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RESEARCH METHODOLOGY

**RESULTS & DISCUSSION** 

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# FORECAST ANALYSIS OF PROFITABILITY IN SELECT STEEL COMPANIES IN INDIA

# DR. M. KRISHNAMOORTHI ASST. PROFESSOR DEPARTMENT OF MANAGEMENT STUDIES PRIYADARSHINII ENGINEERING COLLEGE VANIYAMBADI

#### **ABSTRACT**

The Indian Iron and Steel industry contributes significantly to the overall growth and development of the economy. As per the estimation of the ministry of steel, the industry today directly contributes to 2% of India's GDP and its weightage in the official index of Industrial Production (IPP) is 6.2%. The industry has been able to shape out a niche for itself globally. From a country with a production of one million tonnes at the time of independence, it has now become the world's 4th largest producer of crude steel preceded behind China, Japan and the US The study evaluates the profitability level of selected steel companies to know their financial strength and weakness, it will lead to increase financial tactic to compete with international steel producers. In the present study concludes that the profitability of selected steel companies very fair, except few belongs to mid-cap companies, they need effort to stabilize their financial position to meet domestic and global competition. The companies belong to same industry differ in maintaining of profitability in various aspects.

#### **KEYWORDS**

profitability, profit margin, return on investment, return on assets, return on net worth.

#### INTRODUCTION

he prime objective of a business undertaking is to earn profit and it is considered essential for the survival of the business. A business needs profit not only for its existence but also for expansion and diversification. Profit to the management is the test of efficiency and a measurement of control. It is to the owners a measure of worth of their investment, to the creditors the margin of safety, to the employees a source of fringe benefits, to the government a measure of taxpaying capacity and the basis of legislative action, to the customers a hint to demand better quality and price units, to an enterprise a less cumbersome sources of finance for growth and existence and finally to the country an index of economic progress. A business enterprise can discharge its obligations to the various segments of the society only through earnings of profits. Therefore, profit is the engine that drives the business enterprise to achieve its objectives, and is the reward for entrepreneurship. In this stage the analysis of profitability of TATA, SAIL, JSW, VISA, which are large Cap and Mid Cap companies of BHUSHAN, JSPL& KALYANI was analyzed by using multiple variables acquires more significance.

The Indian Iron and Steel industry contributes significantly to the overall growth and development of the economy. As per the estimation of the ministry of steel, the industry today directly contributes to 2% of India's GDP and its weightage in the official index of Industrial Production (IPP) is 6.2%. The industry has been able to shape out a niche for itself globally. From a country with a production of one million tonnes at the time of independence, it has now become the world's 4<sup>th</sup> largest producer of crude steel preceded behind China, Japan and the US

The study evaluates the profitability level of selected steel companies to know their financial strength and weakness, it will lead to increase financial tactic to compete with international steel producers. Profitability involves profit—making ability of business. Profitability is defined as the ability of invested capital to earn a return from its uses and it is the relationship of the earnings to total capital of the company. Profitability is an overall indication of the strength and weakness of the company. Therefore, profitability is the main sign of the efficiency and effectiveness of a business enterprise in achieving its goal of earning profit. Profitability as a relative measure enables the management to make prompt changes in the financial and production policies in the beam of the past performance. The important managerial decisions are pertaining to such issues, expansion of plant, implementation of modern technology, raising of additional funds, and also payment of bonus and dividend are depending on profitability of the firm.

## **NEED OF THE STUDY**

The profitability entails the process and methodology of identifying company's all operational income and expenditure value drivers at a transactional level, and aggregating to translate their workings into financial results. It is providing operational managers to use their resources in an optimal way. In addition, to get insight into the financial consequences of their operational business and it guides to increase financial control and predictability of financial results. The purpose of profitability makes the good and permanent business environment. It should create goodwill and increase value of the firm, not only for the benefit of one individual, but also for the benefit of all consumers, suppliers, employees and the community at large. Businesses can be a catalyst to transform benefits to society and nations for serving as the engine of the economy

# STATEMENT OF THE PROBLEM

In the present scenario, companies are facing so many problems to generate profit, due to high competition in domestic and international level. The production companies are struggling to maintain to reduce costs, increase production, and constant profitability. Here, profitability is the primary goal of all business. Without profitability, the business will not survive for a long period. Therefore, measuring current and past profitability and predicting future profitability is very important to identify the success of the business during the period. Conversely, the highly profitable company has the ability to reward its shareholders with a high return on their investment. Profitable and continuous growth only suggests itself when all operations and financial control things deep inside the business are running well.

