AN ANALYSIS OF FINANCIAL PERFORMANCE OF STEEL AUTHORITY OF INDIA LTD., SINCE 2005

ABSTRACT

SUBMITTED FOR THE AWARD OF THE DEGREE OF

Doctor of Philosophy
In
Commerce

BY
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UNDER THE SUPERVISION OF
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ALIGARH (INDIA)
2016
ABSTRACT

INTRODUCTION

In 21st century business firms exist in a world of rapid changes characterized by various changes like High-growth markets, financial crisis, technological advances, stiff competition, innovation etc. In such a complex and rapidly changing corporate environment, a firm will not be able to survive in the long-run if its financial performance is not sound in all respects. Profit earning is necessary to meet various expenses occurring in the business. In the words of Keynes, “Profit is the engine that drives the business enterprise”. The efficiency of a business is measured by the amount of profit earned by it. Therefore, an evaluation is done from time to time to assess the efficiency of operations and the profitability of the organization. This evaluation is called financial analysis or financial performance analysis. But profit maximization as an objective of a firm has been criticized by many scholars and is considered as traditional objective of the firm while wealth creation or value creation for the shareholders is considered as the modern objective of the firm. Therefore, another technique to assess the financial performance of an enterprise is value added techniques like Economic Value Added and Market Value Added

The Indian steel industry is one of the most important industries in India. Indian became fourth largest steel producing country in the world in the year 2014-15 with the production of 91.46 million tonnes (MT) of finished steel, a growth of 4.3% over 2013-14 and is expected to become the second-largest producer by 2016. The steel sector in India employs over 6,00,000 people. The per capita consumption of total finished steel in the country has risen from 51 Kg in 2009-10 to about 59 Kg in 2014-15.

Steel Authority of India Limited (SAIL) is one of the largest public sector steel making company based in New Delhi, India. It is India's largest steel producing company and one of the top steel makers in world with an annual turnover of Rs. 50,627 crores in the year 2014-15 (SAIL, n.d.). SAIL has five integrated steel plants, three special plants, and one subsidiary in different parts of the country.
The present study has been conducted to evaluate financial performance of Steel Authority of India Limited, which is a public sector enterprise in Indian steel Industry and largest steel producer in India.

STATEMENT OF THE PROBLEM

Currently, domestic steel industry is facing new challenges related to huge capital investment, Shortage of metallurgical coal, Inferior quality of products, Lack of Technology, Low Productivity and Inefficiency of public sector units. Most of the public sector units are overwhelmed by inefficiency caused by heavy investment on social overheads, poor labour relations, inefficient management, underutilization of capacity, etc. This hinders proper functioning of the steel plants especially with increasing competition and limited resources in the present world of liberalized economy. In recent time, a number of financial problems are faced by public sector enterprises (PSEs) which require analytical studies related to their financial performance. The main purpose of the present study is to look into the operational activities and financial efficiency of steel manufacturing and trading sector of India with special reference to Steel Authority of India Limited. The present study is a doctoral thesis entitled, “AN ANALYSIS OF FINANCIAL PERFORMANCE OF STEEL AUTHORITY OF INDIA LTD., SINCE 2005” which has been undertaken with a view to highlight the importance of an efficient financial management in a public sector steel company SAIL.

RESEARCH GAP

Enormous work has been done in the area of financial performance analysis in the past. Most of the studies have been done in other sector of the economy regarding their financial performance. Some studies have been conducted on the financial performance analysis of companies in Indian steel industry, a few studies have been conducted on financial analysis in Indian public sector steel companies and a few comparative studies have been conducted between SAIL and other Indian Steel companies but no particular study have been made on SAIL regarding its financial performance especially using advance performance measures like EVA & MVA. Also no study has considered Industry average ratios as benchmark ratios in Indian Steel Industry. Hence, in the present study, the researcher has made an attempt to evaluate
the financial performance of one of the major public sector steel company of India, Steel Authority of India Limited, using both traditional techniques of ratio analysis as well as advance techniques of value addition. Further, financial ratios of SAIL have also been compared with the industry average ratios that have been used as benchmark ratios in the present study. Therefore, through the present study the researcher has attempted to fill the gap of research in this specific area of study

