AGJ ARABIAN GROUP OF JOURNALS

International Journal of Accounting Research (IJAR)
Vol. 2, No. 12, 2016

Accounting Research

IMPACT OF LIQUIDITY, SOLVENCY AND EFFICIENCY ON PROFITABILITY OF STEEL AUTHORITY OF INDIA LIMITED

Dr Mohd Yameen
Associate professor - Dept of commerce, A.M.U, Aligarh, India
Dr Asif Pervez
Women's College, A.M.U, Aligarh, India

Abstract

Business firms exist in a world of rapid changes. In 21st century, business and economic environment is 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. The present study attempted to analyze financial performance of Steel Authority of India Limited, a Public sector undertaking in India enjoying the status of *Maharatna*, for a period of ten years from 2005 to 2014 using various financial ratios. Results of the study showed declined in the financial performance of SAIL during study period.

Keywords: Liquidity, Solvency, Efficiency, Profitability, Financial Performance

Introduction

A sound financial performance enables a firm to attain profitability, market share and sustainable competitive advantage for its survival and growth (Patra, 2009). Financial performance evaluation is a process of determining the financial health of a concern from different angles, identifying its strengths and weaknesses and suggesting ways for improvement in its future workings (Patra, 2009). Financial performance measures evaluate how well a company is using its resources to make profit (Financial performance, n.d,). In the words of Keynes, (Cited in Gupta & Sharma, 2011) "Profit is the engine that drives the business enterprise".

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. In the present impact of liquidity, solvency and efficiency have been found on profitability of Steel authority of India Limited, since the financial year 2005-06.

A brief profile of Steel Authority of India Limited (SAIL)

The Indian steel industry is one of the most important industries in India. It marks its beginning with the first integrated steel plant established by Tata Iron & Steel (popularly known as Tata Steel) in 1907. Integration of steel industry with other important industries like infrastructure, construction, automobile etc., makes it a strategic sector for the economy as huge demand for steel is derived from these sectors (Department of Public enterprises, 2006).Indian has been 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 (MOS, 2015) The steel sector in India contributes nearly two per cent of the country's gross domestic product (GDP) and 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 (Indian Brand Equity Foundation, 2016). 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.

Statement of the Problem

Steel is considered as the backbone of human civilization. It is important for the development of any modern economy. Significance of steel for an economy can be understood by the fact that the level of per capita consumption of steel is considered as an important indicator of the level of socioeconomic development and living standards of the people in the country. Currently, the 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, 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. The survival, growth and organizational success of a business enterprises is greatly depend on the efficient management of its finance. The present study has been undertaken with a view to highlight the importance of an efficient financial management in a public sector steel company SAIL. Analysis of financial statement can highlight the strength and weaknesses of the company. This information can be used by management to improve performances and to predict future results.

Objectives of the Study

The present study is aimed to achieve followings objectives.

1. To analyse the financial position of SAIL with respect to liquidity, solvency, management efficiency, profitability and market valuation.
2. To assess the impact of liquidity, solvency and management efficiency on Profitability of SAIL.
3. 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.

H_{01}: There is no significant impact of Liquidity on Profitability of SAIL.

H_{01a}: There is no significant impact of Current Ratio on Return on Capital Employed.

H_{01b}: There is no significant impact of Current Ratio on Return on Assets.

H_{02}: There is no significant impact of Solvency on Profitability of SAIL.

H_{02a}: There is no significant impact of Debt to Equity ratio on Return on Capital Employed.

H_{02b}: There is no significant impact of Debt to Equity ratio on Return on Assets.

H_{03}: There is no significant impact of Management Efficiency on Profitability of SAIL.

H_{03a}: There is no significant impact of Inventory Turnover ratio on Return on Capital Employed.

H_{03b}: There is no significant impact of Inventory Turnover ratio on Return on Assets.

Research Methodology of the Study

Analytical research design has been used in the present study. The study covers a period of ten years from 2005-06 to 2014-15. Data of SAIL were collected from various published annual reports and financial statements of SAIL, published documents of the Ministry of Steel (GOI), World steel association, RBI, BSE, NSE and other Government websites of

India. The variables incorporated in the present study are financial ratios. Various financial ratios under the categories of liquidity, profitability, management efficiency, solvency and market valuation have been calculated and analyzed. The present study employed a multi-regression technique to analyze the impact of liquidity, solvency and management efficiency on profitability of SAIL. This technique has been widely used in prior empirical studies (Pal, 2013; Singla, 2013; Bhunia and Brahma, 2009; Pratheepkanth, 2011).