## **OBJECTIVE OF THE STUDY**

To find forecast performance of profitability of select steel companies in India.

# **REVIEW OF LITERATURE**

Greiner (1972) described the relationship between company growth and profitability can be positive or negative. On the one hand, increased growth can contribute a breakdown of informal relationship established over time in companies, greater growth requiring greater formality in relationships at work, which in the short-term can be difficult to achieve efficiency, thus leading to diminish company profitability. On the other hand, greater growth can result in greater profitability. Singh and Whittington (1975)studied about the growth and profitability that are important dimensions of firm performance, when the study of growth is undertaken in terms of systematic influence which may affect growth, rather than regarding growth as wholly chance phenomenon, then most important systematic influence on growth is that of profitability, it may consider by industry condition and economic cycles which affects the competitiveness of the market environment, and in turn both growth and profitability.

Kester (1986) found that there is a negative relationship between capital structure and profitability under market value and book value basis for both U.S and Japanese manufacturing firms. There is no significant difference in U.S and Japanese company's growth, profitability, risk, size, and industry classification.

**Lieberman and Montgomery** (1988) argued that growth displays a favourable impact on its profitability except for samples of bigger firms. It might be argued that smaller firms are being more flexible which tend to take chance more readily than their bigger rivals, it may also be that smaller firms can profitably exploit chances by expanding sales at unreduced price. It suggests that new entrants can create a lasting advantage by building a dominant position for themselves in the market. **Debashish Rai and Debashish Sur** (2001) studied about how the firm's growth rate affects the profitability and analysed the various categories in relationship with growth and profitability. They concluded that the studies support the general notion which shows a positive relationship between growth and profitability.

Eldos Mathew punnoose (2008) postulated negative relationship between growth and profitability; in short the empirical evidence on the relationship between growth and profitability performance is inconclusive. There is no evidence for substantial, universal and positive relationship between growth and profitability.

Fulbag Singh and Monica Mogla (2008) discussed about profitability on merger in an expanding economy, one should expect a positive association between growth and profitability of firms because profits provide the ability to grow. However, the factors affecting the willingness to grow and that are likely to vary between different industries.

Ahmed Arif Karim Almazari (2009) found evidence that growth had a positive impact on profitability providing support indicates a positive relationship, and also suggested that growth and profitability are positively related, one would be expecting the empirical evidence to clearly demonstrate a positive association between the two, whether or not the research can determine the direction of casualty.

Balram Dogra and Gupta (2009) examined that the optimum capital structure enhances the profitability and the value of the firm. The result of a study on SMEs in India showed that they relied more on their own funds and comparatively less on borrowed funds,

**Zelia Serrasqueiro** (2009) measured firm's profitability in the analysis of the relationship between growth and profitability, return on assets and return on sales, the profit rates measured by sales will give a short term perspective of profitability because sales are annual flows. On the other hand, the return on assets and return on capital employed will give us a long term perspective of profitability concludes that there is a positive relationship between growth and profitability.

Rajagopalan (2009) concluded that profitability analysis by taking into account, the combined effect of sales related and assets related ratios is in the inception stage. In the context of widening opportunities, challenging competition, merger and acquisition wave, strategic investment in subsidiaries and associates and increased depends upon debt financing.

Ramachandran Azhagaiah and Raju Deepa (2011) studied about the profit earned by firms was a major contribution to the profitability and its impact of various predictors variable such as liquidity, capital intensity, growth, volatility on profitability, when income earned was controlled. It was found that the firms, with varying income level, were influenced by different determinants in deciding their profitability.

**Karthik and Titto** (2011) have found that profitability more or less depends upon the better utilisation of resource, cut-off expenses and quality of management, it is worthwhile to increase production capacity and use advance technology to cut down the cost of production in order to increase profitability, not only against the investment, but also from investor's return point of view. These programs are helpful to increase profitability of the company.

