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RELATIONSHIP BETWEEN DEGREE OF FINANCIAL LEVERAGE AND EARNING PER SHARE

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ABSTRACT

Degree of financial leverage refers to the effect of the use of debt capital on the earning per share of a company. This paper studied the relationship between degree of financial leverage and earnings per share of two leading Indian steel companies- Steel Authority of India Limited, and Tata Steel Limited for a period since 2006-07 to 2014-15. This study used the secondary source of data i.e. Annual Reports of SAIL and Tata Steel Limited. We found a negative correlation between degree of financial leverage and earnings per share in SAIL, whereas no relationship was found between degree of financial leverage and earnings per share in Tata Steel Limited.

KEYWORDS: Borrowed Capital, Degree of Financial Leverage, Earning Per Share

INTRODUCTION

Financial leverage refers of use of borrowed capital, to magnify the return on equity share. Borrowed capital carries a fixed cost on it, called interest. So, a high degree of financial leverage leads a high return on equity share if the return on investment is more than the rate of interest on borrowed capital. On the other hand, it has a negative effect on return on equity share when the interest rate on borrowed capital, in more than return on investment.

Chinedu Innocent Enekwe (2014), stated in his paper that, the financial leverage employed by a company is intended to earn more on the fixed charges funds than their costs. The amount of debt finance in the financial mix of the firm should be at the optimal level so as to ensure adequate utilisation of the firms' assets. The management should also monitor the interest charged on debt financing to avoid liquidation of the company [1]. In an another research, Dr. E. B. Khedkar (2015) found that, the degree of financial leverage was positively correlated with the Return on Investment and statistically not significant in Dr.Reddy‟s Laboratories. It means that, degree of financial leverage of DrReddy‟s Laboratories was not at optimum level[2]. Syed Shah Fasih Ur Rehman (2013), studied the relationship between Financial Leverage and Financial Performance of Listed Sugar Companies of Pakistan. He found that there were the positive relationship of debt-equity ratio with return on asset and sales growth, and negative relationship of debt-equity ratio with earning per share, net profit margin and return on equity[3]. Nicolas Tan (2015) stated financial leverage levels have often been used by investors and other stakeholders as an indicator of the riskiness of firms [4].

The objective of this paper is to find out the relationship between degree of financial leverage and earnings per share in the Indian Steel Industry. The Indian Steel Sector is one of the fastest growing sectors and holds an important position in the industrial system of India. This industry is also a capital-intensive industry which requires a huge amount of capital. Hence, This study is very helpful to understand the use of financial leverage and its relationship with the return in the Indian Steel Industry.

Degree of Financial Leverage (DFL)

Degree of Financial Leverage (DFL) is a financial leverage ratio which denotes the effect of the financial leverage on the Earning Per Share (EPS) of a company. A Higher degree financial leverage provides an opportunity for a company to magnify its profit in a favourable condition i.e., the rate of return is more than the interest rate. This leads to a higher EPS. On the other hand, it creates a higher level of financial risk of a company, because if the company is not able to meet its financial cost of using the Borrowed Capital, the company may be bankrupted.

Degree of Financial Leverage (DFL) is measured as the percentage change in EPS for a unit change in earnings before interest and taxes (EBIT). It can be mathematically represented with the help of these formulas given as follows:

$$DFL = \frac{\%\ \text{Change in EPS}}{\%\ \text{Change in EBIT}}$$

Or,

$$DFL = \frac{EBIT}{EBIT - Interest}$$

Where, EPS refers to Earnings Per Share; EBIT refers to Earnings Before Interest and Taxes

Earnings per Share (EPS)

EPS refers to the earnings available for each equity shareholder after meeting all expenses from the earnings. EPS is calculated by dividing profit after tax by number of equity shareholders in this study.

Indian Steel Industry

The Indian iron and steel industry has a significant presence in the Indian as well as international economy. Its contribution to the Indian economy is manifested in terms of its contribution to the industrial production, employment generation and foreign exchange earnings. India is the world's third-largest producer of crude steel (up from eighth in 2003) and is expected to become the second-largest producer by the end of 2016. The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. The Indian steel industry is very modern with state-of-the-art steel mills. It has always strived for continuous modernisation and up-gradation of older plants and higher energy efficiency levels.