**OBJECTIVES OF THE STUDY**

The main objective of the present research is to evaluate the financial Performance of Steel Authority of India Limited. The Main objective of the study has been supported by the following specific objectives:

1. To analyse the financial position of SAIL with respect to liquidity, solvency, management efficiency, profitability, market valuation and value addition.
2. To assess the impact of liquidity, solvency and management efficiency on traditional performance measures of SAIL.
3. To investigate the impact of liquidity, solvency and management efficiency on advance performance measures of SAIL.
4. To examine the relationship of traditional and advance performance measures with Market Value Added (MVA) of SAIL.
5. To examine the relation between Economic Value added and traditional performance measures of SAIL.
6. To assess financial strength of SAIL with the help of comparison of Company’s ratios with industry average ratios.
7. To summarise the main findings of the study and to offer suggestions, if any, for improving the performance of the company under study.

**HYPOTHESES OF THE STUDY**

For studying the above objectives, the following null hypotheses have been framed. The proposed hypotheses have been framed in the light of prior theoretical and empirical literature.
Hypotheses of the study (Multiple Linear Regression analysis)

H0₁: There is no significant impact of Liquidity on Financial performance of SAIL.

H0₁a: There is no significant impact of Current Ratio on Return on capital employed.

H0₁b: There is no significant impact of Current Ratio on Return on Assets.

H0₁c: There is no significant impact of Current Ratio on Economic Value Added.

H0₂: There is no significant impact of Solvency on Financial performance of SAIL.

H0₂a: There is no significant impact of Debt to Equity ratio on Return on capital employed.

H0₂b: There is no significant impact of Debt to Equity ratio on Return on Assets.

H0₂c: There is no significant impact of Debt to Equity ratio on Economic Value Added.

H0₃: There is no significant impact of Management Efficiency on Financial performance of SAIL.

H0₃a: There is no significant impact of Inventory Turnover ratio on Return on capital employed.

H0₃b: There is no significant impact of Inventory Turnover ratio on Return on Assets.

H0₃c: There is no significant impact of Inventory Turnover ratio on Economic Value Added.

H0₄: There is no significant impact of financial performance measures on Market Value Added of SAIL.

H0₄a: There is no significant impact of Return on Capital employed on Market Value Added.

H0₄b: There is no significant impact of Market to book Value ratio on Market Value Added.

H0₄c: There is no significant impact of Economic Value Added on Market Value Added.

Hypotheses of the study (Correlation analysis)

H0₅: There is no significant relation between traditional performance measures and Economic Value added of SAIL.
H05a: There is no significant relation between Return on Capital employed and Economic Value Added.

H05b: There is no significant relation between Return on assets and Economic Value Added.

H05c: There is no significant relation between Return on Equity and Economic Value Added.

H05d: There is no significant relation between Earnings per share and Economic Value Added.

Hypotheses of the study (One sample t-test)

H06: There is no significant difference between Profitability of SAIL and industry average profitability.

H06a: There is no significant difference between Return on Assets of SAIL and its industry average.

H06b: There is no significant difference between Return on Equity of SAIL and its industry average.

H07: There is no significant difference between Liquidity of SAIL and industry average Liquidity.

H07a: There is no significant difference between Current ratio of SAIL and its industry average.

H07b: There is no significant difference between Liquid ratio of SAIL and its industry average.

H08: There is no significant difference between Solvency of SAIL and industry average Solvency.

H08a: There is no significant difference between Debt to Equity ratio of SAIL and its industry average.

H08b: There is no significant difference between interest coverage ratio of SAIL and its industry average.

H09: There is no significant difference between Management Efficiency of SAIL and industry average Management Efficiency.

H09a: There is no significant difference between total assets turnover of SAIL and its industry average.

H09b: There is no significant difference between working capital turnover ratio of SAIL and its industry average.
RESEARCH METHODOLOGY OF THE STUDY

Research methodology briefly explains the sources of data, the techniques followed in analyzing the data and the period of study. Further, the variable used in the study and limitations of the study have also been dealt herein.

Research design

Analytical research design has been used in the present study where available facts and information have been used to analyze and to make critical evaluation of financial position of SAIL.