Sathya (2012) studied to measure the composite profitability of a firm by a single index. The analysis shows that in order to rank the selected companies in terms of composite profitability, ratio-wise scores have been aggregated and the firm who is getting the highest total score has been ranked as 1 and the firm who is securing the lowest total score has been ranked as 30. The return of a business may be measured by studying the profitability of investment in it. Profitability may be defined as the ability of given investment to earn a return from its use

Sasikala (2012) investigated that there is no relationship between liquidity and profitability, risk and profitability and concluded that the excessive liquidity may lead to lower profitability. So, the negative association between liquidity and profitability must control with effective liquidity management.

Krishna Moothi and Ramesh (2012) have found that the companies belong to steel industry are maintaining different level of profitability, the profitability strength level determine on the basis of difference in gross profit, net profit, operating profit, return on investment and dividend payout ratio. They conclude that there is no correlation of net profit and operating profit among the selected companies, and there is no significant difference in return on Investment of selected companies in India.

Amir Hossein Jamali and Asghar Asad (2012) investigated the relationship between the management efficiency and the firm's profitability for a sample of 13 auto manufacturing companies listed on the Bombay Stock Exchange and the study conclude that profitability and management efficiency are highly correlated to each other and based on the results of the study; recommendations for improving the management efficiency and profitability in this industry are given

## **RESEARCH DESIGN**

The research design describes the theoretical plan and structure of the study to find answers to the research problem. It constitutes the outline for data collection, sampling techniques and framework for analysis of data. The present study is both descriptive and analytical nature.

## DATA COLLECTION

The present study purely based on the secondary data only. The related data, such as profit and loss account statement, balance sheet and some important key ratios were collected from the published annual reports of selected steel companies in India. Other related information was collected from the Centre for Monitoring Indian Economy (CMIE) Reports, official website of selected steel companies, NSE, BSE, annual report of the ministry of steel, Institute of Financial Management and Research (IFMR), Libraries of various institutions, research publications and various academic research reports. Further the researcher referred various finance related textbooks and journals.

# SAMPLING

In order to analyse the profitability and dividend performance of steel companies, the details of 72 companies were collected. From this, the steel companies which satisfied the following criteria which have been shortlisted for further research:

- 1. The companies listed in NSE and BSE.
- 2. Availability of data at least for the period of 10 years.
- 3. The company should have at least three years of continues profit during the study period.
- 4. The companies declared and paid dividend for a minimum of three years during the study period.
- 5. The selected steel companies have been classified as large and mid-cap companies based on market capitalisation.

The companies' stocks with market capitalisation of Rs. 10,000 crore or more are large cap companies and which are listed below:

## LARGE CAP COMPANIES

- Tata Steel Limited
- 2. Steel Authority of India Limited (SAIL)
- 3. JSW Steel Limited
- 4. Visa Steel Limited

The companies' stocks with market capitalisation between Rs. 2,000 crore to Rs. 10,000 crore are mid cap companies and which are listed below:

# MID CAP COMPANIES

- Bhushan Steel Limited
- 2. Jindal Steel and Power Limited (JSPL)
- 3. Kalyani Steels Limited

# FRAMEWORK FOR ANALYSIS

The various statistical tools are used to analyse profitability performance of the selected steel companies in India. The study of financial statement such as profit and loss accounts and balance sheets through profitability ratios, solvency ratios, turnover ratios and dividend ratios constitutes in the framework of analysis. The frame work of analysis contains data analysis by using of SPSS package with applications of ratio analysis and forecast models

#### MODEL FITTING OF PERFORMANCE OF SELECTED FINANCIAL PARAMETERS

Eleven basic mathematical models were used to fit these data. The objective is to find how best these data fit into the models and choose the model. The following eleven mathematical models were used for this purpose.

