. The annual growth rate of sugarcane area in Tamil Nadu is 2.44% which is more than all India growth rate (1.37%). The average
annual sugarcane production in Tamil Nadu during the same period was 18,930 thousand tonnes which accounts for nearly 10% of the Indian sugarcane production.

The average yield of cane per hectare in Tamil Nadu is 100.5 tonnes which is almost 1.5 times the country’s average yield. But, however, the growth rate in Tamil Nadu is below the all India level. It would also be seen that acreage and production of sugarcane in Tamil Nadu fluctuated more widely than the all India level.

Tamil Nadu which accounts for nearly 10 per cent of the total output of sugar in India is also in the forefront in the per hectare production of sugarcane. A majority of sugar units in Tamil Nadu are with the cooperative sector while private players are also in the field. The industry which had a boom period in 1980s started facing crisis from 1990, especially after the economic liberalization. Increase in procurement price of sugarcane, excess production and fall in the open market sugar price have all led to heavy glut of stocks in sugar factories.

The crushing capacity of the Arignar Anna Sugar Mills Ltd is 2500 million tones during the period from 2003-04 to 2005-06. The cane crushed has increased from 3.23 million tones to 4.72 million tones. Sugar production of the company has increased from 3.30 lakh quintals in the year 2003-04 to 4.45 lakh quintals in the year 2005-06 registering growth rates of 146 percent as compared to 2003-04.

The crushing capacity of the Thiru Arooran Sugars Industries is 5000 million tonnes during the period from 2003-04-2005-06. The cane crushed has increased to about 241 per cent in the year 2005-2006 as compared to 2003-04. Similarly, the production of sugar and molasses have increased to 240 per cent and 245 per cent respectively during the same period.
The current ratio Thiru Arooran Sugars Industries that stood at 2.03 in 2002 has declined considerably to reach 1.63 in 2006. The average ratio is 1.71 which is less than that of the standard ratio of 2.1. The coefficient of variation 11.76 per cent. Therefore, it is concluded that based on current ratio the liquidity management of the company is not satisfactory.

The average current ratio of the Arignar Anna Sugar Mills is 2.50. The standard deviation and coefficient of the variation is 0.24 and 9.6 percent respectively. Thus, from the analysis it can be concluded that the current ratio which stood at above the standard ratio 2.1 over the study period, it indicates the efficiency of the liquidity management.

The liquid ratio of the Thiru Arooran Sugars Industries has decreased by year after year, the average of the ratio is 0.38, and it is below the standard norms of 1.1. The standard deviation is 0.24 and coefficient of variation is 36.62 per cent.

The average liquid ratio of the Arignar Anna Sugar Mills is 1.85. The ratio shows the fluctuation in the study period. The ratio is the highest, 2.11 times in the year 2002 and lowest 1.49 in the year 2003. However, during the study period the ratio is above the standard norms of 1.1, which shows the strong liquidity position of the company. The standard deviation of the ratio is 0.21 and coefficient of variation is 11.47 per cent, which does support strong liquidity management of the company.

The average of the inventory turnover ratio of the Thiru Arooran Sugars Industries is 1.42. The ratio has moved between 0.79 to 2.28 during the entire period of study, the ratio has increased to approximately 225 percent in 2006 as compared to 2002, which shows the efficiency of the inventory management of the company.
The average inventory turnover ratio of the Arignar Anna Sugar Mills is 3.7 times. The ratio, which stood at 5.34 in 2002, has declined considerably to reach 3.7 times at the end of the study period. The decrease being approximately by 20 per cent in 2006 against 2002. The inventory turnover ratio shows fluctuation in the study period. The ratio has moved between 2.69 to 5.34 in 2002 and lowest in 2004. The standard deviation and coefficient of variation is 0.93 and 24.53 per cent respectively. Therefore, from the analysis of the inventory turnover ratio in can be concluded that the efficiency of the inventory management is not good, as the ratio has declined considerably over study period.

The age of inventory of the Thiru Arooran Sugars Industries varies 160 days to 462 days during the study period. The average age of inventory is 309 days. The age of inventory during the year 2003 was 462 days, thereafter it has declined, finally during 2006 the age of inventory stood at 178 days when compared to 2002. The trend percentage shows that the age of inventory has declined to about 44 per cent in 2006 when compared to 2002. It indicates effective inventory management of the company. The coefficient of variation is 38.93 per cent, which shows variability of the age of inventory.