Ordinary Least Square Regression Models

Ordinary Least Square technique of regression has been used to estimate the regression line. Following models have been estimated on data of SAIL during the financial period 2005-06 to 2014-15.

1. $ROCE_t = \beta_0 + \beta_1 CR_t + \beta_2 DER_t + \beta_3 ITR_t + \varepsilon_t$
2. $ROA_t = \beta_0 + \beta_1 CR_t + \beta_2 DER_t + \beta_3 ITR_t + \varepsilon_t$

Where,

$ROCE_t$ = Return on Capital Employed at time t (Profitability)
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)
β_0 = Intercept.
$\beta_1 - \beta_3$ = Coefficients of the explanatory variables.
ε_t = stochastic error term at time *t.*

Profitability Ratio Analysis

The table 1 exhibits profitability ratios of SAIL during study period.

Table 1: Profitability Ratios of SAIL from 2005-06 to 2014-15
(In per cent)

Years	Gross Profit Ratio (GPR)	Operating profit Ratio (OPR)	Net Profit Ratio (NPR)	Return on Equity (ROE)	Return on Assets (ROA)	Return on Capital Employed (ROCE)
2005-06	36.37	11.79	13.72	36.77	13.93	34.51
2006-07	40.88	18.00	17.41	41.50	17.41	41.48
2007-08	45.29	18.53	18.09	37.27	15.53	33.49
2008-09	37.85	10.37	13.63	24.15	11.21	24.34
2009-10	39.60	17.80	15.80	22.03	10.84	23.61
2010-11	41.58	14.43	11.17	14.06	6.75	14.72
2011-12	37.16	10.72	7.44	9.23	4.59	10.73
2012-13	38.85	8.59	5.06	5.69	2.82	7.02
2013-14	38.67	4.94	5.55	6.25	2.94	6.84
2014-15	41.60	6.61	4.60	4.93	2.21	6.08

Source: Calculated from Financial Reports of SAIL

As can be seen from table 1, the gross profit ratio of the SAIL has been in fluctuating trend during study period. The GPR was highest in the year 2007-08 (45.29%) and it was lowest in the year 2005-06 (36.37%). Operating profit ratio of SAIL reveals declining operating efficiency of the company during the study period. It can be seen that the Net Profit Ratio of the company has been in decreasing trend during study period. NPR of SAIL reveals

declining management's efficiency of the company in operating the business successfully during study period.

Return on assets (ROA) of the company indicates that the company has not utilized the assets efficiently during the study period. ROE showed a decreasing trend from the year 2007-08 (37.27%) to the year 2014-15 (4.93%) except in the year 2013-14 (6.25%). It is an indication of very low return on shareholders' equity. ROCE has been in decreasing trend from 2005-06 (34.51%) to 2014-2015 (6.08%) except the year 2006-2007 (41.48%) indicating decreasing profitability of the company.

Liquidity Ratio analysis

The standard ratio for current ratio is 2:1. But the company has shown a Lower Current Ratio over the period of study except from 2006-07 to 2009-10. The mean value of current ratio of SAIL was 1.57 times during study period, indicating that the liquidity position of the company was not satisfactory during the study period. The liquid ratio showed a decreasing trend during the period of study. Standard ratio for Liquid Ratio is 1:1. However, mean value of liquid ratio is satisfactory (1.01 times) but the company shouldrevise the liquidity position. Cash Ratio has also shown decreasing trend over the period of study except in the year 2009-10 (1.28 times).

Table 2: Liquidity Ratios of SAIL from 2005-06 to 2014-15
(In times)

Year	Current Ratio (CR)	Liquid Ratio (LR)	Cash Ratio (CsR)
2005-06	1.47	0.88	0.90
2006-07	1.98	1.48	1.03
2007-08	1.98	1.47	1.03
2008-09	2.03	1.44	1.06
2009-10	2.26	1.75	1.28
2010-11	1.51	1.05	0.72
2011-12	1.49	0.79	0.35
2012-13	1.23	0.53	0.18
2013-14	0.95	0.42	0.11
2014-15	0.83	0.32	0.07

Source: *Calculated from Financial Reports of SAIL*

Solvency Ratio analysis

Debt-Equity ratio of SAIL in the above table indicates that Debt to Equity ratio of SAIL has been more than 1:1 during the period of the study except for the years 2008-09 (0.97 times) & 2011-12 (0.95 times), indicating that total liabilities was higher than owners' equity and the external lenders and creditors were bearing more risk. The average Debt to Equity ratio of the company has been 1.18 times during the period of study indicating that the company has been financially leveraged during study period. The Interest Coverage Ratio of the company was highly satisfactory in the initial years of the study. Interest coverage ratio was 12.94 times in the year 2005-06 which rose to 45.68 times in the year 2007-08. However, ICR of SAIL decreased from 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. It is a warning sign for the company that the company may not have the ability to offer assured payment of interest to the lenders in the future.

