

Financial Performance of Steel Industry in India

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ABSTRACT

Steel is considered to be the backbone for the development of modern economy and human civilization. The level of consumption of steel is considered as a vital index to measure the socio-economic development and standard of life of people of the country. This product is the outcome of the large and technological complex industry poisoning in terms of material flows and incomes that are strong. The economic status of industries is strong ended by the existence of strong steel industry and the development of these industries at the initial stage is shaped by the steel industries. Industrial sector has made rapid steps with the help of steel industry using it as a vanguard. The latest technology used by the green field plant has increased the output and the industry has improved the global economy. The new plants have also brought a great regional dispersion in the western region and earned the domestic supply position. The domestic steel industry has faced new challenges and due to the high cost of commissioning of new projects, the developed markets face many problems. The domestic demand too has not improved to significant level. The litmus test of the steel industry will be to surmount these difficulties and remain globally competitive.

1. History of steel

Even the period of Christ is termed as iron age as iron was broadly used in the nooks and corner of the world and in 202 BC steel was discovered by the Chinese under the reign of Han dynasty. People were able to find out a stronger and harder material than iron called steel with the changes of time and technology. The works that iron could not, were achieved with steel which is in the combination of iron and carbon. Steel was invented by the Chinese. Steel has many advantages providing ways to make weapons and sword, made of steel used by the emperors. The iron made of steel was spread to India and the high quality steel was produced in south India as early as 300 BC. About 9th century AD the smiths in the middle east developed techniques to produce strong and flexible steel. Steel and a big part of it was exported from Asia only. The new process of cementation of steel was popularized in Europe in 17th century and other new improved technologies were grandly developed and some become a vital factor in which the economy of the world started depending and growing.

2. Statement of the problem

Growth of any industries can be designated by the financial performance of indicators. It is true in the case of steel industry as well. The financial performance of any organization is influenced by several factors like capital structure, cost, revenue and the consequential profit margin. Financial performance of steel industry can be studied with many aspects like financial facts, financial ratios, financial health, financial strength and utilization of assets, etc. The financial performance can be influenced by the operational and financial efficiency of the steel industry, which are related to cost and the revenue aspects. The best indicators of the financial performance are return on assets, sales, equity and other financial variables. Thus, the problem related to the financial performance of the steel industry is interlinked to many aspects

like cost, revenue, capital, assets and other related variables. If the analysis made on all the aspects related to the steel industry gives a clear cut picture about the financial performance, it can be used for policy decisions for its future development. In this connection, the researcher has analyzed the performance of steel industry in India on the parameters such as profitability, utilization of assets, growth of performance, financial strength and capital structure. The researcher has also attempted to identify the nature of relationship between the various aspects of financial performance.

3. Objectives of the study

The research entitled "A Study on Financial Performance of Steel Industry in India" has the following objectives;

- To study the growth of the steel industries in the world and in India.
- To examine the short-term and long-term financial solvency, profitability and growth performance of the steel industries in India.
- To measure the impact of capital structure on the profitability of the steel industries.
- To measure the impact of utilization of assets on the profitability of the steel industries in India.
- To examine the short-term and long-term financial strengths and overall financial health of the steel industries in India; and
- To offer suggestions for enhancement of financial performance of the steel industries in India.

4. Hypotheses

In order to fulfill the above objectives the following hypothesis were formulated to analyse the financial performance of steel industry in India.

- There is no significant variation in liquidity ratios of steel industry;
- There is no significant variation in debt-equity ratios of steel industry;
- There is no difference in variance and profit performance of steel industry;
- Profitability does not depend on the capital structure of steel industry;
- Profitability does not depend on the efficient utilization of assets in steel industry;
- There is no significant variation in the financial strength of steel industry.

5. Methodology of the study

The study is about financial performance so it deals with the secondary data. The required data were collected from the published and unpublished financial records of companies in steel industry in India and Capitaline database. The further information needed for the study was also gathered through the various magazines, books, journals and unpublished thesis.

