CHAPTER 9
SUMMARY OF THE STUDY IN TERMS OF
CONCLUSIONS AND SUGGESTIONS

9.1 Introduction:
In this thesis financial performance of plastic industry of Gujarat is carried out mainly through the techniques of ratio analysis, trend analysis and the Analysis of Variance. Summary of this study along with the important findings of the study contained in the chapters VI, VII and VIII of the thesis and some suggestions are presented below.

In order to analyse the financial performance of plastic industry of Gujarat during the period 2000-01 to 2009-10 on the basis of financial performance of 15 selected companies of the industry located in Gujarat, 14 important ratios related to (i) Liquidity (ii) Profitability (iii) Activity and (iv) solvency aspects related to financial performance analysis have been obtained from the relevant data reported in the annual reports of the selected companies. Then, using the paid up capital of a company as the weight for that company for that year, 14 weighted (composite) ratios have been obtained for each of the companies for all the years under study i.e. 2000-01 to 2009-10. Further, on the basis of average paid up capital as weight of that company for the duration of study, 14 ratios for the industry for the duration of study are obtained as weighted mean ratio of respective weighted ratios of the 15 companies. Then, on the basis of 14 ratios for each of the 15 selected companies for the 10 years period and 14 ratios of the industry for the 10 years period the Trend analysis and ANOVA have been carried out and presented in various sections of chapter-VI, chapter-VII and chapter-VIII.

The chapter-I is contains Introduction and Growth of plastic industry, chapter-II contains Review of literature, Chapter III contains Research Methodology, Chapter IV contain Profile of Selected companies, chapter-V contains Ratio Analysis. The chapter VI deals with the trend analysis of various ratios related to financial analysis of 15 companies and the plastic industry of Gujarat whereas the chapter VII and chapter VIII deal with the ANOVA of 14 ratios of the selected companies as well as the industry.
9.2 Important conclusions made from the Trend analysis carried out in the chapter-VI:

So far as the Liquidity aspect of financial performance of the industry is concerned, it has been observed that (i) the current ratio for the industry was at healthy level 1.5 in the beginning of the decade. During first half of the decade i.e. 2000-01 to 2005-06, the current ratio for the industry had declining trend which means that the plastic industry in Gujarat was unable to keep the current ratio above the healthy level of 1.5. Then from 2006-07 onwards it assumed the rising trend and at the end of the decade i.e. in the year 2009-10 it reached the level around 2 which is considered to be very healthy level. Which means that since 2006-07 these plastic manufacturing units in Gujarat have been able to, by and large, maintained the current ratio at healthy level.

(ii) For the period under study it has been noted that the trend in Quick Ratios of the industry had quadratic trend. In the year 2000-01 it was around 2.75% then it steadily declined up to the level around 1.6 in the year 2004-05 and 2005-06 then it started rising and reached to the level 2.4, which means that it is going above the desired level.

On the profitability aspect of performance of the industry it has been noted that (i) the gross profit margin of the plastic industry of Gujarat had linear declining trend and on an average the gross profit margin declined at the rate of 1.75 per year. (ii) During the decade the operating profit margin for plastic industry in Gujarat had linear declining trend and every year operating profit margin declined, on an average, at the rate of 1.6. In the beginning operating profit margin was around 23% and by the end of the decade it came down to around 9%. (iii) When the Net Profit Margin ratio of Shree Ram industry is taken into account, it was mostly negative for the whole decade because due to very heavy burden of interest toward the loan component in its capitalisation, the Net Profit Margin remained very highly negative for the whole decade and due to its relatively very heavy weight (paid up capital) in the calculation of composite Net Profit Margin ratio of the industry, the Net Profit Margin ratio of the industry was also in negative territory for the whole decade. In 2000-01 it was positive but then after up to 2008-09 it was in negative territory. It had shown improvement only during the last year and had came to the level of 7% which means that so far as net profit margin is concern the industry faced tremendous pressure during the whole decade. However, as explained in the chapter-VI, if the Net Profit
Margin ratio of Shree Ram Multi-tech is considered an out-liar and excluded from the analysis then the trend in Net Profit Margin Ratio for the industry could be consider healthy as in that case it was always positive and improved steadily.(iv) The return on capital ratio trend is linear declining trend. It declined every year at the rate 0.43. The ratio was 11.38 in the year 2000-01 and it came down to 7.5 in the year 2009-10. (v) The Return on Net Worth ratio during the decade this ratio for the plastic industry was mostly positive. However for most of the time it was just positive which means although the plastic industry was able to utilise its assets productively it struggled a lot to do so.(vi) It has been noted that so far as Earning per Share ratio is concern the trend of this ratio is also linear rising trend. Ratio at the beginning of the decade was around 3.5 and it continuously rose to the level of 10.7.