Nature and sources of data

The data pertaining to the present study were collected from the secondary sources only. Financial data of SAIL were collected from various published annual reports and financial statements of SAIL. The historical information relating to the Steel industry was extracted from the relevant published documents of the Ministry of Steel (GOI) and World steel association. The data on macro-economic variables were obtained from RBI, BSE, NSE and other Government websites of India. Besides these sources, data have also been extracted from Ace Equity and Indiastat databases.

Period of the study

The present study covers a period of ten years from 2005-06 to 2014-15. The ten year period has been chosen in order to have a fairly long and cyclically well balanced period.

Variables used in the study

The variables incorporated in the present study are divided into two categories: Financial ratios and value added measures. Financial ratios were used in the present study to analyze the financial performance of Steel Authority of India Limited under various categories i.e. liquidity, profitability, management efficiency, solvency and market valuation. Along with the traditional technique of financial ratio analysis, advanced value addition techniques in the form of Economic Value added (EVA) and
Market value Added (MVA), have been used to analyze the financial performance of SAIL during the study period.

**Tools & techniques for analysis**

For analyzing the data, statistical techniques like measure of central tendency, measures of dispersion, Pearson correlation analysis, multiple regression analysis, t test etc., have been used and hypotheses have been tested at confidence level of 95%.

The present study employed a multi-regression technique to analyze the impact of liquidity, solvency and management efficiency (explanatory variables) on profitability (explained variable) of SAIL. Multiple linear regression analysis has been conducted to analyze the impact of Liquidity, solvency and management efficiency on Economic Value Added (EVA) of SAIL. Multiple linear regression analysis was conducted to analyze the impact of traditional performance measures (Profitability and market valuation) and advanced performance measures (EVA) on Market value Added (MVA) of SAIL. Correlation technique, which is complementary to regression analysis, was used to test the relationship between the Economic value added and traditional performance measures and to check for the multicollinearity problem in OLS models. In addition, one sample t-test was conducted to analyze if there was any significance difference between financial ratios of SAIL and their Industry averages during the study period. Furthermore, t-test has been conducted to analyze the significance of regression coefficients and $F$-test was used to test the overall significance of the estimated regression coefficients and to test the significance of $R^2$.

**ORDINARY LEAST SQUARE REGRESSION MODELS**

The study employed time series regression techniques to analyze the impact of independent variables on financial performance measures (dependent variables) of Steel Authority of India Limited. Ordinary Least Square technique of regression has been used to estimate the regression line.

**Model 1:** This financial performance analysis model has been used to test the influence of liquidity, solvency and management efficiency on profitability of SAIL during study period. Profitability (dependent variable) has been used as a traditional
performance measure of financial performance. The variables used in the model have been proxied by selected ratios. The estimated equation is as follow:

\[ ROCE_t = \beta_0 + \beta_1 CR_t + \beta_2 DER_t + \beta_3 ITR_t + \epsilon_t \]

Where,

- \( ROCE_t \) = Return on Capital Employed at time \( t \) (Profitability)
- \( CR_t \) = Current Ratio at time \( t \) (Liquidity)
- \( DER_t \) = Debt to Equity Ratio at time \( t \) (Solvency)
- \( ITR_t \) = Inventory turnover ratio at time \( t \) (Efficiency)
- \( \beta_0 \) = Intercept.
- \( \beta_1 - \beta_3 \) = Coefficients of the explanatory variables.
- \( \epsilon_t \) = stochastic error term at time \( t \).

**Model 2:** This financial performance analysis model has been used to test the influence of liquidity, solvency and management efficiency on profitability of SAIL during study period. Profitability (dependent variable) has been used as a traditional performance measure of financial performance. The variables used in the model have been proxied by selected ratios. The estimated equation is as follow:

\[ ROA_t = \beta_0 + \beta_1 CR_t + \beta_2 DER_t + \beta_3 ITR_t + \epsilon_t \]

Where,

- \( ROA_t \) = Return on Assets at time \( t \) (Profitability)
- \( CR_t \) = Current Ratio at time \( t \) (Liquidity)
- \( DER_t \) = Debt to Equity Ratio at time \( t \) (Solvency)
- \( ITR_t \) = Inventory turnover ratio at time \( t \) (Efficiency)
- \( \beta_0 \) = Intercept.
- \( \beta_1 - \beta_3 \) = Coefficients of the explanatory variables.
- \( \epsilon_t \) = stochastic error term at time \( t \).