Table 3: Solvency Ratios of SAIL from 2005-06 to 2014-15
(In times)

Years	Debt Equity Ratio (DER)	Interest Coverage Ratio (ICR)	Solvency Ratio (SR)	Capital Gearing Ratio (CGR)
2005-06	1.33	12.94	0.57	2.75
2006-07	1.42	28.64	0.59	3.77
2007-08	1.38	45.68	0.58	5.99
2008-09	0.97	37.15	0.49	3.27
2009-10	1.09	22.73	0.52	1.91
2010-11	1.08	13.68	0.52	3.77
2011-12	0.95	7.79	0.49	3.25
2012-13	1.08	5.09	0.52	2.94
2013-14	1.17	4.20	0.54	3.06
2014-15	1.29	2.61	0.56	3.06

Source: Calculated from Financial Reports of SAIL

Management efficiency Ratios

Table 4 reveals that the Working capital turnover ratio has been in fluctuating trend during the period of the study. The ratio was 6.97 in 2005-06 which declined to 2.16 in the year 2009-10 and became negative in 2014-15 (-13.17), indicating a very low maintenance of working capital during last years of the study. Total assets turnover ratio of SAIL indicates that the management efficiency has decreased during the period of the study and the company has not been able to increase the sale with increase in the assets. The inventory turnover ratio of SAIL has been in decreasing trend from 2008-09 (5.38 times) to 2014-15 (2.82 times) indicating that company has not been able to efficiently used the increase in inventory stock over the period of the study. The Operating Ratio of the company indicates operational efficiency of management of SAIL have decreased during the period of the study.

Table 4: Management Efficiency Ratios of SAIL from 2005-06 to 2014-15

Years	Working capital Turnover Ratios (WTR) *(In times)*	Total Assets Turnover Ratio (TATR) *(In times)*	Inventory Turnover Ratio (ITR) (In times)	Account Receivable Turnover Ratio (ARTR) *(In times)*	Operating Expense Ratio (OER) *(In Percent)*
2005-06	6.97	1.00	5.48	15.29	78.64
2006-07	3.94	0.85	5.50	16.87	72.88
2007-08	3.17	0.76	6.12	15.48	72.69
2008-09	2.94	0.82	5.31	14.93	81.06
2009-10	2.16	0.62	4.46	12.94	72.49
2010-11	2.57	0.57	4.34	11.64	78.68
2011-12	4.40	0.61	3.88	10.81	82.44
2012-13	6.32	0.53	3.11	9.79	85.81
2013-14	24.41	0.51	3.03	9.51	89.48
2014-15	-13.17	0.46	2.82	10.78	87.28

Source: Calculated from Financial Reports of SAIL

Market Valuation Ratios Analysis

In table 5 Earnings per share of the Company has been higher in the initial years of the study but lower in subsequent years. It is an indication of low return per share of the company. A lower ratio is the indication of the lower capacity of the concern to pay dividend to its equity share holders. In the final year of the study 2014-15, the payout ratio was maximum (39%) and in 2008-09 the payout ratio was minimum (17%).

Table 5: Market Valuation Ratios of SAIL from 2005-06 to 2014-15

Year	Earnings Per Share (EPS) *(In Rs.)*	Dividend Payout Ratio (DPR) *(In Per cent)*	Price Earnings Ratio (PER) *(In times)*	Market to Book value Ratio (MBR) *(In times)*
2005-06	9.87	21	8.44	3.63
2006-07	15.16	21	7.53	3.71
2007-08	18.39	20	10.05	4.37
2008-09	15.12	17	6.38	1.71
2009-10	16.59	20	15.18	3.66
2010-11	12.14	20	13.98	2.08
2011-12	8.7	23	10.81	1.03
2012-13	5.64	38	11.05	0.64
2013-14	6.42	32	11.12	0.71
2014-15	5.22	39	12.91	0.64

Source: *Calculated from Financial Reports of SAIL*

The Price-Earnings ratio of SAIL 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 was higher during the initial years of the study indicating that the investors were ready to pay more than book value per share. However, MBR has been less than one from the year 2012-13 (0.64 times) to 2014-15 (0.64 times) indicating that investorswas willing to pay less than book value per share.