India is one of the important steel producing countries in the world with more than 120 million tonnes production and annual growth rate of more than 8 percent. In India based on revenue earned by the companies, top 500 companies have been ranked by the Economics Times Magazine, from those 500 companies researcher has chosen the steel companies alone for the study. In the year, 2012 among top 500 companies, 26 steel companies are placed, and that companies have been taken as universe. Out of 26 steel companies due to the time constraints to the researcher only 10 companies have been chosen randomly for the study. Accordingly the following companies were chosen for the study;

1. Steel Authority of India Limited (SAIL)
2. Tata Steel Limited (TSL)
3. Uttam Galva Steels Limited (UGSL)
4. JSW Steel Limited (JSW)
5. Jindal Stainless Limited (JSL)
6. Essar Steel Company
7. Bhushan Steel Ltd (BSL)
8. Rhastrya Steel Company
9. Sunflag Iron & Steel Company Limited
10. Surya Roshni Limited

6. Frame work of analysis

The secondary data have been organized and presented in the form of tables which consist of various financial data and ratios. Various statistical techniques, such as mean, standard deviation, variance, correlations co-efficient, compound growth rate, multiple regression, ANOVA, Correlation, F-max Test, Altman's 'Z' Score analysis, DuPont analysis have been used for analyzing and interpreting the data.

7. Period of the study

The present study covers a period of ten years from 2003-04 to 2012-13. The financial data for ten years were compiled from the annual reports of respective companies in steel industries in India.

8. Scope of the study

The present study was confined and highlights, the financial performance of the steel industry in India through facts of published financial data. The financial performance of the steel industry was evaluated on the parameters like profitability, utilization of assets, growth of performance, financial strength and financial health.

9. Limitations of the study

- The reliability of the study depends on the accuracy of data collected. The present study is based on the published secondary data, hence the limitations of the published financial statement limitations may be applicable to this study as well.
- The study covers a period of ten years from 2003-04 to 2012-13. So happening prior and after the study period is not considered.
- The study concentrates only on the analysis of quantitative financial data. The emerging trends in qualitative aspects of steel industry have not been taken into consideration.
- The present study is largely based on ratio analysis, which has its inherent limitations.

10. Findings

Trend and growth of financial elements of the steel companies

Among the selected companies Sunflag steel units had registered lowest CGR value of 11.63 percent during the study period. It clearly reveals that the company had not increased their shareholders' fund by way of either direct or indirect.

Among the selected companies most of the companies current liability registered CGR value in the range of 18 percent to 23 percent except JSW and SAIL steel units.

JSW steel company's current liability CGR value was higher with value of 36.89 percent it may cause of liquidity problem in the company but in the case of SAIL company CGR value was 13.66 percent, they concentrated on only on shareholders funds and again it may lead to lesser return to the shareholders in the company.

In the case of Jindal steel unit total debt CGR value was 33.64 percent at 1 percent level of significance. Further the analysis shows that the R^2 value 0.950, which shows that 95.0 percent variation in dependent variable, is explained by independent variable. Among the selected companies Surya Roshnisteel unit's total debt had registered lowest CGR value with 14.00 percent during the study period.

In the case of JSW, which had the highest CGR value in respect of current assets among the selected companies, the value of 'b' is 0.283, which shows that current assets had increased at an absolute rate of 28.3 percent.

Among the selected companies, most of the companies total assets has registered CGR value in the range of 22 percent to 28 percent except TATA, Bhushan, Rastrya, Sunflag and Surya steel units. Bhushan steel company's total assets CGR value was higher with value of 46.23 percent.

Financial Performance

The analysis indicated that the overall situation regarding the current ratio was better in Surya Roshni (7.27), Rhastrya (3.13), Sunflag (2.83) and Bhushan (2.61) steel companies because the average current ratio of these companies were above the standard rate. It is concluded from the ANOVA analysis, that there is a significant difference between the mean current ratios of the selected steel companies.

The analysis concluded that the quick ratio of Surya Roshni steel company (3.48) was better than all other companies throughout the period of study, followed by Rhastrya (2.38), Sunflag (1.45) and SAIL (1.19). From the ANOVA analysis, it is concluded that there is a significant difference between the mean quick ratios of the selected steel companies.

