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Research Article

AN EMPIRICAL STUDY ON CAPITAL STRUCTURE ANALYSIS OF TATA STEEL COMPANY

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A R T I C L E I N F O

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A B S T R A C T

The main objective of the firms is to maximize its profits and in the same time minimize its costs, when companies search about resources to finance its investments they take this objective in consideration. The main sources that firms could use to provide the necessary finance are the internal finance which is equity, and the external finance which is debt. Most of companies use a mix between equity and debt which form the capital structure.

Capital structure was defined firstly by Modigliani and Miller as the mix between debt and equity that the company uses in its operation. The paper that published by Modigliani and Miller refers to the impact of capital structure on firm value under many restrictive assumptions that have been modified by them five years later in (1963).

After Modigliani and Miller, Jensen and Meckling discussed the agency cost theory which refers to the potential conflict between managers and shareholders in one side, and between shareholders and debtors in another side.

Since Jensen and Meckling's argument the relationship between capital structure and firm performance, many researchers have begun to study the relationship between capital structure and firm performance.

INTRODUCTION

Capital Structure implies the composition of funds raised from various sources broadly classified as debt and equity. It may be defined as the proportion of debt and equity in the total capital that will remain invested in a business over a long period of time. The relative proportion of various sources of funds used in a business is termed as financial structure. Capital Structure is a part of the financial structure and refers to the proportion of the various long-term sources of financing. The Capital Structure of a company is made up of debt and equity securities that comprise a firm's financing, of its assets.Capital Structure is the mix of the long-term sources of funds used by a firm. It is made up of debt and equity securities and refers to permanent financing of a firm. It is composed of long-term debt, preference share capital and shareholders' funds

Statement of the Problem

The Steel manufacturing sector is increasingly recognized as an important component of the economy. Therefore, it is of value to assess the constraints the industry is facing. Where finance as major constraints because, it is the fundamental of any organization, which requires proper planning and decision with regard to its mix and source. So far, various empirical studies show that, there are differences on financial structure of a firm as a result of industry, financial system, financial development and country macro economic conditions.

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The first and foremost purpose of this study is to determine the firm characteristics that affect financial structure. This study clarifies the extent of debt and equity used in financing the firms' activity. Thus, it is hoped that the present study is detailed and shed light on the private limited Steel company's financial structure (with, special reference to Tata Steel company limited) in which financial structure decision is crucial area.

Scope of the Study

The present study aims that analysing the Capital Structure of Tata Steel Company. The study could help the company as well as the investors to establish and understand its efficiency. This study guides the other lower efficient Steel Industries which might need some effort for more and effective and efficient utilization of its capital resources.

Overview of the Company

The Steel industry in India is one of the fastest growing sectors. The demand drivers for the Indian steel industry are increase in the activities of the automobile industries, real estate industries, transportation systems, aircraft industries, ship building industries. India ranks 5th in the world in the terms of production of steel. Tata Steel Limited (formerly Tata Iron and Steel Company Limited (TISCO)) is an Indian multinational steel-making company headquartered in Mumbai, Maharashtra, India, and a subsidiary of the Tata Group. It is one of the top steel producing companies globally with annual crude steel deliveries of 23.88 million tonnes (in FY17), and the largest steel company in India (measured by domestic production) with an annual capacity of 13 million tonnes after SAIL Tata Steel has been ranked 2nd in 2017 Responsible Business Rankings developed by IIM Udaipur. Tata Steel has manufacturing operations in 26 countries, including Australia, China, India, the Netherlands, Singapore, Thailand and the United Kingdom, and employs around 80,500 people. Its largest plant is located in Jamshedpur, Jharkhand. In 2007 Tata Steel acquired the UK-based steel maker Corus. It was ranked 486th in the 2014 Fortune Global 500 ranking of the world's biggest corporations. It was the seventh most valuable Indian brand of 2013 as per Brand Finance. The acquisition of the Corus, the Anglo-Dutch steel manufacturer by the Tata Steel has vasten its capacity.

Objectives of the Study

- To understand the Capital Structure of Tata steel company.
- To examine the Capital Structure ratios, profitability ratios.
- To analyze the profitability ratio relation to investments and the long term solvency ratio with cash flow.
- To find out the factors determining the financial performance of the company.

Limitations of the Study

- The present study based on the published secondary data, the reliability of the study depends of the accuracy of data collected.
- There are many approaches to the measure of financial efficiency and financial strength. There is no uniformity among experts.
- The financial performance covering a large period say 20 years or 30 years can give a much clear picture of management practices of financial performance. Our study covering a period of 5 years can touch only a part of the problem.