Results of Data Analysis

The pair wise correlation coefficients of different dependent and independent variables have been reported in table 8. It can be noticed that bivariate correlation between different independent & dependent variables for the two OLS models are highly significant. Table 8 also reveals the correlation coefficients between Independent variables for the four OLS models in the study.

Table 8: Pearson correlation coefficients between Dependent and independent variables

	ROCE	ROA	CR	ITR	DER
ROCE	1				
ROA	0.994**	1			
CR	0.727*	0.780**	1		
ITR	0.929**	0.952**	0.784**	1	
DER	0.572	0.530	-0.016	0.373	1

Source: E-Views output

*Note: ** Correlation is significant at the 0.01 level (2-tailed).*

** Correlation is significant at the 0.05 level (2-tailed).*

It can be noticed from the above table that Correlation coefficients between independent variables in model 1 and 2 are less than the threshold value of 0.8 (Gujrati, et.al. 2012), therefore no serious problem of multicollinearity have been found in model 1 and 2.

Multiple Linear Regression Analysis of Profitability and selected Financial Ratios

In this section of the study, influence of selected financial ratios of liquidity, solvency and management efficiency has been examined on Profitability of SAIL using multiple linear regression analysis.

Table 10: Result of Multiple Linear Regression analysis
Dependent Variable: ROCE

Independent Variables	Unstandardized Coefficients	Std. Error	t- statistics	Probability
Constant	-0.524168	0.14108	-5.034864	0.0024
CR	0.078064	0.049738	1.569502	0.1676
DER	0.277888	0.093525	2.971276	0.0249*
ITR	0.068968	0.021917	2.872967	0.0283*
R^2	0.944496			
Adjusted R^2	0.916744			
F - statistic	34.03330			
P – value (F)	0.000366			
Durban-Watson	2.206315			

*Source: E-Views output, * significant at 5%,*

The explanatory power (R^2) of ROCE model is 0.944, which reflects that about 94.4% of change in Return on Capital employed can be explained jointly by the given financial ratios while the remaining 5.6% is attributed to other factors outside the model. The explanatory power (adjusted R^2) that penalizes the addition of extraneous predictors to the model is 91.6%.

Table 10 shows that CR have positively influenced ROCE. Coefficient of CR (0.078064) indicates that for every one unit change in CR, there is a 0.078 unit change in ROCE. However, it can be observed that Regression coefficient of CR is statistically insignificant at 5% level of significance (Sig. > 0.05). Therefore, the Null Hypothesis $H0_{1a}$ is accepted. DER is positively influencing ROCE. Coefficient of DER (0.277888) indicates that for every one unit change in DER, there is a 0.28 unit change in ROCE. It can be observed that Regression coefficient of DER is statistically significant at 5% level of significance (Sig. < 0.05). Therefore, the Null Hypothesis $H0_{2a}$ is rejected. Inventory turnover ratio (ITR) has significant positive relationship with Return on Capital Employed at 5% level of significance. Coefficient value of ITR (0.068968) indicates that for one unit change in ITR, there is 0.07 unit change in ROCE. The regression coefficient of ITR is statistically significant at 5% level of significance (Sig. < 0.05). Therefore, the Null Hypothesis $H0_{3a}$ is rejected.

Table 11: Result of Multiple Linear Regression analysis
Dependent Variable: ROA

Independent Variables	Unstandardized Coefficients	Std. Error	t- statistics	Probability
Constant	-0.223280	0.030195	-7.394700	0.0003
CR	0.041545	0.014426	2.879941	0.0281*
DER	0.109019	0.027125	4.019102	0.0070*
ITR	0.026733	0.006357	4.205463	0.0057*
R^2	0.975351			
Adjusted R^2	0.963027			
F - statistic	79.13959			
P – value (F)	0.000032			
Durban-Watson	2.458487			

*Source: E-Views output, * significant at 5%*

The explanatory power (R^2) of ROA model is 0.975, which reflects that about 97.5% of change in Return on Assets can be explained jointly by the given financial ratios while the remaining is attributed to other factors outside the model. The explanatory power (adjusted R^2) that penalizes the addition of extraneous predictors to the model is 96.3%.