**Model 3:** This financial performance analysis model has been used to test the influence of liquidity, solvency and management efficiency on Economic Value Added (EVA) of SAIL during the study period. EVA (dependent variable) has been used as a Advanced performance measure of financial performance. The independent variables used in the model have been proxied by selected ratios. The estimated equation is as follow:
\[ EVA_t = \beta_0 + \beta_1 CR_t + \beta_2 DER_t + \beta_3 ITR_t + \varepsilon_t \]

Where,
- \( EVA_t \) = Economic Value Added at time \( t \)
- \( CR_t \) = Current Ratio at time \( t \) (Liquidity)
- \( DER_t \) = Debt to Equity Ratio at time \( t \) (Solvency)
- \( ITR_t \) = Inventory turnover ratio at time \( t \) (Efficiency)
- \( \beta_0 \) = Intercept.
- \( \beta_1 - \beta_3 \) = Coefficients of the explanatory variables.
- \( \varepsilon_t \) = stochastic error term at time \( t \).

**Model 4:** This financial performance analysis model has been used to test the influence of Economic Value Added, Profitability and Market valuation on Market Value Added (MVA) of SAIL during study the period. MVA (dependent variable) has been used as advanced performance measure of financial performance while Profitability and Market valuation have been proxied by selected ratios in the model. The estimated equation is as follow:

\[ MVA_t = \beta_0 + \beta_1 EVA_t + \beta_2 ROCE_t + \beta_3 MBR_t + \varepsilon_t \]

Where,
- \( MVA_t \) = Market Value Added at time \( t \)
- \( EVA_t \) = Economic Value Added at time \( t \)
- \( ROCE_t \) = Return on Capital Employed at time \( t \) (Profitability)
- \( MBR_t \) = Market to Book Value Ratio at time \( t \) (Market Valuation)
- \( \beta_0 \) = Intercept.
- \( \beta_1 - \beta_3 \) = Coefficients of the explanatory variables.
- \( \varepsilon_t \) = stochastic error term at time \( t \).
### SUMMARY OF HYPOTHESES TESTING