1. Linear model  $: Y = b_0 + b_1 t$ 2. Quadratic model :  $Y = b_0 + b_1 t + b_2 t^2$ 3. Cubic model  $: Y = b_0 + b_1 t + b_2 t^2 + b_3 t^3$ 4. Logarithmic model  $: Y = b_0 + b_1 \log t$ 5. Inverse model  $: Y = b_0 + b_1 / t$ 6. Compound growth model  $: Y = b_0 * b_1^t$ 7. Power curve model  $: Y = b_0, t^{b_1}$ 8. S curve model :  $Y = e^{(b_0 + b_1/t)}$ :  $Y = e^{(b_0 + b_1 t)}$ 9. Growth curve model 10. Exponential model :  $Y = b_0. e^{b_1 t}$ 11. Logistic model  $: Y=1 / [(1/u) + (b_0. b_1 t)]$ 

Where, u = upperbound

In all these equations Y represents as dependent variable, t as time and  $b_0$  as constant,  $b_1$ ,  $b_2$  and  $b_3$  are growth coefficients. The best fitting model is identified by the highest  $R^2$ value, since  $R^2$  describes them the goodness of fit of the model. Once the best fit model is identified, then the forecast for the next few years were estimated using the model.

# **OPERATING PROFIT MARGIN**

It is seen from the analysis that the cubic model has highest R<sup>2</sup> value and hence considered as the best fitting model when comparing with all other models. The model equations for the Operating Profit Margin for the large cap and mid cap companies are

**TABLE 1: FORECASTED VALUES OF OPERATING PROFIT MARGIN** 

|      | L     | arge cap | compani | es     | Mid cap companies |       |         |
|------|-------|----------|---------|--------|-------------------|-------|---------|
| Year | TATA  | SAIL     | JSW     | VISA   | BHUSHAN           | JSPL  | KALYANI |
| 2014 | 27.32 | 9.62     | 19.03   | -25.71 | 27.24             | 22.97 | 18.12   |
| 2015 | 24.35 | 10.28    | 22.33   | -51.10 | 21.56             | 18.53 | 31.62   |
| 2016 | 21.54 | 13.15    | 27.99   | -84.47 | 12.31             | 13.73 | 51.40   |

Source: SPSS output

Using the coefficient values of CUBIC model the forecast was done for next few years i.e. for 2014, 2015 and 2016. Observing the estimates of this models it can be predicted that the Operating Profit Margin for TATA is expected to be 27.32, 24.35 and 21.54 for the years 2014-16 respectively, for SAIL is expected to be 3.62, 10.28 and 13.15 for the years 2014-16 respectively, for JSW is expected to be 19.03, 22.33 and 27.99 for the years 2014-16 respectively and for VISA is expected to be -25.71, -51.10 and -84.47 for the years 2014-16 respectively.

The predicted Operating Profit Margin for BUSHAN is expected to be 27.24, 21.56 and 12.31 for the years 2014-16 respectively, for JINDAL is expected to be 22.97, 18.53 and 13.73 for the years 2014-16 respectively, for KALYANI is expected to be 18.12, 31.62 and 51.4 for the years 2014-16 respectively.

# **GROSS PROFIT MARGIN**

# MODEL FITTING OF PERFORMANCE OF SELECTED FINANCIAL PARAMETERS

It is seen from the analysis that the cubic model has highest R<sup>2</sup> value and hence considered as the best fitting model when comparing with all other models. The model equations for the Gross Profit Margin for the large and mid cap companies are

 $\begin{array}{lll} \textbf{Y}_{\text{TATA}} & = 27.7527 + 7.0279t \cdot 1.2688 \, t^2 + 0.0556 \, t^3 \\ \textbf{Y}_{\text{SAIL}} & = 10.9007 + 13.2481 \, t \cdot 2.7731 \, t^2 + 0.1421 \, t^3 \\ \textbf{Y}_{\text{JSW}} & = 13.2180 + 10.0257 \, t \cdot 2.2555 t^2 + 0.1249 \, t^3 \\ \textbf{Y}_{\text{VISA}} & = 9.8667 - 6.6756 \, t \cdot +2.4258 \, t^2 - 0.2020 \, t^3 \\ \textbf{Y}_{\text{BHUSHAN}} & = 18.1397 - 5.7268t \, +1.5258 t^2 - 0.0908 t^3 \\ \textbf{Y}_{\text{JSPL}} & = 38.3770 - 2.9910t \, + 0.5460 t^2 - 0.0432 t^3 \\ \textbf{Y}_{\text{KALYANI}} & = -4.6140 + 15.1287t \cdot -3.3525 t^2 + 0.1960 t^3 \end{array}$ 