The average age of inventory of the Arignar Anna Sugar Mills is 101 days, which varies from 68 days to 135 days. During the year 2004, the average age of inventory is nearly two times as compared to 2002, which is due low inventory ratio. The trend percentage shows that the age of inventory has increased to 126 per cent during 2006 against 2002. The increasing trend of the age of inventory of the company during the study period indicates inefficiency of the management.

The mean receivable ratio of Thiru Arooran Sugars Industries is 25.03 times. The ratio has increased significantly during the study period. The trend
percentage shows that the ratio has increased to about 550 per cent in 2006 when compared to 2002, which indicates efficient receivable management of the company. The standard deviation of the ratio is 16.51 and coefficient of variation is 65.96 per cent, which shows the high variable nature of the ratio.

The average of inventory turnover ratio of Arignar Anna Sugar Mills is 6.68 times. It has declined from 2002 to 2004, thereafter it has increased from 2005 to 2006, and finally it stood at 7.37 times in 2006. There is no significant improvement in the ratio as it has increased to about 107 per cent during the five years of the study period. The standard deviation and coefficient of variation is 0.83 and 12.43 per cent, which indicates consistency of the ratio for the study period.

The average collection period of the Thiru Arooran Sugars Industries is about 25 days. The trend percentage of the ratio shows that the collection period has decreased considerably, which stood at 18 per cent in 2006 as compared to 2002. It is a good indication of efficient credit management of the company.

The average collection period of Arignar Anna Sugar Mills is about 56 days. The trend percentage of the collection period indicates that the period has declined to 94 per cent in 2006 when compared to 2002. Thus from the analysis it can be concluded that there is no significant improvement in the collection period of the company.

The average payable turnover ratio of Thiru Arooran Sugars Industries is 7.87 times. The ratio is more or less same except in 2002 and 2004. The trend percentage of the ratio shows that the ratio has declined to 68.69 per cent in 2006 as compared to 2002. This is less favourable to the creditors.
The average of the ratio of Arignar Anna Sugar Mills is 4.67 times. It is varies from 3.15 to 5.94 times during the study period. Trend percentage indicates that the ratio has declined to nearly 50 per cent in 2006 when compared to 2002. This is less favourable to the investors. The standard deviation of the ratio is 25.48 and coefficient of variation is 41.63 per cent, which indicates high variability nature of the ratio.

The average payment period of Thiru Arooran Sugars Industries is about 48 days. The payment period varies from 33 to 58 days during the study period. The period is the highest, 58 days in the year 2005 and lowest, 33 days in the year 2004. The payment period has increased to nearly 145 per cent in 2006 as compared to 2002. The standard deviation is 10.59 and coefficient of variation is 21.67 per cent which shows the variable nature of the ratio.

The average payment period of Arignar Anna Sugar Mills is 84 days. The standard deviation is 21.79 and coefficient of variation is 26.05 per cent, which shows the variable nature of the ratios.

The average working capital ratio of Thiru Arooran Sugars Industries is 2.10. The ratio increased to about 403.66 per cent in 2006 as compared to 2002. It indicates efficiency of the working capital management of the company. The coefficient of variation shows high variable nature of the ratio.

The working capital turnover ratio of Arignar Anna Sugar Mills varies 1.44 times to 1.84 times during the period 2002 to 2006. The average of the ratio is 1.56, the increase of the ratio being approximately 108 per cent during 2006 against 2002, which shows no major improvement in the ratio. Standard deviation is 0.16 and coefficient of variation is 10.26. The results are disappointing from the view point of working capital management of the company.
The coefficient of correlation between the profitability ratio and current ratio of Thiru Arooran Sugars Industries is 0.71. Correlation between profitability ratio and liquid ratio is 0.86. This indicates that there is a high degree of negative correlation between the two variables. The correlation analysis also showed working capital turnover, inventory turnover ratio, receivable turnover ratio and payable turnover ratio have positive correlation with the profitability ratio.

As regard Arignar Anna Sugar Mills, the coefficient of correlation analysis shows that current ratio, liquid ratio and receivable turnover ratio have positive correlation with profitability ratio and working capital turnover ratio, inventory turnover ratio and payable turnover ratio have negative correlation with the profitability ratio.

It is concluded from the findings of the study, the liquidity management of Thiru Arooran Sugars Industries, a private sectors company, is satisfactory except inventory management as compared to Arignar Anna Sugar Mills, a public sectors company.

The average debt equity ratio of Thiru Arooran Sugars Industries is 1.76. The trend percentage shows that the ratio has declined considerably during the study period. The ratio has declined to about 77 per cent in 2006 as compared to 2002. The standard deviation is 0.19 and coefficient of variation is 10.80, which shows consistency of the ratio for the study period. Thus from the analysis it can be concluded that the ratio is favourable to the long term creditors because a high proportion of owners funds provide a larger margin of safety for them.