Research Methodology of the Study

It is an empirical study, so researcher has followed scientific approach to design the research methodology for investigation. For this study researcher is using secondary data as a source of information for thus research e.g. the Annual Reports, websites and other publications.

Period of the Study

The period of the study taken for the analysis is **five** years **2012** to **2017**.The last five financial years has been chosen.

Source of the Data

The study uses only the secondary sources of are collected from the published and unpublished financial statements of Tata steel and relative websites like moneycontrol.com and other supportive data's from books, journals, annual reports and various newspapers.

Statistical Tool Used

The following tool & techniques have been classification in the study

Accounting Techniques
Ratio analysis

A Ratio Analysis is a technique of analyses and interpretation of financial statement. It is the process of establishing interpreting various ratios for helping in making certain decisions. However, analysis is not an end in itself. It is only a means of better understanding a financial strength and weakness of a firm.

Profitability Ratios
Capital structure Ratios

Capital Structure Ratio

A Company's proportion of short and long term debt is considered when analyzing Capital Structure. When analysts refer to Capital Structure, they are mostly likely referring to a firm's debt-to-equity ratio, which provides insight into how risky a company.

Interest Coverage Ratio

The Interest Coverage Ratio is a measure of company's ability to meet its interest payments. The Interest Coverage Ratio is equal to earnings before income taxes (EBIT) for a time period often for one year dividing by interest expenses for the same time period.

$$\text{Interest coverage ratio} = \frac{\text{ebit}}{\text{Interest Expenses}}$$

Interest Coverage Ratio

Year	EBIT	Interest expenses	Interest coverage Ratio
2012-13	8,511.13	47066.5489	5.53
2013-14	9,855.26	63172.2166	6.41
2014-15	6,618.04	28788.474	4.35
2015-16	7,709.07	48412.9596	6.28
2016-17	6,060.31	19696.0075	3.25

Total Debt Equity Ratio

Debt-equity ratio is also known as external-internal ratio. The two basic components of the ratio are outsiders funds, i.e., external equities and share holders funds, i.e., internal equities. The outsiders funds include all debts/liabilities to outsiders, whether long-term or short-term or whether in the form of debentures bonds, mortgages or bills. The shareholders funds consist of equity share capital, preference share capital, capital reserves, revenue reserves and reserves representing accumulated losses and surpluses like reserves for contingencies, sinking funds, etc.

$$\text{Total debt equity ratio} = \frac{\text{outsiders fund}}{\text{Share holders fund}}$$

Total Debt Equity Ratio

Year	Total Debt	Shareholders fund	Total Debt To Owners Fund Ratio
2012-13	57,247.18	26906.1746	0.47
2013-14	70,667.59	30387.0637	0.43
2014-15	71,578.88	27915.7632	0.39
2015-16	86,078.97	37874.7468	0.44
2016-17	84,625.37	51621.4757	0.61

Financial Coverage Ratio

Financial coverage ratio is also called as fixed charges coverage ratio. The fixed charges coverage ratio is a financial ratio that measures a firm's ability to pay all of its fixed charges or expenses with its income before interest and income taxes. The fixed charge coverage ratio is basically an expanded version of the times interest earned ratio or the times interest coverage ratio.

$$\textbf{\textit{Financial Coverage Ratio}} = \frac{\text{EBIT} + \text{Fixed charges before tax}}{\text{Fixed charges before tax} + \text{Interest}}$$

Financial Coverage Ratio

Year	Earnings before interest	Total debt service	Financial Charges Coverage Ratio
2012-13	9,476.98	60747.4418	6.41
2013-14	11,642.20	86967.234	7.47
2014-15	10,506.48	56314.7328	5.36
2015-16	8,059.63	61253.188	7.6
2016-17	8,898.48	40666.0536	4.57

Capital Gearing Ratio

The term capital gearing ratio is used to describe the relationship between equity share capital including reserves and surpluses to preference share capital and other fixed interest – bearing loans. If preference share capital and other fixed interest bearing loans exceed the equity share capital including reserves, the firm is said to be highly geared. The firm is said to be in low gear if preference share capital and other fixed interest-bearing loans are less than equity capital and reserves.

Capital Gearing Ratio = $\frac{\text{Equity Capital +Reserve \& Surplus}}{\text{Fixed Charges Before Tax + Interest}}$

Asset Management Ratio

Asset Management Ratio attempt to measure the firm's success in managing its asset to generate sales.

Total Asset Turnover Ratio

The Asset Turnover Ratio is an efficient ratio that measures a company's ability to generate sales from its assets by comparing net sales with average total assets.