Further, so far as the Activity aspect of analysis of financial performance is concerned (i) the Inventory Turnover Ratio was positive during the decade and it was stable in the range of 15.5 to 18.5. (ii) The Debtors Turnover Ratio had declining trend during the decade. In the beginning of the decade it was around 8 and it came down to 6.8 it shows that the recovery from the debtors, converting debtors into cash went slow. It also requires keeping more cash balance on-hand. (iii) The Fixed Assets Turnover Ratio had linear rising trend. At the beginning of the decade it was around 1.45 and then at the end of the decade it reached to around 2.42. It is a good sign and shows the efficient use of Fixed Assets by the management. (iv) The trend of the investment turnover ratio during the decade was quadratic in nature during the first half of the decade it declined steadily from about 23 to around 14.5 during 2006-07 and than its steadily rose upto the level around 21. It shows the capacity to raise the sales with existing investments. This ratio improved in the last 4 years, which indicates a good sign of the industry, going back to higher than the Investment Turnover ratio at the initial year level.

On the Solvency aspect of financial analysis (i) It has been found that the debt-equity ratio had linear rising trend with the regression coefficient as 0.229 which means during the decade the plastic industry in Gujarat was able to keep the long liabilities (debt) at Rs 1.23 crore against the capital of Rs 1 crore. It also indicates that the plastic industry was able to generate the capital from the sources other than the equity reasonably well and during the decade the investor’s interest remained protected very
well. (ii) The industry had poor interest cover ratio during the whole decade. It had declining trend. It was -1.28 in the year 2000-01 and it continuous by worsened to -11.9 in the year 2009-10. It shows that the industry’s capacity to pay the interest is doubtful and creditors are less secured. It also indicates the industry was over burdened with debt.

9.3 Important conclusions made from the Analysis Of Variance (ANOVA) carried out in the chapter-VII and chapter-VIII:

In the chapter-VII and chapter-VIII, while carrying out the ANOVA on various ratios of the selected companies and the industry as a whole, the following conclusions have been made.

So far as ANOVA of Current ratios is concerned, it is found that

- There is significant difference in composite current ratios of selected companies during decade but there was no significant difference among yearly composite current ratios of the industry.

- All the companies having composite current ratios above 2 and below 1 belonged to small and mid-cap group except Shree Ram Multi-tech.

- Out of the selected companies the composite current ratios of 4 companies were higher than 1.81 and 11 companies were lower than 1.81.

- It is found that the composite current ratio of the industry was 1.81 during the decade for company wise comparison, which is near to the ideal level.

- The highest composite current ratio during the decade was 6.29 for the Ashish Polyplast followed by Gopala 2.61, Polylink 2.47, Gujarat Craft 2.47 which was unnecessarily too high.

- The lowest composite current ratio during the decade was 0.71 for Shree Ram Multitech followed by Shaily 0.80, Acrysil 0.85, Plastiblend 0.93. The current ratios of these companies were below 1 which is considered low and risky in terms of current assets and may create financial crisis for short term expenses.
While carrying out the ANOVA on the Quick ratio it is found that

(i) The Quick ratio among the companies during the decade differed significantly but there was no significant difference among yearly composite Quick ratios of the industry.

(ii) It is found that the composite quick ratio of the industry during the decade was 2, which is high in terms of liquidity.

(iii) The highest composite quick ratio was 7.68 for Ashish Polyplast, followed by Gopala 4.55, Promact 3.38, Essel Propack 2.68. It indicates excessive liquidity and it needs to be controlled.

(iv) The lowest composite quick ratio was 0.76 for INEOS ABS, followed by Plastiblends 1.01, JBF 1.1.

(v) Out of selected companies the composite quick ratios of 4 companies were higher than 2.4 and that of 11 companies were having lower than 2.4.

(vi) The companies having the composite quick ratios more than 1 were Ashish, Gopala, Promact and Essel Propack which belonged to small and mid-cap segment.

(vii) Quick ratios of 11 companies were in the range (1, 2).

From the ANOVA on Gross Profit ratios it has been found that

(i) The Gross Profit ratios during the decade differed significantly among the companies but there was no significant difference among yearly composite Gross Profit ratios of the industry.

(ii) It is found that the composite gross profit margin ratio was 7.5 for the industry during the decade.

(iii) The highest composite gross profit ratio was 29.24 for Essel Propack and the lowest was -19.8 for Shree Ram Multi-Tech.

(iv) Out of selected companies the composite gross profit ratio of 9 companies were higher than 7.5 and 6 companies were having lower than 7.5.

(v) All the companies having gross profit margin ratio less than 7.5 belong to small and mid-cap segment.
(vi) Shree Ram Multi-tech was having most negative gross profit margin ratio suffering from over capitalization.

(vii) Nine companies have the gross profit margin ratios in the range (7, 29) and 6 have the ratios in the range of (-19 to 5).

While carrying out the ANOVA on the Operating Profit ratio it is found that

(i) The Operating Profit ratios during the decade differed significantly among the companies but there was no significant difference among yearly composite Operating Profit ratios of the industry.

(ii) It is found that the composite operating profit margin ratio of the industry during the decade was 12.58.

(iii) The highest composite operating profit margin ratio was 31.61 for Essel Propack, followed by Sintex 19.08, Acrysil 17.86, INEOS ABS 15.27. All these companies belong to large size group except Acrysil India Ltd. It indicates healthy ratios and efficient management.