TABLE 2: FORECASTED VALUES OF GROSS PROFIT MARGIN

|      | l     | .arge cap | compan | ies     | Mid ca  | ар сотра | anies   |
|------|-------|-----------|--------|---------|---------|----------|---------|
| Year | TATA  | SAIL      | JSW    | VISA    | BHUSHAN | JSPL     | KALYANI |
| 2014 | 25.56 | 10.21     | 16.80  | -38.86  | 18.93   | 14.06    | 17.08   |
| 2015 | 25.48 | 16.09     | 24.52  | -69.92  | 12.26   | 6.48     | 32.93   |
| 2016 | 26.87 | 26.65     | 36.73  | -110.67 | 2.10    | -3.12    | 56.19   |

Source: SPSS output

Using the coefficient values of CUBIC models the forecast was done for next few years ie for 2014, 2015 and 2016. Observing the estimates of CUBIC models it can be predicted that the Gross Profit Margin for TATA is expected to be 25.56, 25.48 and 26.87 for the years 2014-16 respectively, The predicted Gross Profit Margin for SAIL is expected to be 10.21, 16.09 and 26.65 for the years 2014-16 respectively, for JSW is expected to be 16.80, 24.52 and 36.73 for the years 2014-16 respectively and for VISA is expected to be -38.86, -69.92 and -110.67 for the years 2014-16 respectively,

The predicted Gross Profit Margin for BUSHAN is expected to be 18.93, 12.26 and 2.10 for the years 2014-16 respectively. for JINDAL is expected to be 14.06, 6.48 and -3.12 for the years 2014-16 respectively, for KALYANI is expected to be 17.08, 32.93 and 56.19 for the years 2014-16 respectively.

## **NET PROFIT MARGIN**

# MODEL FITTING OF PERFORMANCE OF SELECTED FINANCIAL PARAMETERS

It is seen from the analysis that the cubic model has highest R<sup>2</sup> value and hence considered as the best fitting model when comparing with all other models. The model equations for the Net Profit Margin for the large cap and mid cap companies are

 $\begin{array}{lll} \textbf{Y}_{\textbf{TATA}} & = 13.9170 + 4.5131 \, \text{t} \, -5751 \, \text{t}^2 \, + 0.0131 \, \text{t}^3 \\ \textbf{Y}_{\textbf{SAIL}} & = 9.9403 + 4.8423 \, \text{t} \, -0.8202 \, \text{t}^{2+} - 0.0285 \, \text{t}^3 \\ \textbf{Y}_{\textbf{JSW}} & = 14.8480 + 0.7242 \, \text{t} \, -0.3697 \, \text{t}^2 \, + 0.0199 \, \text{t}^3 \\ \textbf{Y}_{\textbf{VISA}} & = 6.0183 - 4.0256 \, \text{t} \, + 1.2202 \, \text{t}^2 - 0.1041 \, \text{t}^3 \\ \end{array}$ 

 $\begin{array}{ll} \textbf{Y}_{\text{BHUSHAN}} &= 8.9267\text{-}4.0768\,t\,+1.2827\,t^2\,-0.0883\,t^3 \\ \textbf{Y}_{\text{JSPL}} &= 23.8950\,-2.3368\,t\,+0.6383\,t^2\,-0.0533\,t^3 \\ \textbf{Y}_{\text{KALYANI}} &= -7.8900\,+2.7552\,t\,+0.1558\,t^2\,+0.1558\,t^3 \end{array}$ 

TABLE 3: FORECASTED VALUES OF NET PROFIT MARGIN

|      | La    | rge cap | compan | ies    | Mid cap companies |        |         |
|------|-------|---------|--------|--------|-------------------|--------|---------|
| Year | TATA  | SAIL    | JSW    | VISA   | BHUSHAN           | JSPL   | KALYANI |
| 2014 | 11.41 | 1.94    | 4.54   | -29.11 | 1.72              | 4.51   | 11.33   |
| 2015 | 7.90  | -0.75   | 4.66   | -46.37 | -7.91             | -4.29  | 23.02   |
| 2016 | 4.19  | -3.03   | 5.47   | -68.69 | -21.34            | -15.66 | 40.43   |