Total Assets Turn Over Ratio = $\frac{\text{Net Sales}}{\text{Average Total Assets}}$

Total Asset Turnover Ratio

Year	Net sales during the financial year	Average total assets	Total Asset Turnover Ratio
2012-13	43,761.70	93,109.99	0.47
2013-14	54,219.49	112,957.27	0.48
2014-15	47,093.46	104,652.14	0.45
2015-16	44,168.18	116,232.06	0.38
2016-17	74,280.55	121,771.39	0.61

Financial Performance Ratios

Financial Performance Ratios are profitability ratios are used in assess a business's ability to generate earnings compared to its expenses and other relevant cost incurred during a specific period of time.

Operating Profit Margin (%)

This ratio is calculated by dividing operating profit by sales.

Operating Profit Margin = $\frac{\text{Operating profit} \quad * 100}{\text{Net Sales}}$

Operating Profit Margin

year	Operating profit	Sales	Operating Profit Margin
2012-13	12,743.41	43,761.70	29.12
2013-14	16,656.23	54,219.49	30.72
2014-15	11,278.88	47,093.46	23.95
2015-16	8,334.54	44,168.18	18.87
2016-17	18,377.01	74,280.55	24.74

Gross Profit Margin (%)

Gross profit ratio measures the relationship of gross profit to net sales and is usually represented as a percentage.

Gross Profit = $\frac{\text{Gross profit} \quad *100}{\text{Net Sales}}$

Gross Profit Margin

Year	Gross Profit Margin(%)
2012-13	24.83
2013-14	26.1
2014-15	19.17
2015-16	13.81
2016-17	17.36

Cash Profit Margin (%)

The net profit of a phone are affected by the amount/ method of depreciation charged. Further, depreciation being a non cash expense, it is better to calculate cash profit ratio. This ratio measures the relationship between Cash generated from operations and net sales.

Cash Profit = $\frac{\text{Cash profit} \quad * 100}{\text{Net Sales}}$

Table 4.8 cash Profit Margin

Year	Change in total cash flows	Sales	Cash Profit Margin
2012-13	8,253.46	43,761.70	18.86
2013-14	10,816.79	54,219.49	19.95
2014-15	7,275.94	47,093.46	15.45
2015-16	8,829.22	44,168.18	19.99
2016-17	11,795.75	74,280.55	15.88

Net Profit Margin (%)

Net profit ratio establishes relationship between net profit (after taxes) and sales, and indicates the efficiency of the management in manufacturing, selling. Administrative and other activities of the firm. This ratio is the over all of firms profitability.

Net Profit = $\frac{\text{Net Operating Profit} \quad *100}{\text{Net Sales}}$

Table 4.9 Net profit margin

Year	Profit after tax	Sales	Net Profit Margin
2012-13	5,798.43	43,761.70	13.25
2013-14	8,333.54	54,219.49	15.37
2014-15	7,257.10	47,093.46	15.41
2015-16	5,662.36	44,168.18	12.82
2016-17	5,325.92	74,280.55	7.17

Return on Capital Employed (%)

Return on capital employed established the relationship between profits and the capital employed. It is the primary ratio and is most widely used.

Return on Capital Employed = $\frac{\text{Net Operating Profit *100}}{\text{Net Sales}}$

Return on Net Worth

Year	Net income	Average share holders equity	Return On Networth
2012-13	37,725.46	345,942.47	9.17
2013-14	41,271.24	432,522.60	10.48
2014-15	41,433.82	399,836.36	9.65
2015-16	37,814.69	262,812.10	6.95
2016-17	47,296.99	327,768.14	6.93

Return on Assets (%)

Return on assets known as ROA is the relationship between non profit (after taxes) and assets employed to earn that profit. This ratio measures the profitability of the firm in relation of the assets employed in the firm.

$$\textbf{\textit{Return on Assets}} = \frac{\text{Net Profit After Tax}}{\text{Average Total Tax}}$$

Return on Assets

Year	Company's annual earnings	Average total assets	Return On Assets
2012-13	529,293.05	93,109.99	568.46
2013-14	711,178.97	112,957.27	629.6
2014-15	718,332.29	104,652.14	686.4
2015-16	843,437.94	116,232.06	725.65
2016-17	622,629.29	121,771.39	511.31

Return on Long Term Funds

Return on NET CAPITAL EMPLOYED. It is calculated by dividing earnings before interest and tax (EBIT) by the mid capital employed. The term net capital employed in the gross capital in then business - current liabilities. Thus, it represents the long term funds supply by creditors and owners of the firm.