(iv) The lowest composite operating profit margin ratio among the companies was 3.98 for Gopala Ployplast, followed by Promact 4.64, Ashish 6.57, Gujarat Craft 6.64. All these companies belong to small and mid-cap segment, these companies need to reduce the cost of production and to raise the sales.

(v) Out of the selected companies the composite operating profit margin ratio 7 companies were higher than 12.58 and 8 companies have less than 12.58.

(vi) The composite operating profit margin ratio was in the range (4, 31).

From the ANOVA on Net Profit Margin ratios it has been observed that

(vii) The Net Profit Margin ratios during the decade differed significantly among the companies when the company Shree Ram Multi-tech was included in the analysis and also when it was excluded from the analysis. However, in both the cases the yearly Net Profit Margin ratios of the industry did not differ significantly.

(viii) The highest composite net profit margin ratio was 13.29 for Essel Propack and the lowest was -84 for Shree Ram Multi-tech.
For an individual company the average Net Profit Margin ratio was (-3.1262) during the decade when the Shree Ram Multi-tech was included in the analysis and it was 2.65213 when this company was excluded from the analysis.

Out of selected companies the composite net profit margin ratio of 5 companies was negative.

- When Shree Ram Multi-tech excluded from the composite net profit margin ratio following results are observed.
  - The composite net profit margin ratio among the companies for revised table was 2.65213 during the decade for the industry.
  - The highest composite net profit margin ratio was 13.291 for Essel Propack followed by Plastiblends 9.87.
  - The lowest composite net profit ratio was -14.647 for Promact followed by Polylink -2.9797, Gopala -1.412.
  - Out of selected companies the composite net profit margin ratio of 8 companies was above 2.6521 and 6 companies was below 2.6521.
  - The range of composite net profit margin ratio of selected companies was (-14.647 to 13.291).
  - It is found that the composite net profit margin ratio among the years of the industry during the decade was 5.3467.
  - The highest net profit margin ratio during the decade was 8.4843 in year 2004-05 and the lowest was 1.6038 during 2006-07. After initial two years net profit margin ratio went down and was negative but it improved in last two years.
  - Individually Essel Propack’s net profit margin ratio was highest during the decade and Shree Ram net profit margin ratio was lowest and negative during the decade.
  - Net profit margin ratios of 8 companies were higher than the industry and 6 companies net profit margin ratio were lower than the industry. The companies among the poorest performance in net profit margin ratio were Promact, Polylink and Gopala which belong to small cap group.
(x) Overall picture of the industry in terms of net profit margin ratio during the first half of the decade was steadily improving and was not stable in the second half of the decade as it was moving up and down every alternate year.

From the ANOVA on ratios Return on Capital Employed it has been observed that

(i) The Return on Capital Employed ratios during the decade differed significantly among the companies but there was no significant difference among yearly composite Return on Capital Employed ratios of the industry.

(ii) It is found that the composite ratio of return on capital employed for the industry during the decade was 10.6.

(iii) The highest composite ratio of return on capital employed was 25.24 for INEOS ABS, followed by Plastiblend 23.72, Acrysil 19.27.

(iv) The lowest composite ratio of return on capital employed was -3 for Shree Ram Multi-tech.

(v) The companies among the poor performance in terms of return on capital employed were Gopala 2.4, Ashish 3.11, Polylink 3.61, Promact 4.5 belong to small and mid-cap group except Polylink.

(vi) Acrysil even though in small cap group maintained consistency in profitability ratios.

(vii) Out of selected companies the composite ratio of return on capital employed, 8 were higher than 10.6 and 9 were lower than 10.6.

(viii) Composite ratio of return on capital employed of selected companies were in the range of (-2, 25).

From the ANOVA on ratios Return on Net Worth it has been observed that

(i) The Return on Net worth ratios during the decade did not differ significantly among the companies and so did the yearly Return on Net Worth ratios of the industry.

(ii) It is found that composite return on net worth ratio for the industry was 49.84.

(iii) The highest composite return on net worth ratio was 412.24 for Promact. It was due to the exceptionally high return on net worth ratio i.e. 1975.27 during 2008-09.
(iv) The composite return on net worth ratio for Shree Ram was 163.34. It was also due to the exceptionally high return on net worth ratio i.e. 1601.74 during 2004-05.

(v) The lowest composite return on net worth ratio was -70.48 for Gopala followed by Ashish 1.68, Gujarat Craft 6.64 considered very low reward to the owners capital. These companies belong to small and mid-cap group.

(vi) Out of the selected companies 3 companies have the composite return on net worth ratio higher than 49.84 and 12 companies have lower than 49.84.

(vii) Three companies achieved higher performance in terms of return on net worth belong to large cap segment.

While carrying out the ANOVA on the Earning Per Share ratios it is found that

(i) The Earning Per Share ratios during the decade differed significantly among the companies but there was no significant difference among yearly composite Earning Per Share ratios of the industry.