Table 11 shows that CR is positively influencing ROA. Coefficient of CR (0.041545) indicates that for every one unit change in CR, There is a 0.0415 unit change in ROA. It can be observed from the above table 6.22, that Regression coefficient of CR is statistically significant at 5% level of significance (Sig. < 0.05). Therefore, the Null Hypothesis $H0_{1b}$ is rejected. DER is positively influencing ROA. Coefficient of DER (0.109019) indicates that for every one unit change in DER, There is a 0.109 unit change in ROA. It can be observed that Regression coefficient of DER is statistically significant at 5% level of significance (Sig. < 0.05). Therefore, the Null Hypothesis $H0_{2b}$ is rejected. The coefficients of Inventory turnover ratio (ITR) have significant & positive relation with Return on Assets at 5% level of significance. Coefficient value of ITR (0.026733) indicates that for one unit change in ITR, there is 0.026 unit change in ROA. The regression coefficient of ITR is statistically significant at 5% level of significance (Sig. < 0.05). Therefore, Null Hypothesis $H0_{3b}$ is rejected.

Summary and Conclusion

The profitability ratios show that overall profitability of SAIL has been positive during study period. However, 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 which leads to fluctuations in cost of goods sold 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. Therefore, it can be concluded that liquidity position of SAIL deteriorated during study period. 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 is 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. 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. Market valuation of SAIL has decline over the period of study. Findings of the study brought the conclusion that overall financial performance of SAIL was satisfactory during initial years of the study but deteriorated in subsequent years.

Suggestions

On the basis of the findings of study, following suggestions may be offered in order to improve financial performance of Steel Authority of India Limited.

1. Liquidity is an area which needs sincere attention in the case of SAIL. Current ratio of SAIL indicates poor liquidity position the company had negative working capital during last year of the study. It may be suggested that the company must reduce the amount of current liabilities and/or increase the amount of current assets up to a reasonable level.
2. The Debt to equity position of the company has been satisfactory as this proportion is acceptable for a manufacturing company. It may be suggested that SAIL may maintain its capital structure but SAIL should avoid using more long term debt. 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 and is advised to reduce debt burden in order to avoid financial distress.
3. SAIL suffers from under-utilization of its assets. It may be due to shortage of working capital. SAIL, is advised to detect the reasons and make possible effort to solve them as far as practicable. 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. The operating expense ratio of SAIL indicated 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.
5. Gross profit ratio of SAIL decreased due to increase in cost of goods sold particularly increase in the prices of raw materials. Therefore, effective cost management is advised to improve profitability of SAIL. The Operating profit margin & net profit margin of SAIL have been much lesser than gross profit margin indicating higher operating cost. SAIL is suggested to reduce operating expenses to improve the profitability.

Limitations of the Study

The study is based on secondary data, 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. 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. Under the study, a comparative study of the selected company with other companies within the industry was not undertaken.

References

Bhunia, A., and Brahma, B. (2009, March).Efficiency Analysis - A Study of Liquidity and Profitability.*Vidyasagar University Journal of Commerce*, 14, 77-88. Retrieved from: http://14.139.211.206:8080/jspui/bitstream/123456789/ 432/1/p6.pdf

Brooks, C. (2014). *Introductory Econometrics in Finance (3rd ed.)*. New York, NY. Cambridge University Press.

Department of Public enterprises.(2006). *2nd Pay Revision Report*. New Delhi. Retrieved from http: //dpe. nic.in /publications /2nd_pay_revision_committee _report

Gujrati, D. N., Porter, D. C., Gunasekar, S. (2012). *Basic Econometrics (5th ed.)*.New Delhi, ND. McGraw Hill education.

Gupta, S. K., & Sharma, R. K. (2011). Financial Management- Theory and Practice (7thed.*)*. Ludhiana, Punjab. Kaliyani Publisher.

Pal, S. (2013). A Study on Financial Distress in Indian Steel Industry under Globalization.*IOSR Journal of Business and Management.*14 (2), 49-53. Retrieved from http://iosrjournals.org/iosr-jbm/papers/Vol14-issue2/G014249 53.pdf

Patra, S. (2009), Financial Performance of Iron and Steel Industry in India: An Analytical and Comparative Study of Some Selected Companies During 1995-1996 To 2004-2005 (Doctoral thesis). Retrived from shodhganga.

Pratheepkanth, P. (2011).Capital Structure and Financial Performance: Evidence from Selected Business Companies in Colombo Stock Exchange Sri Lanka. *Journal of Arts, Science & Commerce,* 2(2), 171-183. Retrieved from http://www.Rese archersworld.com/vol2/issue2/Paper_16.pdf

Singla, V. (2013).A Comparative Study of Financial Performance of Sail and Tata Steel Ltd. *International journal of review, survey and research,* 2 (1).

Steel Authority of India Limited (n.d.). *Steel Authority of India Limited -A Maharatna.* Retrieved from: http://www.sail.co.in/