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H0₁:</strong> There is no significant impact of Liquidity on Financial performance of SAIL.</td>
<td></td>
</tr>
<tr>
<td><strong>H₀₁ₐ:</strong> There is no significant impact of Current Ratio on Return on Capital Employed.</td>
<td>Accepted</td>
</tr>
<tr>
<td><strong>H₀₁₉:</strong> There is no significant impact of Current Ratio on Return on Assets.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H₀₁₇:</strong> There is no significant impact of Current Ratio on Economic Value Added.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H₀₂:</strong> There is no significant impact of Solvency on Financial performance of SAIL.</td>
<td></td>
</tr>
<tr>
<td><strong>H₀₂ₐ:</strong> There is no significant impact of Debt to Equity ratio on Return on Capital Employed.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H₀₂ₙ:</strong> There is no significant impact of Debt to Equity ratio on Return on Assets.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H₀₂₇:</strong> There is no significant impact of Debt to Equity ratio on Economic Value Added.</td>
<td>Accepted</td>
</tr>
<tr>
<td><strong>H₀₃:</strong> There is no significant impact of Management Efficiency on Financial performance of SAIL.</td>
<td></td>
</tr>
<tr>
<td><strong>H₀₃ₐ:</strong> There is no significant impact of Inventory Turnover ratio on Return on Capital Employed.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H₀₃ₙ:</strong> There is no significant impact of Inventory Turnover ratio on Return on Assets.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H₀₃₇:</strong> There is no significant impact of Inventory Turnover ratio on Economic Value Added.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H₀₄:</strong> There is no significant impact of financial performance measures on Market Value Added of SAIL.</td>
<td></td>
</tr>
<tr>
<td><strong>H₀₄ₐ:</strong> There is no significant impact of Return on Capital Employed on Market Value Added.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H₀₄₉:</strong> There is no significant impact of Market to book Value ratio</td>
<td>Rejected</td>
</tr>
<tr>
<td>Hypotheses of the study (Correlation analysis)</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td></td>
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<tr>
<td>$H_{04}$: There is no significant impact of Economic Value Added on Market Value Added.</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H_{05}$: There is no significant relation between traditional performance measures and Economic Value added of SAIL.</td>
<td></td>
</tr>
<tr>
<td>$H_{05a}$: There is no significant relation between Return on Capital Employed and Economic Value Added.</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H_{05b}$: There is no significant relation between Return on Assets and Economic Value Added.</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H_{05c}$: There is no significant relation between Return on Equity and Economic Value Added.</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H_{05d}$: There is no significant relation between Earnings Per Share and Economic Value Added.</td>
<td>Rejected</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Hypotheses of the study (One sample t-test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_{06}$: There is no significant difference between Profitability of SAIL and industry average profitability.</td>
</tr>
<tr>
<td>$H_{06a}$: There is no significant difference between Return on Assets of SAIL and its industry average.</td>
</tr>
<tr>
<td>$H_{06b}$: There is no significant difference between Return on Equity of SAIL and its industry average.</td>
</tr>
<tr>
<td>$H_{07}$: There is no significant difference between Liquidity of SAIL and industry average Liquidity.</td>
</tr>
<tr>
<td>$H_{07a}$: There is no significant difference between Current ratio of SAIL and its industry average.</td>
</tr>
<tr>
<td>$H_{07b}$: There is no significant difference between Liquid ratio of SAIL and its industry average.</td>
</tr>
<tr>
<td>$H_{08}$: There is no significant difference between Solvency of SAIL and industry average Solvency.</td>
</tr>
<tr>
<td>$H_{08a}$: There is no significant difference between Debt to Equity ratio of SAIL and its industry average.</td>
</tr>
<tr>
<td>$H_{08b}$: There is no significant difference between interest coverage</td>
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</tbody>
</table>
ratio of SAIL and its industry average.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H0</strong>: There is no significant difference between Management Efficiency of SAIL and industry average Management Efficiency.</td>
<td></td>
</tr>
<tr>
<td><strong>H0a</strong>: There is no significant difference between Total Assets Turnover of SAIL and its industry average.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H0b</strong>: There is no significant difference between Working Capital Turnover ratio of SAIL and its industry average.</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

**FINDINGS OF THE STUDY**

1. The gross profit ratio of the SAIL has been in fluctuating trend during study period and there was a considerable decline in Operating Profit Ratio. It indicates decline in the operating efficiency of the company during study period. The Net Profit Ratio of the company decreased considerably during study period indicating decline in the management’s efficiency of the company in operating the business.

2. Average Return on Assets ratio (ROA) of the company during the study period was 8.8%. It indicates that the company has not utilized the assets efficiently during the study period. Return on Shareholders’ Equity Ratio showed a very sharp decline in last years of study indicating very low return on shareholders’ equity during the study period. Return on Capital employed has been in decreasing trend indicating low return on capital employed in the business.

3. SAIL has maintained low Current Ratio and liquid ratio during the study period. The average current ratio of SAIL during the period of the study was 1.57 times against the standard of 2:1. The average liquid ratio has been 1.01 times against the standard of 1:1. Working capital turnover ratio was exceptionally very high (24.0 times) in 2013-14 and was negative in 2014-15 (-13.17 times), indicating a very low maintenance of working capital in during last years of the study. The liquidity position of the company was not satisfactory during the study period.

4. Debt to Equity ratio of SAIL has been more than 1:1 for all the years during the study period indicating that the company has been financially leveraged
during the study period. The Interest Coverage Ratio of the company has been in decreasing trend from the year 2008-09 (37.15 times) to 2014-15 (2.61 times), indicating decreasing earning capacity of SAIL and excessive use of debt during these years. Solvency ratio and Capital gearing ratio of SAIL has been in a fluctuating trend during the period of the study. The average value CGR (3.38 times) indicates that long term debt of the company were lower than its equity during the period of study.