Inventory turnover ratio of selected companies showed better in JSW (9.31) followed by Tata Steel (8.92), Surya Roshni (7.59) and Sunflag (6.30). ANOVA analysis of Inventory turnover ratio concluded that there is a significant difference between the mean inventory turnover ratios of the selected steel companies.

From the analysis, it is concluded that the Debtors Turnover ratio of Rhastrya steel company (63.59) was better than all other companies throughout the period of study, followed by Tata (41.77), JSW (31.34) and Essar (22.68). From the ANOVA analysis, it is concluded that there is a significant difference between the mean debtors turnover ratios of the selected steel companies.

Fixed assets turnover ratio of selected steel companies showed better in Surya Roshni (2.26) followed by Uttam Galva Steel (2.21), Sunflag (1.61) and Jindal (1.47). ANOVA analysis of Inventory turnover ratio concluded that there is a significant difference between the mean inventory turnover ratios of the selected steel companies.

From the analysis, it is found that the Debt-Equity ratio of Essar steel company (3.18) was better than all other companies throughout the period of study, followed by Jindal (3.04), Bhushan (2.66) and Uttam Galva (2.06). From the ANOVA analysis, it is concluded that there is a significant difference between the mean debt-Equity ratios of the selected steel companies.

Assets to Equity Ratio of selected companies showed better in Jindal (4.06) followed by Bhushan (3.72), Essar Steel (3.66), SuryaRoshni (3.16) and Uttam Galva (3.13). ANOVA analysis of Assets to equity ratio concluded that there is a significant difference between the mean Assets to Equity ratios of the selected steel companies.

Return on Shareholders Fund of steel Companies during the study period showed lesser average in Essar steel

company with 8.62 percentages, whereas Surya Roshni Steel Company, Sunflag steel company and Jindal steel company were registered 11.81, 12.16 and 13.54 percentages respectively. SAIL achieved the highest average value of 34.37 followed by TATA steel company with a value of 28.38 percentages. The ANOVA analysis concluded that there is a significant difference between the mean Return on Net Worth ratios of the selected steel companies.

From the analysis, it is found that the Net profit margin ratio of Tata steel company (34.70) was higher than all other companies throughout the period of study, followed by SAIL (22.00), Rhastrya (21.20) and JSW (18.80). From the ANOVA analysis, it is concluded that there is a significant difference between the mean Net profit margin ratios of the selected steel companies.

Return on capital ratio of selected steel companies showed higher in SAIL (31.89) followed by Tata Steel (28.49), Jindal (18.16) and Rhastrya (17.36). ANOVA analysis of Return on capital ratio concluded that there is a significant difference between the mean Return on Capital Employed ratios of the selected steel companies.

It is evident from the F_{max} test for Homogeneity concluded that the null hypothesis (H_0) of the equality of group variance was rejected as calculated F_{max} statistics values exceeded the critical value of F_{max} in selected companies in India at 5 percent level of significance. Thus, it was concluded that there was an evidence of difference in the variances in case of the companies under the steel industry in India during the study period. It was further concluded that the analysis of three areas of profit performance indicated that the data for the steel companies were not homogenous. Therefore, there were differences in the profit performance of steel companies in India.

Relationship between the Ratios

In case of SAIL, the current ratio had a significant correlation with quick ratio since its correlation coefficient was 0.855. It had negative correlation with debtor turnover and inventory turnover ratio with correlation coefficients of -0.434 and -0.642 respectively. Further it had positive correlation with fixed assets turnover ratio with correlation coefficient of 0.693 at 5 percent significant level. Quick ratio had strongly positive correlation with fixed assets turnover ratio with correlation coefficient of 0.704 at 5 percent significant level. The inventory turnover ratio had a significant strong correlation with debtors' turnover ratio with its coefficient of 0.833 at 1 percent significant level.

The current ratio of Tata Steel had a very strong correlation with quick ratio since its correlation coefficient was 0.999. It had negative correlation with inventory turnover ratio with correlation coefficients of -0.072. Further this ratio had positive correlation with debtor turnover and fixed assets turnover ratio with a correlation coefficient of 0.071 and 0.183. Quick ratio of Tata Steel had positive correlation with debtor turnover and fixed assets turnover ratio with correlation coefficient of 0.048 and 0.163. The inventory turnover ratio had insignificant strong correlation with debtors' turnover ratio and fixed assets

turnover ratio with its coefficient of -0.537 and -0.498 respectively.