(ii) It is found that the composite ratio of earning per share for the industry for company wise comparison was 6.57.

(iii) The highest composite earning per share ratio was 18.63 for Nilkamal, followed by INEOS ABS 17.63, Sintex 17.20, Plastiblends 16.84. These companies belong to large size group while Plastiblends belong to mid size group.

(iv) Out of the selected companies the composite Earning Per Share ratios 8 higher than 6.57 and 7 companies have lower than 6.57.

(v) Companies among the lowest composite earning per ratio was Shree Ram -8.3, followed by Promact -0.79, Gopala -0.65, Polylink -0.38, Ashish 0.22 were poor performers in terms of earning per share ratio. Out of these companies Ashish belong to small cap segment and the rest belong to large size group.

(vi) The composite ratio of earning per share was in the range of (-8.3 to 18.63).
While carrying out the ANOVA on the Inventory Turnover ratios it is found that

(i) The Inventory Turnover ratios during the decade differed significantly among the companies but there was no significant difference among yearly composite Inventory Turnover ratios of the industry.

(ii) It is found that the composite inventory turnover ratio for the industry was 11.08.

(iii) The highest composite inventory turnover ratio was 42.12 for JBF, followed by Gopala 14.95, Jagdamba 10.94, Shree Ram 10.64. These companies belong to large size group while Jagdamba in a small size group.

(iv) The lowest composite inventory turnover ratio was 4.36 for Ashish Polyplast followed by Acrysil 5.38, Gujarat Craft 5.84, were the poor performers in inventory turnover ratio. These companies belong to small cap segment.

(v) Out of the selected companies only two companies have the higher inventory turnover ratio than 11.08 and 13 have lower than 11.08.

(vi) The composite inventory turnover ratios were in the range of (4.36 to 42.12).

From the ANOVA on Debtors Turnover ratios it has been observed that

(i) The Debtors Turnover ratios during the decade differed significantly among the companies but there was no significant difference among yearly composite Debtors Turnover ratios of the industry.

(ii) It is found that the composite Debtors Turnover ratio for the industry for company wise comparison was 5.94.

(iii) The highest composite debtors turnover ratio was 11.04 for JBF followed by Polylink 9.07, Jagdamba 7.96 were comparatively good performers.

(iv) The lowest composite debtors turnover ratio was 0.055 for Ashish Polymers, followed by Acrysil 2.89, Promact 3.97 were the poor performers in terms of debtors turnover ratio.

(v) Out of the selected companies 8 companies have the composite debtors turnover higher than 5.94 and 7 companies were lower than 5.94.

(vi) Companies among poor performers Ashish and Acrysil belong to small size group while Shaily Engineering and Promact belong to mid-cap group.
The composite debtors turnover ratio of the companies were in the range of (0.055 to 11.04).

From the ANOVA on Fixed Assets Turnover ratios it has been observed that
(i) The Fixed Assets Turnover ratios during the decade differed significantly among the companies but there was no significant difference among yearly composite Fixed Asset Turnover ratios of the industry.
(ii) It is found that the composite fixed assets turnover ratio for the industry was 2.18.
(iii) The highest composite fixed assets turnover ratio was 4.86 for Gujarat Craft, followed by Plastiblends 3.85.
(iv) The lowest composite fixed assets turnover ratio was 0.49 for Shree Ram. It indicate inefficient use of fixed assets.
(v) Out of the selected companies 7 have the ratios higher than 2.18 and 8 have lower than 2.18.
(vi) The composite fixed assets turnover ratios of the selected companies were in the range of (0.49 to 4.86).
(vii) Shree Ram, Shaily and Jagdamba were among the poor performers.

From the ANOVA on Investment Turnover ratios it has been observed that
(i) The Investment Turnover ratios during the decade did not differ significantly among the companies but there was no significant difference among yearly composite Investment Turnover ratios of the industry.
(ii) It is observed that the composite investment turnover ratio for the industry was 11.92.
(iii) The highest composite investment turnover ratio was 29.05 for JBF followed by Essel Propack 25.54, Gopala Polyplast 15.36 and Polylink 14.65 were the good performers.
(iv) The high performers in composite investment turnover ratio belong to large cap segment.
The lowest composite investment turnover ratio was 3.78 for Ashish Polyplast, followed by Acrysil 5.64 and Gujarat Craft 5.89. These companies belong to small cap group.

Out of selected companies 5 of them have composite investment turnover ratios higher than 11.92 and 10 of them have composite investment turnover ratios lower than 11.92.

The composite investment turnover ratio were in the range of (3.78 to 29).

From the ANOVA on Debt-Equity ratios it has been observed that

(i) The Debt-Equity ratios during the decade differed significantly among the companies and so did the yearly Debt-Equity ratios of the industry.

(ii) It is observed that the composite debt-equity ratio for the industry was 2.14 which considered moderate.

(iii) The highest composite debt-equity ratio was 9.07 for Polylink followed by Gopala 8.98. It indicate high level of borrowed capital.