Return on Long Term Funds =Descriptive statists – Profitability ratio

Return on Long Term Funds

Year	EBIT	Net capital employed	Return On Long Term Funds
2012-13	8,511.13	109,027.58	12.81
2013-14	9,855.26	131,863.38	13.38
2014-15	6,618.04	61,216.87	9.25
2015-16	7,709.07	73,467.44	9.53
2016-17	6,060.31	69,148.14	11.41

FINDINGS, SUGGESTIONS AND CONCLUSION

The collected data were analysis and interpreted by using various accounting techniques and statistical tools. The findings of evaluated data has been summarised below:

1. The interest coverage ratio is more than 1.5 stating be to "too safe" and is neglecting opportunities to magnify earnings through leverage. The ratio was high (6.41) during the financial year 2013-2014.
2. Debt to equity ratio was high (0.61) during the financial year 2016-2017. It is inferred that the long term solvency position is satisfactory.
3. The financial charges coverage ratio is a financial ratio that measures a firm's ability to pay all of its fixed charges or expenses with its income before interest and income taxes. It is high (7.6) during the financial year 2015-16. Higher financial charges ratios indicate a healthier and less risky business to invest in or get loan.
4. Capital gearing ratio is high (3.12) during the financial year 2015-16. So, that shows that the common stockholder's equity is highly geared in the company.
5. Asset turnover ratio was high (0.61) during the financial year 2016-2017. So, the higher the asset turnover ratio, the better the company is performing, here the company inferred increase in the value of their assets.
6. The operating profit is expressed as a percentage of sales and shows the efficiency of a company controlling the costs and expenses associated with business operations .Its high (30.72) during the financial year 2013-14. Higher ratio, higher efficiency.
7. Gross margin, alone, indicates how much profit a company makes after paying off its Cost of Goods sold. Gross profit margin is high (24.83) during the financial year 2012-13. It is a measure of the efficiency of a company using its raw materials and labour during the production process. The higher the profit margin, the more efficient a company.
8. Cash profit Margin is a measure of how efficiently a company converts its sales to cash. It is high (19.99) during the financial year 2015-16. The higher the percentage, the more cash available from sales.
9. 9. The net profit margin, indicates how much net income a company makes with total sales achieved. It is high (15.41) during the financial year 2014-15. A higher net profit margin means that a company is more efficient at converting sales into actual profit.
10. Return on capital employed establishes the relationship between profit and capital employed in the business. It is high (13.37) during the financial year 2013-14. A higher ROCE indicates more efficient use of capital.
11. The ratio of after-tax income to net worth. It is also called as Return of equity. It is high (10.48) during the financial year 2013-14. This is a measure of how well the company is investing the money invested in it. A high return on equity indicates that the company is spending wisely and is likely profitable.
12. Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. It is high (72.65) during the financial year 2015-16. The higher ratio is more favourable to investors because it shows that the company is more effectively managing its assets to produce greater amounts of net income. A positive ROA ratio usually indicates an upward profit trend as well.
13. Return on long term funds is calculated as the annual percentage return based on the yields of all the underlying securities in the company. It is high (13.38) during the financial year 2013-14. Higher return, higher yield.

Suggestions

On the basis of studying the capital structure, cost of capital, operating profit ratios, cash flow analyses of Tata Steel Company we would like to give below generic suggestions to the users of this report mainly from industries and investors. The entire capital structure is super sufficient in the first four years of study but, diminishes in the last year. Thus, the company is strong in its long-term structure, in the same way has to concentrate in its short-term capital planning.

Over capitalisation occurs where company has issued more debt and equity than its asset are worth. An overcapitalisation company might be paying more than its need to interest and dividend reducing debt, buying back shares and restructuring the company are possible solution to this problem. When a company does not have sufficient capitalisation to conduct normal business operation and pay creditors. This can occur when company unable to generate enough cash flow or is unable to access form of financing such as, debt or equity. The firm should focus on getting of profits in the coming years by taking care internal as well as external factors

CONCLUSION

An optimum capital structure is that which maximizes the shareholder's wealth with best combination of debt and equity mix by minimizing the firm's cost of capital. Firm's capital structure trends have a great impact on firm's financial performance. The analysis of the study concludes that companies are using both debt & equity financing as a part of their capital structure pattern. But they are advised to maintain a right balance between debt financing and equity financing. The relation of impact between return on equity and debt equity ratio of Tata Steel Company are satisfactory. Thus, it implies that Tata Steel has been influenced by debt equity ratios. From this project we conclude that from the analysis of capital structure analysis it is clear that Tata steel company limited have been doing a satisfactory job. The firm should focus on getting of profits in the coming years by taking care internal as well as external factors. The entire capital structure is super sufficient in the first four years of study but, diminishes in the last year. Thus, the company is strong in its long-term structure, in the same way has to concentrate in its short-term capital planning.

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