In case of Uttam Galva, the current ratio had a very strong correlation with quick ratio since its correlation coefficient was 0.702. The quick ratio also had a positive correlation with inventory turnover ratio with correlation coefficients of 0.646. The debtors' turnover ratio and fixed assets turnover ratio were very strong positive correlation with correlation coefficient of 0.781 at 1 percent significant level.

Current ratio of JSW Steel shows significant correlation with inventory turnover ratio since its correlation coefficient was 0.964 and 0.325 respectively. The debtors' turnover ratio and fixed assets turnover ratio were positively correlated with correlation coefficient of 0.663 at 5 percent significant level.

In Jindal Steel Company, the current ratio had a very strong correlation with quick ratio since its correlation coefficient was 0.778 at 1% significant level. The inventory turnover ratio had a significant strong correlation with debtors' turnover ratio and fixed assets turnover ratio with its coefficient of 0.904 and 0.903 respectively, which shows 1% significant level.

The current ratio of Essar Steel Limited had a very strong correlation with quick ratio since its correlation coefficient was 0.898 at 1% Significant level. Correlation between quick ratio and inventory turnover ratio also strong with the correlation coefficient of 0.637 at 5% significant level. The inventory turnover ratio had a significant strong correlation with fixed assets turnover ratio with its coefficient of 0.487 and negative correlation with debtors' turnover ratio with the coefficient of -0.537.

Current ratio of Bhusan steel had a significant correlation with quick ratio and debtors' turnover ratio since its correlation coefficient was 0.710 and 0.088, which were significant at 5% and 1% respectively. Inventory Turnover Ratio had a positive correlation with fixed assets turnover ratio with the correlation coefficient of 0.840 at 1% significant level.

In Rastrya Steel Company had a significant correlation between quick ratio with the correlation coefficients value of 0.992 at 1% significant level. Further Inventory Turnover Ratio had a significant negative correlation with Fixed Assets Turnover Ratio at 5% level. Moreover a positive correlation found between debtors' turnover ratio with the correlation coefficient of 0.320.

Current ratio of Sunflag Steel Company had a very strong correlation with the quick ratio since its correlation coefficient was 0.869 at 1% significant level. The quick ratio had a positive correlation with inventory turnover ratio and debtors' turnover ratio with correlation coefficients of 0.193 and 0.019. The inventory turnover ratio had a significant strong correlation with debtors' turnover ratio with its coefficient of 0.375 and negative correlation with fixed assets turnover ratio with the coefficient of -0.097. The debtors' turnover ratio and fixed assets turnover ratio were positive correlation with correlation coefficient of 0.415.

In Surya Roshni Steel company, the current ratio had a very strong correlation with quick ratio since its correlation coefficient was 0.843 at 1% significant level. The quick ratio had a negative correlation with fixed assets turnover ratio and debtors' turnover ratio with correlation coefficients of -0.118 and -0.034. The inventory turnover ratio had a significant correlation with debtors' turnover ratio with its coefficient of 0.021 but this correlation is weak. Further this ratio also has a positive correlation with fixed assets turnover ratio with the coefficient of 0.725 at 5 percent significant level.

Impact of Financial Ratios on Profitability

In case of SAIL, the current ratio, quick ratio and inventory turnover ratios were positively influenced the Return on Equity (ROE) but debtors' and fixed assets turnover ratio has negatively influenced the ROE. The coefficient of determination of performance variable of ROE was 0.982 at 1 percent significant level. It means a change in return on equity (ROE) was explained by independent variables to the extent of 98.2 percent. The F statistics and Durbin Watson coefficient were 1 percent level of significant.

In case of Tata steel, the coefficient of determination of performance of variables namely returns on sales and returns on equity were 0.52 and 0.89 respectively. This conveyed that the change in performance variables, namely ROS and ROE were explained by independent variables to the magnitude of 52 percent and 89 percent respectively. The F statistics and Durbin Watson coefficient were not significant in ROS but it's significant at 5 percent in ROE.