(iv) The lowest composite debt-equity ratio was 0.05 for Ashish Polyplast, followed by Plastiblends 0.22 and INEOS ABS 0.34. It indicate the owners capital was more than the borrowed capital and shows less burden of paying interest and there is scope for trading on equity.

(v) Out of the selected companies 3 have the ratios higher than 2.14 and 12 of them have the ratios lower than 2.14.

(vi) The range of composite debt-equity ratio was (0.05 to 9.07).

From the ANOVA on Interest Coverage ratios it has been observed that

(i) The Interest Coverage ratios during the decade did not differ significantly among the companies and so did the yearly Interest Coverage ratios of the industry.

(ii) It is observed that the composite interest coverage ratio of the industry was (-0.51) which is very poor.

(iii) The highest composite interest coverage ratio was 15.04 for Plastiblends followed by INEOS ABS 13.97. It indicates less borrowed capital and high interest paying capacity.
The lowest composite interest coverage ratio was -68.33 for Shree Ram followed by Promact -0.28 indicate low earning capacity and so inability to pay the burden of interest.

Out of selected companies 14 have the composite interest coverage ratios higher than -0.51 and 1 of them have composite interest coverage ratio lower than -0.51.

The range of composite interest coverage ratio was (-68.32 to 15.04).

Polylink, Shaily and Gujarat Craft showed the poor capacity to pay the interest and should increase their earning capacity.

From the analysis in the chapter-VII and chapter –VIII the following observation regarding the selected 15 companies have also been made.

- JBF was consistently good in terms of all the ratios but in case of Inventory Turnover and Return on Net worth it is below the industry average.
- Sintex Industry’s Quick Liquidity Ratio was too high, its Return on Net worth, Inventory Turnover, Debtors Turnover are below the industry level but in other ratios it is consistently good in financial performance.
- Nilkamal’s composite ratio of Return on Net worth, Inventory Turnover and Investment Turnover were lower than the industry but in other ratio it is comparatively better in financial performance.
- INEOS ABS’s composite ratio on Return on Net worth, Inventory Turnover and Debt-Equity were below the industry but in other ratios it is higher than the industry.
- Essel Propack’s composite ratio of Return on Net worth, Inventory Turnover and Fixed Assets Turnover were lower than the industry ratio.
- Plastiblends composite ratio of Return on Net worth, Inventory Turnover, Investment Turnover and Debt-Equity were below the industry ratio.
- Gopala was also below in Gross Profit Margin, Operating Profit Margin, Return on Capital Employed, Return on Net worth and Earning per Share when compared to respective industry ratios. It indicates poor financial performance in Profitability, Solvency and Liquidity.
• Shaily Engineering’s financial performance was also poor in terms of Liquidity, Profitability and Activity ratio.

• Shree Ram Multi-tech was also consistently poor in terms of Liquidity, Profitability and Solvency ratios.

• Acrysil India’s composite ratios of Return on Net worth, Inventory Turnover, Investment Turnover, Debtors Turnover were lower than the industry ratio. So it was a poor performance in Activity ratios.

• Jagdamba’s financial performance was consistently healthy except Return on Net worth. It was almost better than the industry ratios among all ratios. So this is the best company in financial performance in small cap segment.

• Gujarat Craft’s composite ratios in Return on Net worth, Earning per Share, Inventory Turnover were lower than the industry ratios. It was good in Liquidity but poor performance in Profitability and Solvency.

• Polylkink Polymer was also poor in Profitability ratios.

• Promact was very poor in financial performance in terms of Profitability and Solvency ratios.

• Ashish could not control on Liquidity, poor performance in Profitability and needed to give attention in Debtors Turnover Ratio.

• Out of all selected companies JBF Industry was best in financial performance because maximum number of the composite ratios of JBF in Liquidity, Profitability, Activity and Solvency were healthy. It belongs to large cap segment.

• Jagdamba was next best in financial performance during the decade because its composite ratios were healthier than the other competitors in terms of Liquidity, Profitability, Activity and Solvency ratios. It belongs to small cap segment.

• Plastiblends is the third best company in financial performance in comparison with other companies because its composite ratios of Profitability, Activity, Solvency and Liquidity are better than the rest of the companies during the decade. It belongs to mid-cap segment.
• Essel Propack is also another company having healthier Profitability, Activity, Solvency and Liquidity ratios.

• Next one is Nilkamal which also has healthy Profitability, Liquidity, Activity and Solvency ratios.

• Sintex is also better in Liquidity and Profitability ratios.

• INEOS ABS is also good at Profitability ratio and moderate in Activity and Solvency ratios.

• Gujarat Craft was moderate in Liquidity, Profitability, Activity and Solvency ratios.

• Shaily was only good at the Profitability and Solvency ratios as compared to the other ratios.

• Polylink was good in Liquidity and Activity ratios, poor in Profitability ratios.

• Promact and Ashish were poor in all of the four types of ratios.