Source: SPSS output

Using the coefficient values of CUBIC models the forecast was done for next few years i.e. for 2014, 2015 and 2016. Observing the estimates of CUBIC models it can be predicted that the Net Profit Margin for TATA is expected to be 11.41867, 7.90821 and 4.19139 for the years 2014-16 respectively, The predicted Net Profit Margin for SAIL is expected to be 1.942000, -0.75148 and -3.03073 for the years 2014-16 respectively, for JSW is expected to be 4.54967, 4.66618 and 5.47527 for the years 2014-16 respectively and for VISA is expected to be -29.11000, -46.37894 and -68.69909 for the years 2014-16 respectively,

The predicted Net Profit Margin for BUSHAN is expected to be 1.72667, -7.91394 and -21.34879 for the years 2014-16 respectively for JINDAL is expected to be 4.51000, -4.29742 and -15.66424 for the years 2014-16 respectively, for KALYANI is expected to be 11.33167, 23.02879 and 40.43606 for the years 2014-16 respectively.

#### **RETURN ON CAPITAL EMPLOYED**

## MODEL FITTING FOR PERFORMANCE OF SELECTED FINANCIAL PARAMETERS

It is seen from the analysis that the cubic model has highest R<sup>2</sup> value and hence considered as the best fitting model when comparing with all other models. The model equations for the Return on Capital Employedfor the large cap and mid cap companies are

 $\begin{array}{lll} \textbf{Y}_{\textbf{TATA}} & = 44.6870 + 4.2126 \ t - 2.5939 \ t^2 + 0.1897 \ t^3 \\ \textbf{Y}_{\textbf{SAIL}} & = 8.3320 + 28.9131 \ t - 6.1834 \ t^2 + 0.3295 \ t^3 \\ \textbf{Y}_{\textbf{JSW}} & = 4.9367 + 11.4052 \ t - 2.4298 \ t^2 + 0.1380 \ t^3 \\ \textbf{Y}_{\textbf{VISA}} & = 12.7423 - 4.9381 \ t + 1.3632 \ t^2 - 0.01021 \ t^3 \\ \textbf{Y}_{\textbf{BHUSHAN}} & = 12.0533 - 1.1640 \ t + 0.1454 \ t^2 - 0.0077 \ t^3 \\ \textbf{Y}_{\textbf{JSPL}} & = 26.2780 - 1.9010 \ t + 0.3047 \ t^2 - 0.0285 \ t^3 \\ \textbf{Y}_{\textbf{KALYANI}} & = -4.7347 + 18.1809 \ t - 3.7304 \ t^2 + 0.2087 \ t^3 \\ \end{array}$ 

TABLE 4: FORECASTED VALUES OF RETURN ON CAPITAL EMPLOYED

|      | Li    | arge cap | compani | es     | Mid cap companies |       |         |
|------|-------|----------|---------|--------|-------------------|-------|---------|
| Year | TATA  | SAIL     | JSW     | VISA   | BHUSHAN           | JSPL  | KALYANI |
| 2014 | 29.71 | 16.73    | 20.07   | -12.53 | 6.53              | 4.28  | 21.68   |
| 2015 | 49.58 | 34.23    | 30.38   | -26.65 | 5.63              | -1.93 | 36.92   |
| 2016 | 77.94 | 63.08    | 45.77   | -45.4  | 4.47              | -9.59 | 59.73   |

Source: SPSS output

Using the coefficient values of cubic models the forecast was done for next few years i.e. for 2014, 2015 and 2016. Observing the estimates of cubic models it can be predicted that the Return On Capital Employed for TATAis expected to be 29.71, 49.58 and 77.94 for the years 2014-16 respectively. The predicted Return On Capital Employed for SAIL is expected to be 16.73, 34.23 and 63.08 for the years 2014-16 respectively, for JSW is expected to be 20.07, 30.38 and 45.77 for the years 2014-16 respectively and for VISA is expected to be -12.53, -26.65 and -45.40 for the years 2014-16 respectively,

The predicted Return On Capital Employed for BUSHAN is expected to be 6.53, 5.63 and 4.47 for the years 2014-16 respectively, for JINDAL is expected to be 4.28, -1.93 and -9.59 for the years 2014-16 respectively, for KALYANI is expected to be 21.68, 36.92 and 59.73 for the years 2014-16 respectively.