The average debt equity ratio of Arignar Anna Sugar Mills is 22.41 times. Therefore, from the analysis it can be concluded that the ratio is unfavourable to
the long-term creditors because a low proportion of owners funds provide a low
margin of safety for them

The average funded to total capitalization of Thiru Arooran Sugars Industries is 64 per cent. During 2002 to 2006 the ratio is stood at above 50 per cent it is beyond the tolerable limit

The average funded debt to total capitalization of Arignar Anna Sugar Mills is approximately 95 per cent and during the study period the ratio is stood at nearly 100 per cent, which is beyond the tolerable limit, therefore the company may initiate necessary steps to reduce funded debt by increasing equity capital for improving the long term solvency position

The proprietary ratio of Thiru Arooran Sugar is more or less same during the entire study period. The standard deviation is 0.03 and coefficient of variation is 8.11, which indicates consistency of the ratio for the study period

The average proprietary ratio of Arignar Anna Sugar Mills stood at 4.76 per cent. The standard deviation is 0.005 and the coefficient of variation is 12.5 per cent, which shows the consistency of the ratio

The average solvency ratio of Thiru Arooran Sugars is about 64 per cent and that there is no major improvement in the ratio during the entire study period. The trend percentage shows that the ratio has declined to 91 per cent during 2006 as compared to 2002. The standard deviation is 0.36 and coefficient of variation is 44.44, which indicates high variable nature of the ratio

The average of Arignar Anna Sugar Mills ratio is 96.76 per cent, however during the entire study period the ratio stood at above 100 per cent except 2006, which implies that the total liabilities is greater than that of total assets which is
less favourable to the creditors. It is understood from the table that the long-term solvency position of the company is not satisfactory during study period.

The average fixed assets to net worth ratio of Thiru Arooran Sugars Industries is 131 per cent and during the entire study period, the ratio is at above 100 per cent. Therefore, it is implied that the shareholder's fund are not sufficient to finance the fixed assets and the company has to depend upon outsiders to finance the fixed assets.

The average fixed assets to net worth ratio of Arignar Anna Sugar Mills is 137 percent. Therefore, it can be concluded that the shareholder's fund are not sufficient to finance the fixed assets and the company has to wholly depends upon outsiders to finance the fixed assets.

The average fixed asset ratio of Thiru Arooran Sugars Industries is 74 per cent and there is no major variation in the ratio during the studied period. It is understood from the table that the total long-term funds are more than total fixed assets, it implies that a part of the working capital requirements is met out of the long-term funds of the firms.

The average fixed asset ratio of Arignar Anna Sugar Mills is 6.35 per cent. The trend percentage shows that the ratio has declined to 80.05 per cent during 2006 against 2002. It indicates that a part of the working capital requirements is met out of the long-term funds of the firms.

The average interest coverage ratio of Thiru Arooran Sugars Industries is 1.12 times and the ratio has increased considerably during the study period. It is favourable to the creditors. The coefficient of the variation is 75 per cent, which shows high variable nature of the ratio for the study period.
The average interest coverage ratio of Arignar Anna Sugar Mills is 0.79 times. The ratio, which stood at a negative value of -0.15 times has increased significantly from 2003 to 2006. It is inferred from the study that the credit worthiness of the company is not satisfactory because the average interest coverage ratio is less than one. The standard deviation is 0.86 and coefficient of variation is 108.86 per cent, which indicates high variable nature of the ratio for the study period.

The results of the long term solvency ratio indicates that the overall long term solvency position of the Thiru Arooran Sugars Industries is better than that of Arignar Anna Sugar Mills.

The average operating ratio of Thiru Arooran Sugars Industries is 91.21 per cent. It is inferred from the study that the average margin of safety available to creditors is approximately 9 per cent during the study period. Therefore overall efficiency of the company is not satisfactory during the study period. The coefficient of the variation of the ratio is 6.72 per cent, which shows consistency of the ratio for the study period.

The average ratio of Arignar Anna Sugar Mills is 105 per cent which indicate that the operating cost is greater than that of operating income, which in turn indicates poor operating efficiency of the management. The standard deviation is 11.33 and the coefficient of variation is 10.53 per cent which shows consistency of the ratio for the study period.

