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LEVERAGE ANALYSES AND ITS IMPACT ON PROFITABILITY OF JSW STEELS LTD.,- A STUDY

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Abstract
The present study discusses the relationship between both operating leverage & financial leverage and profitability ratios of JSW Steels Limited during the period 2011-12 to 2015-16. The purpose of this paper is also to understand the profitability position of the company and to what extent leverages influences the profitability in which direction. This study found that the firm has recorded low profits during first four years of the study. However, it has incurred losses during fifth year (2015-16) of the study and also concluded that leverages are negatively impacted on profitability of the firm during the study period.

Key words: Operating Leverage, Financial Leverage, Profitability, Correlation analysis.

Introduction

Financial management is a discipline of decision making on the financial avenues, executing the decisions and the follow-up. The basic objective of financial management is to increase the profitability of the share holders i.e., increase the shareholder's wealth. This objective is attained based on major decisions; they are capital structure decision (financing decision), investment decision (capital expenditure decision) and dividend decision.

Capital structure of a firm is defined by its leverage. In a business there are two kinds of leverage, operating leverage and financial leverage. If a business has fixed expenses it is said to have an operating leverage and if a business bears the cost of funds in terms of interest & preference dividend it is said to have a financial leverage. It is habitually said that leverage is an essential evil for a business to be progressively profitable. At the same time it has also been said that leverage is a double-edged sword. So that the sword doesn't cut through your neck it's mandatory that leverage be deployed only up to an extent where return on investment is greater than the cost of capital. This shall ensure maximization of shareholder's wealth.

Leverage: is an Influence of one financial variable over some other related financial variable. It is the use of assets and liabilities to boost profits while balancing the risks involved. In business, we can commonly refer to two types of leverage: Operating Leverage and Financial Leverage.

Financial Leverage: the use of debt and preference share in the capital structure of the firm along with shareholders' equity is called financial leverage or trading on equity. Financial leverage may be favorable or unfavorable. If a company's return is more than the cost of borrowing, then the leverage is said to be favorable. On the other hand, if the company's return is less than the cost of borrowing then the leverage is said to be unfavorable.

Operating Leverage: It refers to the ability of a firm to use fixed operating costs to magnify the effect of changes in sales on its operating profits (EBIT). The firm generally purchases the assets whose operations will produce revenue. When sale increases, the fixed cost remains the same and operating revenue will increases. As fixed cost is constant, the percentage change in operating revenue is more than percentage change in sale. The firm can use a greater operating leverage i.e. using of higher amount of fixed cost when compared to variable cost only when the sales are rising because even a small change in sales will bring a proportionate change in operating profit.

Earnings Per Share (EPS): the portion of a company's profit is allocated to each outstanding share of common stock. Earnings per share serve as an indicator of a company's profitability.

Steel Industry in India

The iron and steel industry is one of the most important industries in India. During 2014 through 2015, India was the third largest producer of raw steel and the largest producer of sponge iron in the world. The industry produced 91.46 million tons of total finished steel and 9.7 million tons of pig iron. Most iron and steel in India is produced from iron ore. The Indian Ministry of Steel is concerned with: the coordination and planning of the growth and development of the iron and steel industry in the country, both in the public and private sectors; formulation of policies with respect to production, pricing, distribution, import and export of iron and steel, ferro alloys and refractories; and the development of input industries relating to iron ore, manganese ore, chrome ore and refractories etc., required mainly by the steel industry.

The iron and steel industry in India is organised into three categories: main producers, other major producers, and secondary producers. In 2004-05, the main producers i.e. SAIL, TISCO and RINL had a combined capacity of around 50% of India's total steel production capacity and production. The other major producers — ESSAR, ISPAT and JSW Steels Ltd., — account for around 20% of the total steel production capacity.

JSW Steels Ltd

The JSW Group's foray into steel manufacturing began in 1982, when it set up the Jindal Iron and Steel Company with its first steel plant at Vasind near Mumbai. The next two decades saw significant expansion and several acquisitions, following the merger of Jindal Iron and Steel Co (JISCO) and Jindal Vijayanagar Steel Ltd (JVSL) in 2005. Today JSW Steel has plants in six locations in India — Vijayanagar in Karnataka, Salem in Tamil Nadu, and Tarapur, Vasind, Kalmeshwar and Dolvi in Maharashtra. Its global operations include a plate and pipe mill in the US. In order to securitise resources, the company has acquired mining assets in Chile, USA and Mozambique.

JSW Steel is a pioneer in the use of innovative technology that keeps it ahead of the competition. Not only it offers the widest product portfolio in India, company also further leverage the capability to customise offerings to match customer expectations. The flagship company of the over $11 billion JSW Group, JSW Steel is testament to decades of experience and a dynamic culture that have culminated in the company becoming the leading manufacturer of value added and high end steel in India.