5. Total assets turnover ratio and Inventory turnover ratio of SAIL was in declining trend from 2005-06 to 2014-15. The Account receivable turnover ratio has been in decreasing trend from 2007-08 (15.48 times) to 2013-14 (9.51 times). It indicates decline in the management efficiency.

6. The operating expense ratio of SAIL has been in decreasing trend from the year 2010-11 (78.68%) to 2014-15 (87.28%) indicating operational expenses have increased during the period of study.

7. Earnings per share has been in increasing trends in the initial years but the ratio was in decreasing trend during subsequent years indicating lower capacity of the concern to pay dividend to its equity shareholders. Dividend payout ratio of SAIL has been in decreasing trend during initial years of the study. However, the ratio has been in increasing trend subsequent years. The PER has been in decreasing trend from 2010-11 (13.98 times) to 2013-14 (11.12 times) indicating negative future expectations of investors during this period. The Market Value to Book value Ratio has been less than 1.0 from 2012-13 (0.64 times) to 2014-15 (0.64 times) indicating market willing to pay less than book value per share.

8. Economic Value Added of SAIL has been positive during first five years of the study while it was negative for the other five years.

9. Market Value Added of Steel Authority of India Limited has been positive during first six years of the study while it has been negative for last four years.

10. Average Return on Assets of SAIL (9.56%) has been greater than industry average (7.54 %) during the period under the study. However, the higher value
of significance (Sig. > 0.05) shows that mean ROA of SAIL is not significantly different from its Industry mean.

11. Return on Equity of SAIL has been greater than industry average during the years under the study. However, the higher value of significance (Sig. > 0.05) shows that mean ROE of SAIL is not significantly different from Industry mean.

12. The Mean Current Ratio of SAIL (1.66 times) has been lower than industry average (1.88 times) indicating that SAIL has been lesser liquid as compared to industry average. However, the higher value of significance (Sig. > 0.05) shows that mean CR of SAIL is not significantly different from Industry mean.

13. The Mean Liquid Ratio of SAIL (1.09 times) has been lower than that of industry average (1.26 times) indicating that SAIL has been lesser liquid as compared to industry average. However, the higher value of significance (Sig. > 0.05) shows that mean LR of SAIL is not significantly different from Industry mean.

14. Total assets Turnover Ratio of SAIL has been lower than the industry average during study period. The lower value of significance (Sig. > 0.05) shows that mean TATR of SAIL is significantly different from Industry mean.

15. The working capital turnover ratio of SAIL has been higher than industry average during 2005-2007. The higher value of significance (Sig. > 0.05) shows that mean WTR of SAIL is not significantly different from Industry mean.

16. Debt to equity ratio of SAIL has been higher than industry average Debt to Equity Ratio during the study period. The lower value of significance (Sig. > 0.05) shows that mean DER of SAIL is significantly different from Industry mean.

17. The interest coverage ratio of SAIL has been higher than industry average during the study period. The lower value of significance (Sig. > 0.05) shows
that mean ICR (19.77 times) of SAIL is not significantly different from Industry mean (3.79 times).

18. The t statistics and significance (p) values gave a rough indication of the impact of each predictor variable namely, Current ratio, Debt to equity Ratio and Inventory turnover ratio, on predicted variable Return on Capital Employed. Regression coefficient of CR was statistically insignificant at 5% level of significance (Sig. > 0.05) while Regression coefficients of DER and ITR were statistically significant (Sig. > 0.05). ANOVA results and P value is less than 0.05 (p < 0.05). Hence, the model 1 is statistically significant.

19. The t statistics and significance (p) values give a rough indication of the impact of each predictor variable, namely Current ratio, Debt to equity Ratio and Inventory turnover ratio, on predicted variable Return on Assets. Regression coefficients of CR, DER and ITR were statistically significant (Sig. > 0.05). Overall ANOVA results and P value is less than 0.05 (p < 0.05). Hence, the model 2 is statistically significant.