9.5 Some other findings based on the Ratio analysis

If the conclusions are to be presented ratio-wise then on the basis of 14 ratios studied in this thesis for the plastic industry of Gujarat (and also 15 selected companies) then the following conclusions are note worthy

1. Findings based on the analysis of Current Ratio

• It is found that the current ratio for the industry during decade was above 1.4 which is not at an ideal level but was also not poor.

• The current ratios of the companies (during the decade) differed significantly. Among the companies selected, 8 companies have current ratios (during the decade) higher than 1.5 and 7 companies have current ratios lower than 1.5.

• Shree Ram Multi-tech, Shaily, Acrysil and Plastiblends could not maintained the level of current ratio, as their current ratios were bellow 1. Out of these Shaily and acrysil belongs small scale group. While Shree Ram belongs to mid size group.

• Overall performance of plastic industry in terms of current ratio was at satisfactory level.
2. Findings based on the analysis of Quick Ratio
   - It is found that the quick ratio of plastic industry of Gujarat during the decade was 2.0 which was almost double the ideal level.
   - The quick ratios of the companies during decade differed significantly.
   - The quick ratios of the industry remained above 2.0 during first three years, 1.5 to 1.6 during 2003-04 to 2006-07 and again above 2.0 for the last three years.
   - The quick ratios of Ashish, Gopala, Promact remained so high i.e. above 3.0, it shows poor management of working capital. These companies need to check the liquidity. All these companies belong to small-cap segment (small in size according paid-up capital).
   - Essel Propac, Sintex, Nilkamal, Polylink maintained the quick ratios at above 2.0, it indicate unnecessarily high liquidity.
   - JBF, INEOS ABS, Plastiblends, Jagdamba, Gujarat craft maintained their quick ratios at expected level.
   - Overall picture of the liquidity of the industry shows that there is need to raise the current assets and to control the quick ratio.

3. Findings based on the analysis of Gross Profit Margin Ratio
   - It is found that the Gross Profit Margin ratio of the industry during the decade, was 8.11.
   - The Gross Profit Margin ratios of the companies during decade differed significantly.
   - During the first three years gross profit margin ratios were 16.94, 17.32, and 12.21 in year 2003-04 it was 2.10 which is very low. During 2004-05 it gone up to 15.66 which was very good recovery but in 2006-07 it was negative i.e. -10.95 and in the preceding years going downward.
   - In 2006-07 the companies like Shree Ram, Promact occurred heavy loss, it affected on the gross profit margin ratio to negative.
   - Companies like Essel Propack was having highest gross profit margin ratio during the decade i.e. 29.24, Sintex 15.64, INEOS ABS 14.20, Acrysil 13.50, Jagdamba 10.73, JBF 9.18, Nilkamal 8.7 were comparatively good gross profit
margin ratios. These companies gross profit margin ratios were higher than the industry.

- Shree Ram, Polylink, Promact and Gopala performance were very poor in terms of gross profit margin ratio. These companies belongs to mid and small size group, according to paid-up capital.

- While Shree Ram, Promact, Polylink’s gross profit margin ratios were lower than the industry and were negative.

4. Findings based on the analysis of Net Profit Margin Ratio

- The Net Profit Margin ratios of the companies during decade differed significantly when the company Shree Ram Multitech was included in the analysis and they did not differ significantly when this company was excluded from the analysis. The conclusion for the yearly Net Profit Margin ratios of the industry is also the same.

- It is found that the net profit margin ratio of the industry during the decade was negative i.e. -7.65 when the company Shree Ram Multitech was included in the analysis and it was 5.3467 when this company was excluded from the analysis.

- For the industry the highest net profit margin ratio during the decade was 6.35 in year 2000-01 and the lowest was -49.25 during 2004-05 when the company Shree Ram Multitech was included in the analysis and they were 8.4843 and 1.6039 when this company was excluded from the analysis.

- Individually Essel Propack’s net profit margin ratio was highest during the decade and Shree Ram net profit margin ratio was lowest during the decade.

- Net profit margin ratios of 10 companies were higher than the industry and 2 companies net profit margin ratio were lower than the industry when the company Shree Ram Multitech was included in the analysis and these figures are 9 and 6 respectively when this company was excluded from the analysis.

- The companies among the poorest performance in net profit margin ratio were Shree Ram Multitech, Promact, Polylink and Gopala respectively.
5. Findings based on the analysis of Operating Profit Margin Ratio

- It is found that the Operating Profit Margin ratio of the industry during the decade was 15.63 which is good.

- Operating profit margin ratio was highest during 2001-02 and lowest during 2006-07.

- The Operating profit margin ratios of the companies during decade differed significantly

- Essel Propack was having highest operating profit margin ratio i.e. 31.61 during the decade individually. Sintex, Acrysil and Essel Propack’s operating profit ratio was higher than the industry. While 12 companies operating profit margin ratios were lower than the industry.

- Promact’s individual operating profit margin ratio was least among all. Polylink, Ashish and Gujarat Craft’s operating profit margin ratios were very low and they belong to small size group.

- In terms of operating profit margin ratio, overall performance of the plastic industry of Gujarat during the decade was good.