Review of Literature

Choudhury (1993) pointed out that the decreased use of debt tends to decrease profitability of a business firm. Because due to lack of ample finances it has to give up some of the profitable opportunities and vice-versa.

D. Vijaya lakshmi and Padmaja Manoharan in a research paper titled, "Determinants of leverage -An Empirical analysis on Indian metal sector", considered the determinants of leverage of Indian metal sector. The study reveals that the variables, viz., profitability ratios, size of the firm and tangibility are the key determinants of leverage of metal sectors in India.

Safieddine and Titman (1999) made a study titled "A study in leverage and its determinants" brings out the results, which are consistent with the use of debt being positively associated with an alignment of Research Methods interest between shareholders and managers that subsequently increased their leverage ratios, tend to experience significantly better performance than those that do not.

Using a pooled regression analysis, *Dalber and Upneja (2002)* summarized theories related to debt maturity and debt selection including costs of debt, signaling effects, and tax effects.

Debasish Sur, Kaushik Chakraborty and Parveen Begam (2009) have conducted a study on "Financial leverage and owners' return: A study on their relationship with reference to selected Indian companies". The studies have revealed that a company can increase EPS by employing a higher amount of debt funds in their capital structure and shareholder value is created if the efficient management of financial leverage is properly. The main carried out. The object of the research is to examine the relationship between financial leverage on owners' return and also to measure the effect of financial leverage on owners return.

The empirical studies have been reviewed to have the knowledge of research topic. An examination of review of literature reveals that studies on determinants of leverage and financial leverage & owners' return have been conducted. The literature survey indicates that majority of the studies were conducted to identify the significant determinants of leverages. There is a scope for the study of impact of leverages on profitability and the present study entitled "Leverage Analyses and Its Impact on Profitability of JSW Steels Ltd." is an attempt to fill this gap.

Objectives of the Study

The following objectives have been undertaken in the current paper.

1. To determine and analyze operating and financial leverages.
2. To measure the profitability of JSW steels Ltd.,
3. To analyse the impact of leverages on profitability using correlation analysis.

Methodology

It is an analytical research. The study used the information which is readily available and analyzed them to make critical assessment of the study. It covers five years data from 2011-12 to 2015-16. The secondary data is largely used for the

study which is available in the financial statements of the firm from the publication in the company annual reports. Data is Analyzed by using financial tools and techniques such as ratio analysis, mean, standard deviation and correlation coefficient to provide a meaningful conclusion.

The different variables are considered in the study to analyze the effect of leverage on the profitability. The variables are used as dependent variables viz., Return on Investment (ROI), Return on Equity (ROE) , Operating Profit margin, Net profit Margin and EPS and independent variables such as Operating Leverage and Financial Leverages.
Formulae:

- Return on Investment (ROI) = Net operating profit after tax ÷ Investment
- Return on Networth (RONW) = PAT ÷Equity fund
- Operating Profit Margin = EBIT ÷Sales
- Net Profit Margin= Net Profit ÷ Sales
- Earnings per share (EPS) = PAT/ No's of Equity Shares.
- Operating Leverage (OL) = Contribution ÷ EBIT
- Financial Leverage (FL) = ÷ EBT
- 8. Mean: $\bar{x} = \sum_i x_i / n$
- Correlation co-efficient :

$$r = \frac{\Sigma(x-\bar{x})(y-\bar{y})}{\sqrt{[\Sigma(x-x)^2\,\Sigma(y-y)^2]}}$$

Data Analysis and Interpretation:
Table no.1 the following statement shows the amount of sales, contribution, EBIT and EBT during the period 2011-12 to 2015-16:

(INR in crores)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Sales	32,122.66	38,867.59	45,297.72	46,087.32	37,706.92
Less: Variable cost	26,491.86	31,705.73	36,515.13	37,215.68	30,984.40
Contribution	5,630.80	7,161.86	8782.59	8871.64	6722.52
Less: Fixed cost	1708.17	2237.18	2725.88	2784.50	2557.45
EBIT	3922.63	4924.38	6056.71	6087.14	4171.07
Less: Interest	1186.41	1967.46	2740.13	2908.69	2687.34
EBT	2736.22	2956.92	3316.58	3718.45	1483.73

Source: Computed using annual reports.