The average operating profit ratio of Thiru Arooran Sugars Industries is 13.33 per cent. The ratio varies from 3.69 per cent to 24.43 per cent during the study period. The trend percentage indicates that the ratio has increased nearly 5 times from the period 2002 to 2006. The standard deviation of the ratio is 8.01 and
coefficient of the ratio is 60.89 per cent which indicates much fluctuation in the ratio for the study period.

The average operating profit ratio of Arignar Anna Sugar Mills is 10.19 per cent which implies that on an average the creditor and other outsiders has margin of safety to the extent of nearly 10\% of the sales. Hence the company's financial position needs attentions. The standard deviation is 8.11 and coefficient of variation is 79.59 percent which indicates much fluctuation in the ratio.

The average net profit ratio of Thiru Arooran Sugars Industries is in a negative value of 7.25 per cent. Due to loss, the ratio was in negative during the period 2002 and 2003. The ratio is the highest, 3.42 per cent in the year 2012. The coefficient of variation is 157.51 per cent, which indicates much fluctuation in the ratio. Thus, from the analysis it can be concluded that the overall efficiency of the management is not satisfactory.

The average net profit ratio of Arignar Anna Sugar Mills is in a negative value of 5.75 per cent. From the analysis it is found that the major reasons for incurring losses is heavy fixed interest burden faced by the company. The standard deviation of the ratio is 10.93 and coefficient of variation is 190.09 per cent, which indicates much fluctuation in the ratio. These results are very disappointing from the viewpoint of overall efficiency of the management of the company.

The average return of shareholder investment of Thiru Arooran Sugars Industries is in a negative value of 3.73 per cent. The coefficient of variation indicates much fluctuation in the ratio. The results are very disappointing from the viewpoint of overall efficiency of the management.

The average return on shareholders investment of Arignar Anna Sugar Mills is in a negative value of 8.3 per cent and coefficient of variation indicates...
much fluctuation in the ratio for the study period. Thus from the analysis it can be concluded that the overall efficiency of the management is not satisfactory.

Due to the effect of the net loss, the average return on capital employed of Thiru Arooran Sugars Industries is in a negative value of 1.10. The standard deviation and coefficient of variation indicates much fluctuation in the ratio for the study period. Therefore, this result does not support the sound overall efficiency management of the company.

The average return on capital employed of Anignar Anna Sugar Mills is in a negative value of 8.08 per cent and the ratio also is in a negative value for the first three years of the study period. The ratio is 12.77 per cent and 10.39 per cent during the year 2005 and 2006. The standard deviation and coefficient of variation indicates much fluctuation in the ratio for the study period. These results are very disappointing from the viewpoint of the overall efficiency of the management.

The average capital turnover ratio of Thiru Arooran Sugars Industries is 1.76. The trend percentage indicates that the ratio has increased to 533 per cent during the year 2006 as compared to 2002. It is a good sign of improving the overall profitability of the firm. However, the coefficient of variation shows the variable nature of the ratio for the studied period.

The capital turnover ratio of Anignar Anna Sugar Mills has moved from 1.13 times to 1.66 times during the study period, averaging 1.51, it indicates there is no much fluctuation in the ratio for the study period. The standard deviation is 0.20 and coefficient of variation is 13.25, which shows consistency of the ratio for the study period.

The average loss per share of Thiru Arooran Sugars Industries is Rs 3.57; the coefficient of variation is 176.47 per cent, which indicate high variable nature.
of the earnings per share. As regard Arignar Anna Sugar Mills, it earned loss per share during first three years of the study period. The average loss per share of the company is Rs 8.27. The coefficient of variation shows much fluctuation in the ratio for the study period. The result of the earning per share analysis of the companies are very disappointing from the view point of the overall efficiency management and also it is disappointed the equity shareholders.

The analysis of profitability ratio indicates that Thiru Arooran Sugars Industries, a private sector company, and Arignar Anna Sugar Mills, a public sector company, is not satisfactory during the study period, however private sector is better than that of public sector in the management of profitability.

The major problems of the sugar industry in the study area are given below.

Despite liberalization and globalization, the industry continues to be regulated with controls imposed at almost every step. Political lobbying has been one of the more prominent reasons why this industry has not developed in India as fast as in other countries like Brazil.

The sugar content in sugarcane on the quality of cane which in turn is influenced by controllable and uncontrollable variables such as climate, irrigation facilities, usage of fertilizers and varieties chosen.