20. The t statistics and significance (p) values give a rough indication of the impact of each predictor variable, namely Current ratio, Debt to equity Ratio and Inventory turnover ratio, on Predicted variable EVA. Regression coefficient of DER was statistically insignificant at 5% level of significance (Sig. > 0.05) while Regression coefficients of CR and ITR were statistically significant (Sig. < 0.05). Overall ANOVA results and P value is less than 0.05 (p < 0.05). Hence, the model 3 is statistically significant.

21. The t statistics and significance (p) values give a rough indication of the impact of each predictor variable, namely Return on Capital Employed, Economic Value Added and Market to book Value Ratio on predicted variable. Regression coefficient of ROCE, EVA and MBR were statistically significant (Sig. > 0.05). Overall ANOVA results and P value is less than 0.05 (p < 0.05). Hence, this model 4 is statistically significant.

21. Pearson coefficient of correlation (0.946) indicated high degree of correlation between EVA and ROCE. Pearson coefficient of correlation (0.946) indicated high degree of correlation between EVA and ROE. Pearson coefficient of
correlation (0.971) indicated high degree of correlation between EVA and ROA. Pearson coefficient of correlation (0.948) indicated high degree of correlation between EVA and EPS.

CONCLUSION BASED ON FINDINGS OF THE STUDY

The profitability ratios show that the profitability of SAIL has declined over the period of study. The gross profit margin of SAIL has been in fluctuating trend because of changes in prices of raw material while the operating profit margin is much lower than the gross profit margin indicating increase in operating expenses over the study period. The short term solvency position or liquidity position of SAIL was not good during study period as current ratio and quick ratio were lower than standard norms. Negative working capital in last year of study indicates more current liabilities than current assets. So liquidity is the area where sincere attention is required. Long term solvency position of SAIL has been satisfactory during study period. The overall debt equity ratio indicates that company has more debt capital than equity capital indicating that SAIL was exploring the trading on equity advantages but because of declining profit and increase in interest charges, interest coverage of SAIL has decline. Although, SAIL is earning enough profit to cover its financial charges but proper attention is required in this area.

From the Findings of the study it is concluded that the management efficiency of SAIL has declined over the study period. Asset turnover ratio of SAIL has declined indicating that SAIL has not been able to utilize the resources effectively. Decline in inventory turnover ratio indicated that increased stock could not be used to increase the sale. Decline in account receivable turnover ratio brought the conclusion that debtors management of SAIL has weaken over the study period.

On the basis of findings, researcher also concluded that Market valuation of SAIL has decline over the period of study. Further, the financial performance measures used in the study, i.e. Return on capital employed, Economic Value Added and Market Value Added, have been in declining trend during study period which brought the conclusion that overall financial performance of SAIL was satisfactory during initial years of the study but deteriorated in subsequent years.
SUGGESTIONS

1. Liquidity is an area which needs sincere attention in the case of SAIL. Current ratio of SAIL indicates poor liquidity position and the liquid assets of SAIL were insufficient. Current ratio of SAIL was below the industry average and standard norm. The management of SAIL should take efforts to resolve their present working capital crisis. It may be suggested that the company must reduce the amount of current liabilities and/or increase the amount of current assets and must maintain adequate amount of liquid assets in order to meet short-term commitments and emergency requirements.

2. The Debt to Equity position of the company has been satisfactory as this proportion is acceptable for a manufacturing company. However, Interest Coverage Ratio of the company declined during the last years of the study due to decline in the earning capacity of SAIL. Higher debt in capital structure and decline in profitability exposed the SAIL to higher financial risk. Therefore, it is suggested that SAIL should take caution in using long term debt fund.

3. TATR of SAIL has been lower than the industry average during study period. SAIL suffers from under-utilization of its assets. The management of the company is advised to detect the reasons and make possible effort to solve them as far as practicable. Inventory Turnover Ratio of SAIL have declined over the period of study indicating that SAIL has not been able to efficiently use the increase in inventory stock over the period of the study. It is suggested that the level of inventory should be fixed up scientifically in order to avoid the problem of under-stocking and over-stocking.

4. Debt management efficiency of SAIL has declined over the period of study. Therefore, receivable management of SAIL needs serious attention by the management. It is advised to review the credit and collection policy. Further, it is suggested that management should reduce the credit period, should review the over dues periodically and should strengthen the debt collection efforts.