The current ratio, debtors' and fixed assets turnover ratios positively influenced the Return on Equity (ROE) but quick ratio and inventory turnover ratio has negatively influenced the ROE in Uttam Galva Steel company. The coefficient of determination of performance variable of ROE was 0.952 at 5 percent significant level. It means a change in return on equity (ROE) was explained by independent variables to the extent of 95 percent. The F statistics and Durbin Watson coefficient were 5 percent level of significant in ROE but in ROS it was insignificant.

In case of JSW Steel Company, the coefficient of determination of performance of variables namely returns on sales and returns on equity were 0.664 and 0.926 respectively. This conveyed that the change in performance variables, such as ROS and ROE were explained by independent variables to the magnitude of 66 percent and 93 percent respectively. The F statistics and Durbin Watson coefficient were significant at 5 percent level in ROS and ROE.

In case of Jindal Steel Company, the quick ratio and fixed assets turnover ratios positively influenced the Return on Equity (ROE) but the current ratio, inventory and debtors' turnover ratio has negatively influenced the ROE. The coefficient of determination of performance variable of ROE was 0.742. It means a change in return on equity (ROE) was explained by independent variables to the extent of 74 percent. The F statistics and Durbin Watson coefficient were 5 percent level of significant in ROE and ROS.

The current ratio, inventory and fixed assets turnover ratios positively influenced the Return on Equity (ROE) but the quick ratio and debtors' turnover ratio have negatively influenced the ROE in Essar Steel Company. The coefficient of determination of performance variable of ROE was 0.821. It means a change in return on equity (ROE) was explained by independent variables to the extent of 82 percent. The F statistics and Durbin Watson coefficient were 5 percent level of significant in ROE and 1 percent significant level in ROS.

In case of Bhushan steel company, the current ratio, debtors and fixed assets turnover ratios positively influenced the Return on Equity (ROE) but the quick ratio and inventory turnover ratio have negatively influenced the ROE. The coefficient of determination of performance variable of ROE was 0.706. It means a change in return on equity (ROE) was explained by independent variables to the extent of 71 percent. The F statistics and Durbin Watson coefficient were 5 percent level of significant in ROE and ROS.

In case of Rhastrya steel, the coefficient of determination of performance of variables namely returns on sales and returns on equity were 0.712 and 0.876 respectively. This conveyed that the change in performance variables, namely ROS and ROE was explained by independent variables to the magnitude of 71 percent and 88 percent respectively. The F statistics and Durbin Watson coefficient were not significant in ROS but it's significant at 5 percent in ROE.

The coefficient of determination of performance of variables namely returns on sales and returns on equity were 0.700 and 0.676 respectively in Sunflag Steel. This conveyed that the change in performance variables, namely ROS and ROE was explained by independent variables to the magnitude of 70 percent and 68 percent respectively. The F statistics and Durbin Watson coefficient were not significant in both ROS and ROE.

In case of Surya Roshni, the current ratio and inventory turnover ratios negatively influenced the Return on Equity (ROE) but the quick ratio, fixed assets and debtors' turnover ratio have positively influenced the ROE. The coefficient of determination of performance variable of ROE was 0.845. It means a change in return on equity (ROE) was explained by independent variables to the extent of 85 percent. The F statistics and Durbin Watson coefficient were 5 percent level of significant in both ROE and ROS.

Financial Strength of the Selected Companies

The short-term financial strength of the Surya Roshni steel company was comparatively better than those of the other selected steel companies under the study since the average of the current ratio and the quick ratio were 7.27 times and 3.48 times respectively. The short-term financial position of the Bhushan steel, Rhastrya and Sunflag steel companies were also good since the quick ratio and current ratios of these companies had registered more than standard rates of 2 times in current ratio and 1 time in quick ratio. In SAIL, the average current ratio was much close to the standard ratio of 2 times and the average quick ratio was 1.50 times which indicated that the short-term financial strength of SAIL was fair. The short-

term financial strength of TATA, Uttam Galva, JSW and Jindal steel companies was not found to be satisfactory since its current ratio and quick ratio were less than the standard rates.