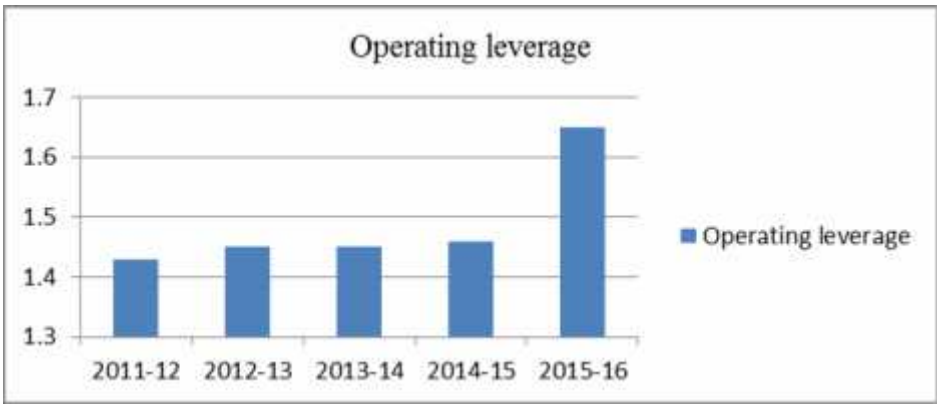
Interpretation
It is evident from the above table that sales are increased during the study period from 2011-12 to 2014-15 except in the year 2015-16. This resulted into the increased contribution. Companies operating profits are increased from Rs.3,920.36 crores in the year 2011-12 to Rs.6,087.4 crores in the year 2014-15 over the previous year. Interest payments of the company continuously increased during the study period due to increased borrowing. Fixed costs are inconsistent due to company's expansion program.

From the above analysis it is clear that, during the first four years of the study period sales and profits are recorded in the increasing trend but in the fifth year company experienced a slight decline in various financial variables over the previous period.

A. Analysis of Operating Leverage

Table No.2: The following table shows operating leverages of JSW steels Ltd.,

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Mean
Operating leverage	1.43	1.45	1.45	1.46	1.65	1.488



Interpretation

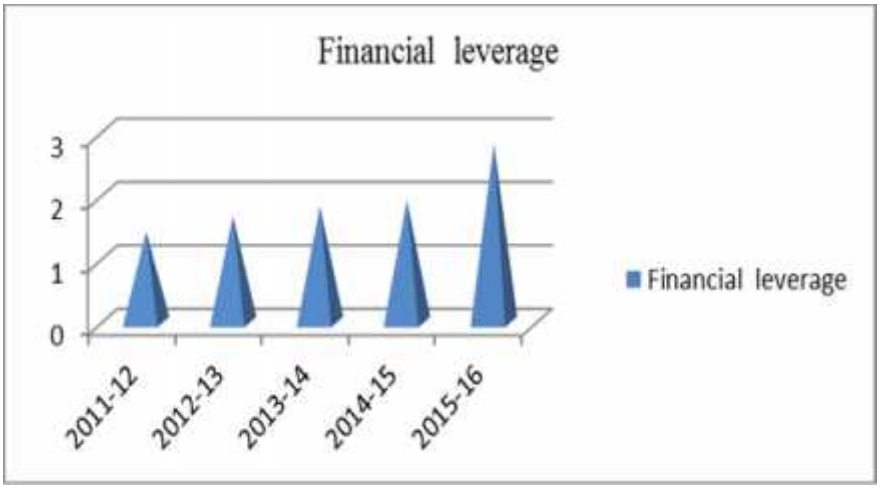
Operating leverage measures how growth in the revenue results into growing operating profit and how volatile a company's profit is. The results of the operating leverage reveals that firm's business risk is low due to low operating leverage. It also allows us to understand that firm's lower portion of fixed cost indicating a lower operating leverage.

From the study it is clear that the operating leverage of the company is consistent during the study period. It implies that operating risk of the firm is consistent during the last four years. The firm recorded an operating leverage of 1.43 in the year 2011-12 which is increased to 1.65 during the year 2015-16 with a mean ratio of 1.488.

B. Analysis of Financial Leverage

Table No.3: The following table shows Financial leverages of JSW steels Ltd.,

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Mean
Financial leverage	1.43	1.67	1.83	1.92	2.81	1.932



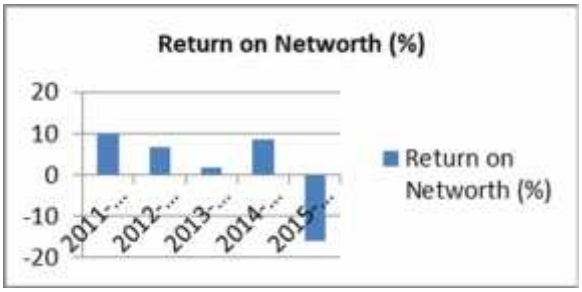
Financial leverage measures the sensitivity of company's EBT or EPS to change in its operating profit due to change in its capital structure. The ratio shows that higher the financial leverage the more volatile is EBT or EPS.