5. Study revealed that the operating expense ratio of SAIL increased over the period of study indicating decline in the operational efficiency of management and rise in the operational expenses over the period of study. It is advised that
SAIL should reduce its operating expenses by focusing on cost management and improving operational efficiency.

6. Gross profit ratio of SAIL has been in fluctuating trend during study period. Operating profit margin & net profit margin of SAIL have been much lesser than gross profit margin indicating higher operating cost. Therefore, effective cost management is advised to improve profitability of SAIL.

7. Multiple regression analysis revealed that liquidity, solvency and management efficiency have significantly impacted profitability of SAIL. Therefore, SAIL is suggested to improve in these areas as suggested above to improve profitability of business.

8. Dividend payout ratio of SAIL declined over the period of study. It is suggested that SAIL should maintain a stable dividend payout ratio in order to appreciate the stock prices of SAIL.

9. The Earning Per Share of SAIL has been higher during the initial years of the study but declined during subsequent years. Therefore, SAIL is suggested to increase its earnings to improve its market valuation.

10. P/E ratio of SAIL showed a mixed trend during study period, it declined during the last years of study indicating negative future expectation for earnings by the investors. Market to Book value Ratio of SAIL was less than one during last two years of study indicating market was willing to pay less than book value per share. SAIL is advised to improve its financial performance in order to improve its market valuation.

11. It is clear from the result of multiple linear regression analysis that liquidity, solvency and management efficiency have significantly impacted Economic Value Added of SAIL. Therefore, SAIL is suggested to improve in these areas as suggested above to improve EVA of business.

12. Multiple regression analysis revealed that profitability, Economic Value Added and market valuations have significantly impacted Market Value
Added of SAIL. Therefore, SAIL is suggested to improve in these areas as suggested above to improve profitability of business.

LIMITATIONS OF THE STUDY

However, there are many limitations of the present study, which are generally inherent in all such studies. The most important among them are:

- The study is based on secondary data collected from different published sources therefore the results and findings are subject to all limitations inherent in the published financial data.
- The study is limited to a period of ten years only. Analysis has been made for ten years from 2005-06 to 2014-15. More data and information would have made the study more exhaustive.
- The study covered only one company in the Indian steel industry. Therefore, the finding may not be applicable to other companies or entire industry as a whole.
- The present study is largely based on ratio analysis which has its own limitations. As we know that ratio analysis has, like all other methods, limited value and application, it cannot reveal exact picture of the financial performance and its conclusion are not always reliable.
- Statistical test used to analyze the data in the study, has their own limitations. Therefore the result in the analysis is subject to same constraints as are applicable to statistical tools.
- Under the study, a comparative study of the selected company with other companies within the industry was not undertaken.
- The study did not cover the entire financial management, also except finance area, other areas of business were not covered.
- Calculation of EVA required various accounting adjustment but due to unavailability of data and non applicability of adjustments in case of SAIL, only a few adjustment has been made.
- In the calculation of MVA, market value of debt and book value of debt has been assumed to be the same.
The aforementioned limitations were encountered by the researcher but in this endeavor all possible efforts have been made to make the study more exhaustive and goal oriented. Moreover, it is sincerely hoped that the results would be a guide line for SAIL and other Steel companies in India.

**SCOPE OF FURTHER RESEARCH**

There is no such particular set of determinants that could influence financial performance of firms uniformly in any country, industry and institutional setup. Although, the present study has contributed significantly, there are various research issues, which have not been addressed in this study and need further investigation. In the present area of study, there is a scope for further research. The researcher suggests the following areas for further research:

1. The present study is restricted to Steel Authority of India Limited in steel industry alone. Hence, studies can be undertaken in other steel companies and a comparative study across companies can also be attempted.

2. For further studies, other financial performance measures can also be considered other than the measures considered in this study.

3. In this study, the impact of functional ratios were found on financial performance of SAIL, further studies may be undertaken to find impact of firm specific variables and macroeconomic variables on financial performance of firms.

4. Present study analyze financial performance of one public sector company in steel industry, further studies can be undertaken to compare financial performance of private and public sector enterprises in steel industry.