Sugarcane price, with its political implications, is fixed by state governments on an ad hoc basis irrespective of the sucrose content or sugar price. In the past, it was a universal problem but some state governments in South India have given up this undesirable practice. North Indian states of Uttar Pradesh, Bihar, Tamil Nadu, Punjab, Haryana and Uttarakhand continue this practice causing avoidable aberrations. Thus, serious distortions take place. This leads to the formation of strange phenomenon and a vicious sugar cycle with a few years of
bumper production followed by years of low production. This volatility is influenced by two factors—natural and manmade. Natural factors include rainfall and other climatic conditions while man-made factors are primarily government policies on cane and sugar price.

Irrespective of the level of sugar prices, cane prices are determined on political considerations and have always been increasing. When there is a wide disparity between high cane price and low sugar price, payment of arrears to farmers start mounting. In such a situation, farmers are in a predicament to switch over from cane cultivation to other crops. As a result of the change of option sugar production falls. Reduced supply results in increased sugar prices and encourages the farmers to go in for sugarcane cultivation again and once the health of the industry is restored, the cycle resumes.

The Central Government decided to de-license the sugar industry without fully understanding its implications or providing safeguards that would allow the industry to grow in a healthy manner. As a result, two factories are being set up in such close proximity that they will spend their lifetime competing for cane until one or both are shut down. A solution to this problem will have to be found in the new policy.

As for issues relating to sugar, the Indian industry is obligated to supply 10 per cent of its production as levy sugar for sale to Below Poverty Line (BPL) families under the Public Distribution System. This is an archaic system. The government requires the industry to subsidise sugar sold to a certain section of the society. Unfortunately, this system is not working effectively. It is an open secret that levy sugar leaks out from the ration shops to the open market where unscrupulous traders make huge profits. Some way of directly subsidizing sales to
the target families through coupons will be more meaningful. In any case, if this
system has to continue, the government should meet the subsidy cost instead of
casting the burden on the industry.

The reduction of import duty led to large-scale import of sugar which in
turn depressed prices, hitting the farmers and millers hard. Again, when there is
surplus production in India, export of sugar is banned. This may lead to a crash in
prices affecting the farmers and the millers.

Another control on sugar is regulated releases through the monthly release
mechanism. This is a tool devised by the government to keep the open market
price in check. Unfortunately, this mechanism has fallen apart during the previous
years when the industry was forced to carry huge inventories due to glut
conditions.

The decline of the sugar industry in the study area was mainly due to non-
availability of sufficient quantity of sugarcane and lack of infrastructure. Poor
linkages, lack of irrigation facilities, irregular power and poor varieties of
sugarcane have left the industry crippled. Moreover, yield per hectare is lower than
the sugarcane producing regions in north India. The main reason for this is that out
of the total cultivable area, a sizeable portion is fallow land and not suitable for
cultivation of sugarcane because of lack of drainage facilities.

An overwhelming majority of sugar mills in India are set up on the
cooperative model. In a cooperative mill, farmers buy shares proportional to the
amount of land they own. A share entitles a farmer to sell a specified amount of
cane to the mill, and obliges the mill to crush that amount of cane. Public funds
were (and still are) used to set up mills, provide bailouts when mills faced threats
of bankruptcy and provide subsidized loans for operation. Sugar mills were given
monopsony power under the "command area" or zoning system, whereby farmers who had land in a particular area could only sell cane to the assigned mill in that vicinity, and the mill could only buy cane from the farmers in its command area.

The country has still to evolve a system for effective utilization of by-products derived in the manufacture of sugar. It extracts only 40% of the alcohol capacity, and the potential for co-generation of power using bagasse is enormous. Likewise, various downstream products from molasses and other by-products have very good potential for value addition but currently are not being produced/under utilized because of the fragmented nature of the industry and the high capital costs involved. Also over 50% of the units in India have capacity of less than 2,500 TCD which is the minimum economic size and hence make them unviable & loss making.

Sugarcane procurement constitutes the bulk (60-70%) of the costs of a factory. The harvested cane needs to be crushed within a few hours to avoid loss of sucrose content, necessitating close coordination of harvesting and cane supply with cane crushing operations. Apart from this, the main determinants of factory efficiency are: (i) cane quality, represented by percentage of sucrose content in the juice (ii) factory recovery rate, in turn the product of rates of mill house and boiler house extraction.

In India the government purchases a fixed proportion of the sugar output of each factory at a controlled price (called the levy price), with the remainder sold in the free market. The sugar so procured is distributed to consumers through fair price shops that serve as outlets of the public distribution system. The levy price is determined on the basis of a cost plus formula, and usually lies substantially below
the market price. Owing to progressive liberalization of industrial policy, the government has lowered the proportion of sugar procured at the levy price.