The long Term Financial strength was analyzed with the help of Debt-Equity ratio, Fixed assets to net worth ratio and fixed assets to total debt ratio. Regarding the debt-equity ratio, Essar steel company stood first with average of 3.18 times, followed by Jindal Steel company with an average of 3.04 times, Bhushan Steel with an average of 2.66, Surya Roshni with the average of 2.10 times. Among the selected companies Rhastrya steel company registered low debt-equity ratio. This implied that Essar steel company was highly levered, followed by Jindal, Bhushan, Surya Roshni, Uttam Galva and JSW. Companies whereas Rhastrya and Tata have low rely levered followed by the SAIL and Sunflag.

The average fixed assets to the net worth ratio of Jindal were 4.06 times, followed by Bhushan 3.72 times, Essar Steel 3.66, Surya Roshni 3.16, Uttam Galva 3.13 times and JSW is 2.59 times. This indicates that in these companies the fixed assets were mostly financed by owners' funds significantly, whereas other companies have financed to their fixed assets mostly from debt source. The Fixed assets to total debt ratio was high in the case of Rhastrya with ratio of 14.20 times and lowest in the case of Surya Roshni.

The above analysis clearly indicates that the long-term financial strength of Jindal steel company was good followed by Rhastrya and Uttam Galva, further other companies have to improve their long-term financial strength.

Financial Health of the Selected Companies

In SAIL, the Debt has increased from 8690.06 crores in the year 2003-04 to 21596.95 crores in the year 2012-13, whereas the Equity has not showing changes during the study period. Further Retained earnings amount has been showing positive changes from Rs. 907.27 crores to Rs. 36894.11 crores. The average of EBIT was Rs. 49018.63 crores and sales were Rs.36971.03 crores. The financial health of the company was found to be healthy since the Z score values during the study period were more than 2.66 which is standard 'Z' Score value.

In TATA, the debt has decreased from 3382.21 crores in the year 2003-04 to 27507.79 crores in the year 2012-13 and further the total assets also has shown tremendous changes during the study period. Further Retained earnings amount has been showing positive changes from Rs. 4146.68 crores to Rs. 54238.27 crores. The financial health of the company was very sound in initial period under study i.e. 2003-04 to 2007-08 since the Z score values during these years were above 2.66. The financial health of the company was good in second half of the study period but likely to sick since Z score value was around 2.66.

The Uttam Galva Company, the Debt had increased gradually from Rs.399.97 crores in the year 2003-04 to 2388.85 crores in the year 2012-13, and Equity has also shown positive changes during the study period. The average of EBIT, Sales, Working Capital and Total Assets were Rs. 3779.19 crores, Rs. 3576.44 crores, Rs. 202.75 crores and Rs. 2130.53

crores respectively. The working capital movement was not positive during the study period and its average amount showed negatively. The financial health of the company was very good throughout the period under study since the Z score value of company was more than 2.66.

The Debt of JSW steel company had increased gradually from Rs.4787.03 crores in the year 2003-04 to Rs.17908.36 crores in the year 2012-13, whereas Equity showed negative changes during the study period. Further Retained earnings amount has been showing positive changes from Rs. -131.9 crores to Rs.19374.19 crores. The average of EBIT, sales and total assets were Rs. 15498.91 crores, Rs. 15893.16 crores and Rs.18948.78 crores respectively. The working capital movement was not positive during the study period and its average amount showed negatively. The financial health of the company was very sound in all the years except in the year 2003-04 (2.469), since the Z score values during these years were above value of 2.66. The financial health of the company was good in second half of the study period.

The Jindal steel company showed positive value of all the components of Z Score during the study period, the debt had increased gradually from Rs.781.04 crores in the year 2003-04 to Rs. 10900.37 crores in the year 2012-13, and equity has shown positive changes during the study period. In addition retained earnings amount has been showing positive changes from Rs. 537.25 crores to Rs.1435.03 crores. The financial health of the company was healthy but from the year 2006-07 the financial health had came down since the Z score values of these years had decreased from 6.084 in the year 2006-07 to 4.497 in the year 2012-13. But generally financial health of the company was found to be too health since the Z score values during the study period were more than standard value for healthy companies 2.66.