# RETURN ON NET WORTH

# MODEL FITTING OF PERFORMANCE OF SELECTED FINANCIAL PARAMETERS

It is seen from the analysis that the cubic model has highest R<sup>2</sup> value and hence considered as the best fitting model when comparing with all other models. The model equations for the Return on Net Worth for the large and mid cap companies are

 $\begin{array}{lll} \textbf{Y}_{\textbf{TATA}} & = 43.3043 + 1.2844 \ t - 1.4810 \ t^2 + 0.1034 \ t^3 \\ \textbf{Y}_{\textbf{SAIL}} & = 61.2097 - 4.9608 \ t - 0.4298 \ t^2 + 0.372 \ t^3 \\ \textbf{Y}_{\textbf{JSW}} & = 42.7877 - 9.4718 \ t + 1.1759 \ t^2 - 0.0576 \ t^3 \\ \textbf{Y}_{\textbf{VISA}} & = 7.5267 - 1.2482 \ t + 0.4946 \ t^2 - 0.0734 \ t^3 \\ \textbf{Y}_{\textbf{BHUSHAN}} & = 9.6257 + 6.3858 \ t - 0.7967 \ t^2 + 0.0159 \ t^3 \\ \textbf{Y}_{\textbf{JSPL}} & = 40.2133 - 3.3135 \ t + 0.4100 \ t^2 - 0.0345 \ t^3 \\ \textbf{Y}_{\textbf{KALYANI}} & = -6.0463 + 17.8716 \ t - 3.5659 \ t^2 + 0.1935 \ t^3 \\ \end{array}$ 

TABLE 5: FORECASTED VALUES OF RETURN ON NET WORTH

|      | La                 | rge cap | compan | ies    | Mid cap companies |       |         |
|------|--------------------|---------|--------|--------|-------------------|-------|---------|
| Year | TATA SAIL JSW VISA |         |        |        | BHUSHAN           | JSPL  | KALYANI |
| 2014 | 15.91              | 4.09    | 4.22   | -44.07 | 4.59              | 7.47  | 16.63   |
| 2015 | 24.2               | 4.00    | -1.08  | -63.09 | -1.05             | -0.11 | 29.31   |
| 2016 | 36.97              | 5.72    | -8.17  | -86.41 | -7.14             | -9.35 | 48.79   |

Source: SPSS output

Using the coefficient values of these models the forecast was done for next few years i.e. for 2014, 2015 and 2016. Observing the estimates of these models it can be predicted that the Return On Net Worth for TATA is expected to be 15.91, 24.20 and 36.97 for the years 2014-16 respectively. The predicted Return On Net Worth for SAIL is expected to be 4.09, 4.00 and 5.72 for the years 2014-16 respectively, for JSW is expected to be 4.22, -1.08 and -8.17 for the years 2014-16 respectively and for VISA is expected to be -44.07, -63.09 and -86.41 for the years 2014-16 respectively,

The predicted Return On Net Worth for BUSHAN is expected to be 4.59, -1.05 and -7.14 for the years 2014-16 respectively, for JINDAL is expected to be 7.47, -0.11 and -9.35 for the years 2014-16 respectively, for KALYANI is expected to be 16.63, 29.31 and 48.79 for the years 2014-16 respectively

# **RETURN ON ASSETS**

# MODEL FITTING OF PERFORMANCE OF SELECTED FINANCIAL PARAMETERS

It is seen from the analysis that the cubic model has highest  $R^2$  value and hence considered as the best fitting model when comparing with all other models. The model equations for the Return on Assets for the large and mid-cap companies are:

 $\begin{array}{ll} \textbf{Y}_{\text{TATA}} & = 119.203\text{-}17.968 \ t + 14.2270 \ t^2 - 0.7890 \ t^3 \\ \textbf{Y}_{\text{SAIL}} & = 8.5243 + 2.3735 \ t + 2.1484 \ t^2 - 0.1475 \ t^3 \\ \textbf{Y}_{\text{JSW}} & = -76.979 + 130.316 \ t - 11.866 \ t^2 - 0.8814 \ t^3 \\ \end{array}$ 