Sugar cane is utilized by sugar mills as well as by traditional users like jaggery, gur, and Khandasari producers. In the early 1980s, the production of cane consumed by sugar industry was around 35%, which went up to 50% in the 1990s and to as high as 65.6% in 2002-2003. Though a lion's share of the sugarcane is diverted to the manufacture of white sugar, still a significant quantum of sugarcane is used in the manufacture of jaggery and Khandasari. All the same in 2003-2004, the share of sugar mills declined to 9.8% due to more intense competition between gur and Khandasari.

Sugar is a cyclical industry and historically it has been repeating its peaks and lows of production in a span of five to six years. In sugar production sugar cycle starts with higher production leading to depressed prices and lower realization and profitability. The lower profitability further results in irregular and delayed payment to cane growers, which compel the farmers to diversify to some other remunerative crops. Consequently, the price of sugarcane and sugar would increase gradually. For instance, if sugar production shows an increasing trend leading to a glut situation in the country, then the price of sugar will fall.

Bankers are generally unwilling to extend the limits of loan for sugar factories because of their high risk perceptions. The problem has got further worsened due to fall in the sugar prices from Rs 1,300 in 2001-02 to Rs 1,050 a quintal in 2002-2003. As a result, the sugar factories face severe cash crunch causing payment arrears to sugarcane farmers.
Indian sugar manufacturers have the option of exporting if the Indian government allows exports without any accompanying export quota obligations (i.e. free exports). However, profitability will depend on the prevailing sugar price in the international sugar market. Historically, sugar was exported from the ports of Mumbai, Tuticorin, Pondicherry, Chennai and Vizag. The companies located closer to these ports are likely to benefit more, due to lower freight costs. Companies far from the ports will feel the pinch of higher freight costs if they plan to export.

The sugar cane price has been increasing steadily over the past five years. The proposed increase in manufacturing capacity will lead to higher demand for cane. It is expected that the sugar cane price will remain firm over the next two-to-three years due to greater competition as a result of the need to feed the additional capacity.

Sugar revenues as a percentage of total industry revenues are expected to decline, and the contribution of sugar to profits will be lower. However, the sugar cane price, which forms the input cost for all these businesses, is likely to remain steady or increase due to the higher competition. According to industry projections, average industry operating margins are likely to fall in the years to come.

6.3 SUGGESTIONS

The following recommendations are offered to arrest the continuing disequilibrium between production and demand for sugar and to foster a climate of viable growth of the sugar industry in India.
The Government should formulate action plan to liquidate the mounting surplus stocks. This will call for a supportive export policy and an aggressive export strategy. A supportive policy must allow free exports and discourage imports except during periods of shortage. Recent initiatives, such as, defraying freight cost out of the Sugar Development Fund are steps in the right direction. But this may not be adequate and it will be necessary to extend the subsidy to cover ocean freight also.

The Government should initiate a viable sugarcane pricing policy linked to realization on sale of sugar, as in every other sugar producing country, which alone can sustain long-term viability and growth of the sugar sector. The Government should renounce the mantle of managing the sugarcane prices and allow it to be market driven.

The sugarcane pricing needs to be depoliticised. The best course will be to have an independent body headed by a retired judge to fix sugarcane prices under certain guidelines. The guidelines should include factors such as cost of farming sugar prices and sucrose content in cane. Only with a fair system for determination of cane price can volatility in sugar production be minimized.

The Indian industry is obligated to supply 10 per cent of its production as levy sugar for sale to Below Poverty Line (BPL) families under the Public Distribution System. In any case, if this system has to continue, the government should meet the subsidy cost instead of casting the burden on the industry.

Control on sugar is done regulated releases and through the monthly release mechanism. This is a tool devised by the government to keep the open market price in check. Unfortunately, this mechanism has fallen apart during years when the industry was forced to carry huge inventories due to glut conditions. It becomes
clear that it is impossible to go against market forces which alone can determine price levels. Therefore, the Government should renounce the mantle of managing the sugarcane prices and allow it to be market driven.

Indian sugar industry can be a global leader provided it comes out of the vicious cycle of acute shortages and surplus of sugarcane. A stable long-term policy is needed to take into account the interests of farmers, consumers and millers, in which the shackles are removed which constrain this industry from growing in a healthy manner. Against the backdrop of skyrocketing crude prices, policymakers have become aware of important of sugarcane as an energy crop and are encouraging mills to go integrated and produce ethanol and power.

The government may subsidize hugely and promote the export of sugar. With the consumption of sugar not registering any significant increase, export of sugar alone can ensure that the stock of sugar reaches manageable levels.