Among the components of Z score all the variables showed positive average amount in Essar Steel Company but the component called working capital showed negative value in the year 2012-13. The debt had been increasing gradually from Rs.5290.63 crores in the year 2003-04 to Rs.29650.45 crores in the year 2012-13, and equity showed positive changes during the study period. The average of EBIT, sales and total assets were Rs.11616.49 crores, Rs. 10069.12 crores and Rs.19437.27 crores respectively. The financial health of the company was healthy but from the year 2009-10 to 2012-13 the financial health was critical since Z score value was less than standard value of 2.66. Hence, this company financial viability was considered to be healthy. The failure in this situation is uncertain to predict.

Among the components of Z score all the variables showed positive average amount in Bhusan steel company but the component called working capital showed negative value in the year 2012-13. The debt has increased gradually from Rs.930.61 crores in the year 2003-04 to Rs. 28523.39 crores in the year 2012-13, and equity showed positive changes during the study period. The financial health of the company was healthy but from the year 2009-10 the financial health was critical since Z score value was less than standard value of 2.66 but more than 1.86. Hence, this company financial viability

was considered to be healthy. The failure in this situation is uncertain to predict.

The Rhastrya steel company showed positive value of all the components of Z Score during the study period, the debt increased from Rs.1187.25 crores in the year 2003-04 to Rs. 2575.14 crores in the year 2012-13, further it showed irregular trend during the study period. The average of EBIT, sales and total assets were Rs. 13571.11 crores, Rs. 8462.49 crores and Rs.10738.44 crores respectively. The working capital movement was positive during the study period and this positive movement is almost four times increased comparing with first year under study. The financial health of the company was found to be too healthy since the Z score values during the study period were more than standard value for healthy companies 2.66.

The Sunflag steel company, the debt increased gradually from Rs.145.67 crores in the year 2003-04 to Rs. 501.29 crores in the year 2012-13. The average of EBIT, sales and total assets were Rs.1390.52 crores, Rs. 1104.85 crores and Rs.674.23 crores respectively. The working capital movement also was positive during the study period. The financial health of the company was healthy since Z score value was more than standard value of 2.66. Hence, this company financial viability was considered to be healthy.

In case of Surya Roshni, among the components of Z score all the variables showed positive average amount. The debt increased gradually from Rs.308.06 crores in the year 2003-04 to Rs. 857.26 crores in the year 2012-13, and equity showed positive changes during the study period. The average of EBIT, sales and total assets were Rs.2014.67 crores, Rs. 1609.54 crores and Rs.864.16 crores respectively. The financial health of the company was healthy since the Z score values during the study period were more than 2.66.

DuPont analysis elicited the ROE of the selected companies almost in all the companies ROE shows as declining trend. In case of Sail Steel company all the ratios decreased comparing to the first year under study in the year 2012-13. During the study period equity multiplier (net assets to net worth ratio) decreased hence return on equity and profit margin had decreased. But in Tata Steel company, the year of 2010-11 all the ratio expressed merely positive changes comparing to previous year but in the following year all the ratios fell down except sales to net assets hence it can conclude that Tata steel's return on equity was not constant level during the study period.

All the ratios of Uttam Galva shows fluctuating trend. During the study period equity multiplier decreased hence, return on equity and profit margin decreased. But in JSW Steel, the returns on equity was not constant level during the study period and its ROE value came down.

In the case of Jindal Steel company, equity multiplier had increased but return on equity and profit margin had decreased because of leverage declined during the study period. So it is concluded that the company's return was not satisfactory

during the study period hence it can be suggested that company has to increase the leverage and efficiency ratio.

During the study period equity multiplier and asset-efficiency ratio of Essar steel company was declined hence, return on equity (ROE) also decreased. Profit margin showed decreasing trend during the study period but ratio of profit after tax to profit before interest, dividend and tax showed bumpy trend through out the study period. Hence it can be concluded that this company's return on equity was not constant level during the study period.