6. Findings based on the analysis of Return on Capital Employed Ratio

- It is found that return on capital employed ratio of the industry during decade was 9.46%.

- Return on capital employed was highest in 2001-02 and lowest in year 2006-07.

- The Return on Capital Employed ratios of the companies during decade differed significantly among the companies selected. 9 companies have return on capital employed ratio higher than the industry i.e. 9.46 and 6 companies have return on capital employed ratio lower than 9.46.

- The highest individual performance in return on capital employed ratio was 25.24 of Ineos ABS followed by Plastiblends 23.72, Acrysil 19.27, JBF 14.57 and Jagdamba 12.76.

- The lowest return on capital employed ratio was -2.3 for Shree Ram followed by Gopala 2.40, Ashish 3.11 and Polylink 3.62.
Companies among the poor performance in return on capital employed were Shree Ram, Gopala, Ashish, Polylink and Promact comes into small and mid size groups.

The return on capital ratio during the period was in the range (8, 11). This reflects efficient use of resources.

7. Findings based on the analysis of Return on Net worth Ratio

- It is found that the return on net worth ratio of the industry during the decade was 50.90 which is good.

- Return on net worth was highest during 2004-05 i.e. 303.7 and the least during 2009-10.

- Return on net worth ratios of the companies during the decade differed significantly. Among the companies selected 3 companies Shree Ram, Polylink and Promact have return on net worth ratio higher than the industry and 12 companies have lower return on net worth ratio than the industry.

- Individually Gopala was having least and negative return on net worth and Promact had highest return on net worth ratio.

- Overall performance of the industry during the decade in terms of return on net worth was good and indicates efficient financial management.

8. Findings based on the analysis of Earning per Share Ratio

- It is found that the earning per share ratio for the industry during the decade was 7.14.

- The highest earning per share ratio was in the year 2009-10 and the lowest was in the year 2004-05.

- Earnings per share ratios of the companies during the decade differed significantly. Among the companies selected 8 companies have earning per share ratio higher than 7.14 and 7 companies have earning per share ratio lower than 7.14.

- Individually, Nilkamal at the highest earning per share ratio during the decade and Shree Ram at the lowest earning per share ratio during the decade.
9. Findings based on the analysis of Inventory turnover ratio
   • It is found that the inventory turnover ratio of the industry during the decade was 17.15.
   • The highest inventory turnover ratio was 56.44 in the year 2006-07 and the lowest 10.14 was in the year 2009-10.
   • The inventory turnover ratios of the company during the decade deferred significantly. Among the company selected only 1 company i.e. JBF had the inventory turnover ratio higher than 17.14 and 14 companies have the inventory turnover ratios lower than 17.14.
   • Individually JBF had the highest inventory turnover ratio during the decade i.e. 42.12 and Ashish had the lowest inventory turnover ratio during the decade i.e 4.36.
   • Three companies Ashish, Gujarat Craft and Acrysil were having minimum inventory turnover ratio, they need to increase their sales and improvement in the working capital management.

10. Findings based on the analysis of Debtors turnover ratio
   • It is found that the debtors turnover ratio of the industry during the decade 7.25 which is good.
   • Highest debtors turnover ratio was 11.23 in 2000-01 and the lowest was 5.12 in the year 2001-02.
   • The debtors turnover ratio of the companies during the decade differed significantly. Among the companies selected 4 companies debtors turnover ratio higher than 7.25 and 11 companies have debtors turnover ratios have lower than 7.25.
   • Individually the highest debtors turnover ratio during the decade was 11.04 for the JBF industry and followed by Polylink 9.07, Jagdamba 7.96 and Plastiblends 7.26.
   • The lowest debtors turnover ratio was 0.055 for Ashish Polyplast followed by Acrysil 2.89, Shaily 3.95, Promact 2.98. Their performance in terms of debtors
turnover ratio is very poor and they need to raise debtors turnover ratio to improve the liquidity.

11. Findings based on the analysis of Fixed assets turnover ratio

- Fixed Asset Turnover Ratio of the industry during the decade was 1.94 which is considered low and indicate inefficient use of fixed assets or over investment.

- The highest Fixed Asset Turnover Ratio was 3.36 in the year 2009-10 and the lowest was 1.41 in the year 2001-02.

- The Fixed Asset Turnover Ratios of the companies during the decade differed significantly. Among the companies selected, 8 companies have fixed asset turnover ratio lower than 1.94 and 7 companies have fixed assets turnover ratio higher than 1.94.

- Individually the highest fixed asset turnover ratio was 4.86 for Gujarat Craft followed by Plastiblends 3.85, Gopala 2.8, JBF industry 2.77, Nilkamal 2.72 during the decade.

- Shree Ran Multi-Tech. had the lowest fixed asset turnover ratio during the decade individually, followed by Jagdamba, Promact, Shaily need to improve fixed asset turnover ratio for efficient use of fixed asset.

12. Findings based on the analysis of Investment turnover ratio

- It is found that investment turnover ratio of the industry during the decade was 17.48%.

- Highest investment turnover ratio was 27.70 during the year 2009-10 and the lowest was 10.46% in the year 2008-09.