While the thrust to renewable energy and support to cogeneration has resulted in creation of more than 275 MW capacities by sugar mills, there are mounting concerns and uncertainties with respect to a stable power purchase policy. Unless an assured offtake at reasonable tariff together with payment of security is ensured, the bagasse cogeneration industry will not take off. If these initiatives are placed on a proper platform, the industry can exploit the potential of 4000 MW of environment friendly power in a short span of time.

The Government should arrange easy availability of funds to the industry for setting up cogeneration capacities and for setting plants to manufacture ethanol. Though there is no doubt about the intention of the Government in this regard, the Financial Institutions and Banks have ostracized the sugar industry and consequently only handful of sugar mills are able to set up these plants. The norms
for funding these projects must be liberalized and lenders must be prevailed upon to lend money on easy terms. Setting up of large cogeneration capacities would help mitigate the power crisis in many states. The use of ethanol should be encouraged in a big way. Presently only 5% blending of ethanol with petrol is made mandatory in only 9 states. Brazilian example should be followed and sugar industry should be encouraged to explore the feasibility of manufacturing ethanol from sugarcane juice as against the present practice of making ethanol from molasses.

Given the proven technology and demonstrated record of Brazil’s ethanol programme, the Government should permit conversion of cane juice along with molasses into ethanol and simultaneously set in place the necessary policy framework for the offtake of ethanol by petroleum companies on reasonable terms. The quantum of diversion of cane juice can be judiciously exercised to balance the interest of farmers, millers and consumers by an appropriate mix of sugar production and ethanol production at the national level.

With sugar mills getting converted into energy complexes with substantial investment in cogeneration and ethanol, ensuring adequate availability of sugarcane on a consistent basis will become paramount. In this regard, the Government should also consider appropriate relaxation under land ceiling laws and permit factories to own/lease captive plantations and take up corporate farming to reap the benefits of economies on a large scale with specialized agronomic practices.

Credit norms should be relaxed and more funds made available at cheaper rates of interest to help the industry to tide over the immediate finance problems, which includes difficulty in making payment for sugarcane.
Small and inefficient units in the Corporation and Cooperative sectors should be closed down or handed over to private sector. Their continuing operation is a drain on the Government exchequer.

The study reveals that the main concern of sugar industry in India is fluctuations in sugarcane production due to inadequate irrigation facilities, lower sugarcane yield, and frequent droughts in tropical and sub-tropical areas where sugarcane is grown on large scale. In addition, sugarcane yield has been lower (59 Mts per hectare). Sugar recovery is also lower in comparison with other sugar manufacturing countries. This leads to escalation of production costs and weakens the competitive edge of the industry. Most sugar mills in India are having daily sugarcane crushing capacity of 1250 tonnes. These mills cannot have economies of scale so they have to incur high production costs. Indian sugar industry is characterized by high production costs. Therefore, daily crushing capacity of sugar industry in India should be extended to the minimum of 2500 tonnes.

In recent years, sugarcane production in India has decelerated to a great extent due to water and power shortage. Special attention is needed to be given on water resource management. All the area under sugar cultivation should be brought under drip irrigation to conserve water as well as fertilizers. Adequate and regular power supply to sugarcane growers and sugar factories would increase production and productivity. To enhance the share of Indian sugar industry in global trade, quality and quantity of sugar need to be enhanced.
The average current and liquid ratio of Thiru Arooran Sugars is 1.71 and 0.38, which is below the standard norms. The average current and liquid ratio of Arignar Anna Sugar Mills is 2.50 and 1.85, which is above the standard norms. This may be due to huge stock and debtors. Therefore, Thiru Arooran Sugars Industries should take efforts to improve the liquidity position.

The average of the inventory turnover ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills are 1.42 and 3.7 times, which shows the efficiency of the inventory management of public sector. Arignar Anna Sugar Mills is satisfactory. Thiru Arooran Sugars Industries should take necessary steps to boost sales.

The average age of inventory of Thiru Arooran Sugars Industries and Arignar Anna Sugar Mills is 309 and 101 days. The inventory management of Arignar Anna Sugar Mills is better than that of Thiru Arooran Sugars Industries. Therefore, Thiru Arooran Sugars should take necessary initiatives to improve sales.