In case of Bhusan steel company, the equity multiplier increased but return on equity decreased because of leverage declined during the study period. So it is concluded that the Bhusan steel's return was not satisfactory level during the study period hence it can be suggested that company has to increase the leverage and efficiency ratio.

During the year 2010-11, all the ratios of Rhastry steel showed downward trend comparing to previous year but in following year all the ratios fell down hence it can be concluded that this company's return on equity was not constant level during the study period. From the DuPont analysis, it is concluded that the Sunflag steel company's return was not satisfactory level during the study period hence it can be suggested that company has to increase the leverage and efficiency ratio.

During the study period, Surya Steel company's equity multiplier and asset-efficiency ratio had declined. Profit margin showed decreasing trend during the study period but ratio of profit after tax to profit before interest, dividend and tax showed increasing trend throughout the study period so that ROE value of this company had shown constant value throughout the study period. Hence it can be concluded that this company's return on equity was not constant level during the study period.

11. Suggestions

- It has been observed that the owner's capital was more than borrowed capital among the selected steel companies. Further, debt amount has declined significantly during the study period. Hence, the companies may tap debt market for issue bonds and debentures by keeping in view in market sentiments to raise funds. Thus it may help the steel companies to get the benefits of leverage in the long-run.
- It was found that the total assets of the selected steel companies were increased considerably but turnover ratio of the total assets was reduced at mean time. It resulted that correlation between these was negative. As a result, that the selected companies utilized their assets during the study period. Hence, the selected Indian steel companies must use their assets in fruitful manner.
- In some of the selected steel companies, the current ratio, quick ratio and the inventory turnover ratio positively influenced the return on equity. Hence, all other steel companies have to take up initiative to increase these ratios.

- It has been observed from the analyses working capital management of some of the steel companies was positive during the study period and the working capital amount average showed negative and it led to working capital shortage in the concerned companies, it is suggested that selected steel companies have to revisit the management of working capital for better financial management.
- It has been observed from the analysis about the financial health of the selected companies, financial healthiness of some of the steel companies came down. Hence it can be suggested that the selected steel companies have to re-examine the capital structure and capital employment.
- It is observed in the Surya steel company, the current ratio and inventory turnover ratio negatively influenced return on equity. This shows that the company has to maintain good current ratio and the inventory turnover ratio for improvement of return on equity.
- The Fixed Assets to Net Worth ratio in the TATA Company has showed that the margin of safety for long-term creditors has increased. It is suggested that the company have to increase share holders fund in order to increase fixed assets to net worth ratio. These will give confidents among the investors.
- It has been revealed that the selected steel companies did not invest adequate funds in the fixed assets. So, it is advisable to find the fixed assets of the selected companies in such a way to extract the maximum contribution out of investments in fixed assets.
- It has been noticed that the net profit of the selected companies was in variably not up to the mark during the periods of study so, a strong pitch has to be made to see that the companies earth fare return on their investment so as to maximize the wealth of the share holders.
- It has been revealed that the liquidity position of the selected companies' profit were satisfactory. So, these companies shall estimate the capital need properly.
- Improvement in the distribution system, of the government agencies would go a long way in ensuring proper management of the working capital and improving profitability.

12. Conclusion

Analysis of the financial performance and its interpretation are the need of the hour in all industries across the world. Steel plays a vital role in offering more employment opportunities to the rural people and it is an important parameter to measure the economic growth. Hence it deserves a planned and continuous attention from the various stake holders. The present study has brought out the various facts about the financial performance of Indian steel industry. The suggestions made in the study are of immense use for the policy makers to make appropriate decision for mitigating the financial problems and to better financial performance. In order to compete with global economic scenario and to sustain its place, steel industry needs to monitor its financial performance continually and take financial decisions rationally. This, in turn, requires sound appraisal of financial management with critical

evaluation of the financial policies. The steel industry should resort to tapping of bond market to get the required financial assistance. The steel industry, being a capital intensive in nature should follow the cluster model, to reap the economies of large scale production. This model included sharing of infrastructure

technology and manpower amongst the companies of the steel industry. Further, the steel industry must evaluate its capital budgeting decisions so that the fixed assets are economically procured and efficiently utilized.

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