- The investment turnover ratios of the companies during the decade differed significantly. Among the companies selected 2 companies JBF and Essel Propack have investment turnover ratio higher than 17.48% and 13 companies have investment turnover ratio lower than 17.48%.

- Individually JBF industry with 29.05% was the highest in investment turnover ratio during the decade, followed by Essel Propack with 25.54%.
In investment turnover ratio Ashish with 3.78% had the lowest individual performance during the decade followed by Acrysil 5.64, Gujarat Craft 5.89.

Overall performance of the industry in terms of investment turnover ratio during the decade remained by and large in good position.

13. Findings based on the analysis of Debt-Equity

- It is found that debt-equity ratio of the industry during the decade was around 1.7.
- The highest debt-equity ratio of the industry was 3.85 during 2009-10 and the lowest was 0.85 during 2000-01.
- The debt-equity ratios of the companies during the decade differed significantly. Among the companies selected 4 companies have debt-equity ratios higher than 1.7 and 11 companies have the debt-equity lower than 1.7.
- Polylink with 9.07 the highest individual debt-equity ratio during the decade, indicate the high level of debt and risk in the company and Ashish was having 0.055 the lowest individual debt-equity ratio, indicate very low level of debt.
- Gopala polyplast was also having 8.98 debt-equity ratio during the decade which indicates high level of debt and risk.
- Overall performance of the industry in terms of debt-equity ratio during the decade was by and large within certain limit.

14. Findings based on the analysis of Interest Coverage

- It is found that the interest coverage ratio of the industry during the decade was 6.559.
- The highest interest coverage ratio of the industry was 5.07 during 2002-03 and the lowest was negative during 2005-06.
- The interest coverage ratios of the companies differed significantly during the decade. Among the companies selected 14 companies have interest cover ratio higher than -6.59 and 1 company have lower than -6.59.
- Plastiblend had the highest 15.04 interest coverage ratio indicating high capacity to pay the interest followed by INEOS ABS 13.97 also having very good capacity to pay the interest.

- Shree Ram having -68.33 negative interest coverage ratios was in the worst situation to pay the interest, followed by Promact, Gopala, Polylink were also having poor capacity to pay the interest.

- During the first half of the decade the overall performance of the industry in terms of interest coverage ratio was comparatively good but in the year 2005-06, 2006-07 and in 2009-10 it was not good to pay the interest.

9.5 Suggestions:
On the basis of the findings of this study the following suggestions may be made for the plastic industry of Gujarat.

- Appropriate measures should be taken to check the Quick ratio of the industry as it was above the desired level.

- The Gross Profit Margin Ratio declined from 17 to 1 is a matter of worry for plastic industry of Gujarat. So the industry should try to reduce the cost of production and try to raise the sales.

- The Operating Profit Margin Ratio line is going downward so the industry should try to concentrate on reducing administrative expenses.

- Profitability Ratios are very important indicators of financial performance. Both Gross Profit margin and net profit margin ratios were declining together and therefore it is a matter of worry for plastic industry of Gujarat. So the industry should reduce the production costs, purchasing costs and administrative expenses as it will help in improving overall cost efficiency.

- Net profit Margin ratio for the industry remained positive and in the range (1.6, 8.48) and around 5.35 during major part of the decade. Though there is no trend traceable, it had a rising trend during first half i.e. up to 2004-05 but the trend had been somewhat erratic during the second half and measures should be taken to make it stable improvement in it.
- The Return on Capital Employed also declined during the decade. It shows inefficient use of resources. So the plastic industry of Gujarat must try to concentrate on maximum utilization of resources in an efficient way.

- The Earnings Per Share is the ratio which had rising trend so for the benefit of the investors the industry should try to maintain this ratio at higher level.

- As the Inventory Turnover Ratio was stable during the decade the plastic industry of Gujarat should try to promote sales.

- The Debtors Turnover Ratio showed declining trend during the decade. So the plastic industry of Gujarat should reduce the average collection period from the debtors.

- The Fixed Assets Turnover Ratio showed the rising trend. So the plastic industry of Gujarat must try to maintain the high level of Fixed Assets Turnover Ratio by concentrating on sales promotion.

- The Investment Turnover Ratios showed improvement in the last year 2009-10. So that the plastic industry of Gujarat can raise their capacity to increase the sales.

- The Debt-Equity Ratio showed a rising trend. It shows that the companies are taking advantages of Leverage or Trading on Equity for the interest of Shareholders.

- In terms of Interest Coverage Ratio the performance of plastic industry of Gujarat was very low during the decade. It shows that the earning capacity is not at the satisfactory level so the industry must try to increase its earning capacity.

- Ashish Polyplast, Promact, Shree Ram Multi-tech and Gopala need to improve overall financial performance in terms of Liquidity, Profitability, Activity and Solvency.

- Plastic industry of Gujarat has ample scope for trading on equity.

- There is a scope for improvement for the plastic industry of Gujarat in Return on Net Worth and Inventory Turnover Ratio.