The mean receivable ratio of Thiru Arooran Sugars and Anna Sugar Mills is 25.03 and 6.68 times, and the average collection period of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 25 and 55 days. This indicates that the Thiru Arooran Sugars Industries has followed effective receivable management. This may be the reasons for huge stocks held by the company. Therefore, it is advisable that the company may follow liberal credit policy to boost sales in the open market. Arignar Anna Sugar Mills should improve the efficiency of the receivable management by way of adopting rigid credit policy.
The average payable turnover ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 7.87 and 4.67 times and average payment period of Thiru Arooran Sugars and Arignar Anna Sugar Mills are 48 and 84 days. Therefore, it is suggested that the Arignar Anna Sugar Mills may try to reduce the average payment period to get creditors confidence.

The average working capital ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 2.10 and 1.56, which indicates that efficiency management of the Thiru Arooran Sugars is better than that of Arignar Anna Sugar Mills. Hence, Arignar Anna Sugar Mills should take necessary steps to improve efficiency of the working capital management. Otherwise its liquidity position will be affected.

The average Debt equity ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 1.76 and 22.07 which shows that the ratio of Thiru Arooran Sugars is favourable to the long term creditors because a high proportion of owners funds provide a larger margin of safety for them. Therefore it is advisable that the Arignar Anna Sugar Mills may enhance shareholders fund by way of issuing fresh equity shares. Otherwise its long term solvency position will be threatened.

The average funded to total capitalization ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills are 64 and 95 per cent. Therefore both companies may try to reduce the funded to atleast 50 per cent for improving the long term financial position of company.

The average preparatory ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 36 and 4.76. percent. It indicates that the long term solvency position of Arignar Anna Sugar Mills is very weak. Hence, the company should improve the preparatory fund by issuing fresh equity capital.
The average solvency ratio of the Thiru Arooran Sugars and Arignar Anna Sugar Mills is about 64 and 104 per cent which indicates that the total liabilities of Arignar Anna Sugar Mills is greater than that of total assets which is less favourable to the creditors. It implies that the long term solvency position of the company is not satisfactory. Therefore the company should reduce the liabilities or further investment be made in the current asset as well as fixed asset to improve the solvency position.

The average fixed assets to net worth ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 131 and 137 per cent during the study period, which shows that the owner's fund are not sufficient to finance the fixed assets and the company has to depend upon outsiders to finance the fixed assets. Therefore both companies should take necessary steps to enhance shareholders funds.

The average interest coverage ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 1.12 and 0.79 times, which indicates that Arignar Anna Sugar Mills' earnings is not enough to pay even interest to creditors. Therefore, the urgent need of the company is to improve the profitability. Otherwise the very survival of the company will be threatened.

The average operating ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 91.21 and 105.72 percent, which indicates that Arignar Anna Sugar Mills has not attained the breakeven point during the study period. Therefore it is suggested that both the companies should try to reduce operating cost.

The average operating profit ratio of Thiru Arooran Sugars and Arignar Anna Sugar Mills is 13.33 and 10.19 percent whereas net profit ratios of the two companies are -7.5 and -5.75. This is due to high interest burden. Hence the
companies should try to reduce fixed interest charges for improving the overall efficiency of the management is not satisfactory.

If the aforesaid measures are initiated, the sugar industry can expect to record phenomenal growth and emerge a key player in the international sugar market — very large producer of ethanol meeting the fuel requirements of the transportation sector and saving substantial foreign exchange on imports and also a dominant player in the renewable energy sector generating environmentally friendly power of 4000 MW and in that process contributing its mite in large measure to the global climate change initiatives.

6.4 CONCLUSION

Sugar industry is the second largest agro based industry in India. Sugar factories in India have been instrumental in building confidence among the rural people by providing employment opportunities directly and indirectly and strengthening industrial base in rural India. Sugar industry has just begun to see its potential. In the era of globalization, sugar industry needs more competitive edge, which can be given by way of modernization, enhancing productivity, and manufacturing excellent quality sugar at competitive prices. It needs quality management at every level of activity to enhance its performance. The need of the hour is to liberalize industry from clutches of unprofessional people. Rapid growth is already taking place in the development of the two renewable sources of energy — ethanol and co-generation. However, most of the sugar units do not have byproduct utilization plants. Projects based on bagasses and molasses should be initiated.
Generally in the study area, some of the risk factors that can affect the industry’s prospects are the huge carrying stock, poor working capital management and high fixed interest charges which can add to financial burden to the units. Besides these problems the outdated technology used by sugar industry also furthers to the risk. The onus of nursing and rejuvenating the industry back to health squarely rests with the Government. Hence, the Government will have to devise a suitable long term policy for the industry that takes into account the interest of farmers, consumers and millers for making India a major sugar exporter in the years to come.