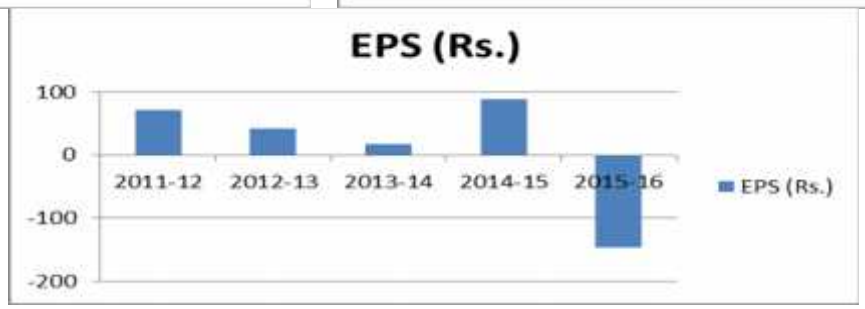
Financial leverage is 1.43 in the year 2011-12 and increased to 2.81 in the year 2015-16 with a mean ratio of 1.93. It indicates that the financial leverage increased during the study period because of increased use of debt in the capital structure. It states sensitivity of EBT towards EBIT increased during the study period. This resulted into more volatility in the EPS during the last five years.

C. Analysis of Profitability Ratios

Table No.4: The following table shows Profitability ratios of JSW steels Ltd.,

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Return on Investment(%)	9.3	8.8	7.13	9.86	-1.7
Return on Networth (%)	9.7	6.6	1.77	8.42	-16.08
Operating Profit Margin (%)	12.2	12.6	13.37	13.21	11.06
Net profit margin (%)	1.6	2.4	1	4.7	-9.28
EPS (INR)	71.42	41.71	17.35	88.24	-146.11





Interpretation

Profitability ratios express the relation between a result and capital invested to get it. ROI measures overall profitability of the company. During the year 2011-12, company recorded a ROI of 9.3%, 2012-13- 8.8%, 2013-14-7.13%, and 2014-15- 9.86% which indicate a consistent profitability of the company during the first four years of the study. However, the firm suffered a loss with an ROI of -1.7% during the year 2015-16.

The company's return on net worth is volatile throughout the study period with the ratios of 9.7,6.6, 7.7, 8.42 and -16.08 during the years 2011-12,2012-13,2013-14,2014-15 and 2015-16 respectively.

The operating profit margin have not changed considerably and remained almost constant during the study period in a range of 11.6 to 13.21. However, the net profit margin showed a drastic volatility during the study period for the first four years and a negative margin in the year 2015-16.

The EPS was recorded interestingly a brisk change over first four years of the study and a sweeping EPS of RS. - 146.11 due to a changing trend in the financial leverage.

D. Analysis of Correlation between Leverages and Profitability Ratios.

Table 5: Table showing correlation of profitability ratios with operating leverage.

Profitability ratios	Financial leverage	Operating leverage
Return on Investment(%)	-0.92533	0.9699
Return on Networth (%)	-0.94442	-0.9631
Operating Profit Margin (%)	-0.63597	-0.8064
Net profit margin (%)	-0.85579	-0.9390
EPS (INR)	-0.90292	-0.9500

Interpretation

It is observed from the Table No.5 that financial leverage is having a negative correlation with profitability ratios selected for the study. It indicates that increase in financial leverage i.e. use of debt capital in the capital structure will reduces the profitability of the company selected for the study, due the low level of operating profits. Operating profits are not sufficient to reap the benefits of financial leverage.

The operating leverage has positive correlation with return on investment (0.9699). However, it has a negative correlation with other profitability ratios such as return on net worth, operating profit margin, net profit margin & earnings per share selected for the present study. It reveals that operating leverage also influences negatively on profitability of the company selected for the study.

Findings

1. Operating leverage ratios are low and consistent with a mean score of 1.488, during the study period 2011-12 to 2015-16. Hence, business risk of the firm is low and consistent.
2. Financial leverage ratios recorded an increasing trend in the last five years with a ratio of 1.43 (2011-12), 1.67 (2012-13), 1.83 (2013-14), 1.92 (2014-15) and 2.81 (2015-16). This reveals financial risk of the firm is increased over the past five years. However, it has a mean score of 1.932, implies a low financial risk.
3. Profitability analysis reveals that company recorded positive returns on investment and sales during first four years of the study period. Whereas, in the year 2015-16 it has suffered a loss.
4. Operating leverage as well as financial leverage maintained a negative correlation with profitability ratios, implies that the company selected for the study not getting the leverage benefits to increase the profitability.

Conclusion

Leverage is a double-edged sword. So that the sword doesn't cut through your neck it's mandatory that leverage be deployed only up to an extent where return on investment is greater than the cost of capital. The present study found that both operating and financial leverages have a negative correlation with profitability ratios. Therefore, it can be concluded that leverages have negative impact on the profitability of the company and it has suffered a loss during last year (2015-16) of the study. However, JSW Steel is testament to decades of experience and a dynamic culture that have culminated in the company becoming the leading manufacturer of value added and high end steel in India

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