In India, Steel Authority of India Limited (SAIL) and Tata Steel Ltd. are the first and the second largest steel-making companies respectively. Brief introductions of these two companies are given as under:

Steel Authority of India Ltd. (SAIL)

Incorporated on 24 January 1973, Steel Authority of India Limited (SAIL) is the largest steel-making company in India and one of the seven Maharatna's of the country's Central Public Sector Enterprises. SAIL produces iron and steel at five integrated plants (at Bhilai, Rourkela, Durgapur, Bokaro and Burnpur) and three special steel plants (at Salem, Durgapur and Bhadravathi), located principally in the eastern and central region of India and situated close to domestic sources of raw materials. SAIL manufactures and sell a broad range of steel products.

The Government of India owns about 75% of SAIL's equity and retains voting control of the company. However, by virtue of its 'Maharatna' status enjoys significant operational and financial autonomy. Sheri P.K Singh is the current Chairman of SAIL.

As part of its global ambition, the company is undergoing a massive expansion and modernization programme involving upgrading and building new facilities with emphasis on state of the art green technology. According to a recent survey, SAIL is one of India's fastest growing Public Sector Units. Besides, it has R&D centre for Iron & Steel (RDCIS), Centre for Engineering and Technology (CET), Management Training Institute (MTI) and SAIL Safety Organization (SSO) located at Ranchi capital of Jharkhand.

Tata Steel Limited.

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 was the 10th largest steel producing company in the world in 2015, with an annual crude steel capacity of 25.3 million tonnes, and the second largest steel company in India (measured by domestic production) with an annual capacity of 9.7 million tonnes after SAIL.

Tata Iron and Steel Company were established by Dorabji Tata on 25 August 1907, as part of his father Jamsetji's Tata Group. The company changed its name from TISCO to Tata Steel in 2005. Presently, RatanTata is the interim chairman of this company.

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.

MATERIALS AND METHODS

This paper is a quantitative research based on secondary source of data. The study covers the period of 10 years starting from the financial year 2006-07 to 2014-15. For the study, two Indian steel companies have been selected. To study the correlation between degree of financial leverage and earnings per share, following hypothesis has been framed:

Degree of Financial Leverage (DFL) and Earnings Per Share in Steel Authority of India Ltd. (SAIL)

Table 1: Degree of Financial Leverage (DFL) and Earnings per Share in Steel Authority of India Ltd. (SAIL)

YEAR	EBIT	PBT	DFL	EPS
2005-06	6174	5706	1.082018927	9.7
2006-07	9755	9423	1.035232941	15
2007-08	11720	11469	1.021885082	18.2
2008-09	9658	9399	1.027556123	14.9
2009-10	10534	10132	1.039676273	16.4
2010-11	7669	7194	1.066027245	11.9
2011-12	5829	5151	1.131624927	8.6
2012-13	3989	3241	1.230792965	5.3
2013-14	4193	3225	1.300155039	6.3
2014-15	3813	2359	1.616362866	5.1

Source: Annual Reports of SAIL and Research Data

With the help of Statistical Software Microsoft Excel 2010, Correlation between DFL and EPS of above mentioned data is found as follows:

Correlation (r) = -0.77795

This shows a Negative Correlation between Degree of Financial Leverage (DFL) and Earnings Per Share in Steel Authority of India Ltd. (SAIL)

Degree of Financial Leverage (DFL) and Earnings Per Share in Tata Steel Limited

Table 2: Degree of Financial Leverage (DFL) and Earnings Per Share in Tata Steel Limited

YEAR	EBIT	PBT	DFL	EPS
6	5364.47	5239.96	1.023762	63.35
7	6435.55	6261.65	1.027772	65.28
8	7852.86	7066.36	1.111302	66.8
9	8468.3	7315.61	1.157566	69.45
10	8722.7	7214.3	1.209085	60.26
11	11077.34	9776.85	1.133017	75.63
12	11782.77	9857.35	1.195328	67.84
13	9713.37	7836.6	1.239488	50.28
14	11534.08	9713.5	1.187428	64.21
15	10484.84	8508.89	1.232222	64.49

Source: Annual Reports of SAIL and Research Data

With the help of Statistical Software Microsoft Excel 2010, Correlation between DFL and EPS of above mentioned data is found as follows:

Correlation (r) = -0.34428

This shows a Negative Correlation between Degree of Financial Leverage (DFL) and **Earnings Per Share in Tata Steel Limited**

CONCLUSIONS

As Indian Steel Industry is growing at a fast pace, so role of financial leverage is very important to meet its financial Investments. This study is very limited in scope as it covers only one financial ratio i.e., Degree of Financial Leverage to find its relationship with **Earnings per Share and studied only steel industry. Hence, this study is helpful for different investors, scholars, and student and general readers to understand the** Degree of Financial Leverage and its relationship with **Earnings Per Share in Indian Steel Industry specifically.**

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