 $\begin{array}{lll} \textbf{Y}_{\text{VISA}} & = -7.6277 + 19.9010 \ t - 3.6693 \ t^2 + 0.2173 \ t^3 \\ \textbf{Y}_{\text{BHUSHAN}} & = 148.743 - 50.203 \ t + 35.6586 \ t^2 - 2.9165 \ t^3 \\ \textbf{Y}_{\text{JSPL}} & = -223.77 - 596.303 \ t - 128.59 \ t^2 - 7.2950 \ t^3 \\ \textbf{Y}_{\text{KALYANI}} & = -5.3650 + 56.3513 \ t - 9.2439 \ t^2 + 0.4431 \ t^3 \\ \end{array}$ 

#### **TABLE 6: FORECASTED VALUES OF RETURN ON ASSETS**

|      |        | Large cap | companies | Mid    | cap compai | nies    |         |
|------|--------|-----------|-----------|--------|------------|---------|---------|
| Year | TATA   | SAIL      | JSW       | VISA   | BHUSHAN    | JSPL    | KALYANI |
| 2014 | 592.83 | 98.23     | 1093.83   | 56.57  | 29.39      | 486.41  | 85.78   |
| 2015 | 588.85 | 91.45     | 1301.13   | 78.36  | -358.51    | 1021.38 | 105.44  |
| 2016 | 556.51 | 78.35     | 1548.17   | 108.46 | -885.07    | 1824.42 | 138.51  |

Using the coefficient values of these models the forecast was done for next few years i.e. for 2014, 2015 and 2016. Observing the estimates of these models it can be predicted that the Return on Assets for TATA is expected to be 592.83, 588.85 and 556.51 for the years 2014-16 respectively. The predicted Return on Assets for SAIL is expected to be 98.23, 91.45 and 78.35 for the years 2014-16 respectively, for JSW is expected to be 1093.83, 1301.13 and 1548.17 for the years 2014-16 respectively and for VISA is expected to be 56.57,78.36 and 108.46 for the years 2014-16 respectively.

The predicted Return on Assets for BUSHAN is expected to be 23.39, -358.51 and -885.07 for the years 2014-16 respectively, for JINDAL is expected to be 486.41, 1021.38 and 1824.42 for the years 2014-16 respectively, for KALYANI is expected to be 85.78, 105.44 and 138.51 for the years 2014-16 respectively.

# FINDINGS AND SUGGESTIONS

Keeping in view of the above findings related to evaluation of Profitability and Dividend progress, the following measures are suggested to make improvement of a weak area in financial activities of large cap and mid cap companies.

- It has been observed that VISA and KALYANI indicates lower levels of operating profit ratio due to increase in operating expenses. Hence, both companies are suggested to give attention to reduce operating expense by effective utilisation of resources and efficient maintenance of equipment, it leads to increase gross profit margin and net profit margin of firm.
- > All the large cap and mid cap companies are showing good return on their total capital employed due to efficient uses of equity and long term fund in the right proportion. But VISA and BHUSHAN show lower than others due to improper uses of equity and debt fund. Hence, both companies are suggested to use available fund in the right proportion with consideration of cost of capital.
- > The return on net worth of major Large cap companies are good due to efficient uses of equity fund, but VISA shows the negative ratio, it shows that the company's inefficient and ineffective uses or misuse of shareholder's funds and it indicates unfavourable business conditions, so it can take new strategies to effective uses of equity fund in their operation by reducing external debt investment.
- > The generating of income from assets is a very good position in the majority of large and mid cap companies, but VISA and KALYANI fail to increase its return on assets due to inefficient and ineffective uses of assets, so these companies should take necessary step to increase income by effective utilization of assets

#### CONCLUSION

In the present scenario, companies have to meet global competition and grow with profitable. It is the main role of financial manager and management to evaluate the company's financial position with appropriate manner, that assist to various financial decision making, such as Investment decision, Finance decision, Dividend decision and Working capital decision. The evaluation plays an important role in judging the financial soundness of selected steel companies in India. The steel industries play vital role in the development of the country's economy. The consumption of steel products is increasing in the industries of automobile, infrastructure, white goods, machinery and tools. This is the role of management to maintain good financial position by effective utilization and control of available asset or funds, which leads to increase profitability of the firm. In the present study concludes that the profitability of selected steel companies very fair, except few belongs to mid cap companies, they need effort to stabilize their financial position to meet domestic and global competition. The companies belong to same industry differ in maintaining of profitability in various aspects.

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