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MEASUREMENT OF PROFITABILITY LIQUIDITY AND DIVIDEND PROGRESS OF SELECT STEEL COMPANIES IN INDIA- A DISCRIMINANT FUNCTION ANALYSIS

Article Particulars

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Abstract

Profitability and liquidity are the vital issues in the industrial finance; the concept of financial liquidity is not especially straight, as it has special aspects, even though normally it deals to the Liquidity management. Financial liquidity is mutually with profitability are the key participants of company's activities, which, in order to function the operation efficiently and effectively, the company should give regular important on it. ***.*** *The major objective of the study is the analysis made to find out How do Select Steel Companies in India who are large Cap companies differ from those who are Mid cap companies in the factors on influencing Evaluation of Profitability ,liquidity and Dividend Progress. Finally, it conclude that Debtors Turnover Ratio, which contributes maximally, in discriminating between Large cap companies and Mid cap companies and Dividend Per Share and Interest Coverage Ratio. Net Profit Margin seems to contribute least in discriminating between large cap companies and mid cap companies.*

Key words: *Profitability, Liquidity, Turnover, Dividend, Midcap companies, large cap companies.*

Introduction

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, Profitability and liquidity are the most important issues in the firms finance; the concept of financial liquidity is not exceptionally straight, as it has different aspects, even though normally it deals to the liquidity management. Financial liquidity is mutually with profitability are the main participants of enterprise activities which, in order to function efficiently and effectively, the company should give regular important. The growth of financial liquidity may influence the company's profitability, and also it creates impact on dividend distribution to the investor. If the company is stagnant sense in liquidity, then it will affect negatively on the profitability of firms. Decision on liquidity, profitability and dividend is all about proper planning which is essential for the efficient working of all organization. The aspect of proper planning should be in the view of marketing, production, human resource, financial budgeting and profit planning. The proper flow of funds leads to effective running of business. This kind of fund is called working capital, which is equally defined as the current assets less the current liabilities. The present study focuses to determine the relationship between liquidity, profitability and dividend, and the impact of liquidity on profitability and dividend of the company.

Statement of the Problem

In the present competitive world, companies are facing so many problems to generate profit. The production companies are struggling to maintain to reduce costs, increase production, and constant profitability. At this point, profitability is the primary goal of all business. Without profitability, the company will not survive for a long term period. Consequently, measuring current and past profitability and predicting future profitability is very significant. Payment of dividend is desirable and very important because the shareholders always expect to earn some return from their investment and they have intention to maximize their wealth. In this regard, retained earnings are playing the major role in internal financing activities such as increasing production, expansion and modernisation of the business. Hence, both profit and dividends are desirable. To avoid the major financial problem, finance managers regularly investigate possible ways to change the business to improve profitability and shareholders wealth. These possible changes can be measured in the present study and attempt to make the evaluation of profitability liquidity and dividend progress of select steel companies in India.

Objective of the Study

To measure the discriminant variation of Profitability, Liquidity and Dividend Progress of Select Steel companies in India

Review of Literature

Abdul Raheman (2007) investigated that there is a strong negative relationship between the variables of the working capital and profitability of the firm. It means that the cash conversion cycle, increase will lead to decrease profitability of the firm, and manager can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level, and found that there is a significant negative relationship between liquidity and profitability [1]. Shin and Soenen(1998) studied about the short term and long term solvency position of the company will lead to company's profitability. Further the strength of working capital management also leads to participation of corporate profitability. They found that there is a strong negative relation between the cash conversion cycle and corporate profitability [2].

Samiloglu and Demirgunes (2008) examined the effect of working capital management on firm profitability about companies listed at the Istanbul Stock exchange (ISE). Using the multiple regression models, the study examined the effect of working capital on firm profitability for the period of 1998–2007. The findings of the study show that accounts receivables period, inventory period and leverage affect firm profitability negatively; while growth (in sales) affects firm profitability positively [3]. 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[4]. Bhaskar Bagchi Jayanta Chakrabarti and Piyal Basu Roy (2012) investigated the effect of working capital management on firm's profitability as measured by return on total assets and return on investment using a sample of Indian FMCG companies found a strong negative relationship between the measures of working capital management with corporate profitability using fixed effect model. Hence, the findings of the study highlight the importance of proficient working capital management to ensure an improvement in firm's profitability and this aspect must form part of the company's strategic and operational thinking in order to operate effectively and efficiently in India's new challenging economic environment[5].Krishnamoorthi (2012) Liquidity plays a vital role in survival of a business. Some describe it as solvency, but it would be better if the term 'solvency' is reserved for "ability to survive in the long run". He concluded that companies belong to the same industry followed a different debt equity position during the study period. [6]

Research Methodology

The present study is both descriptive and analytical nature. The present study purely based on the secondary data only. The related data like some important key ratios were collected from the published annual reports of selected steel companies in India, and official website of NSE,BSE, In order to analyse the profitability and dividend performance the Indian steel companies have been classified as large and mid cap companies based on market capitalisation. Data analysed by using of SPSS package with applications of ratios and discriminant function analysis

Discriminant Function Analysis and Interpretation

Discriminant function analysis makes to find out How do Select Steel Companies in India who are large cap companies differ from those who are Mid cap companies in the factors on influencing Evaluation of Profitability and Dividend Progress? Do factors like profitability ratios, liquidity ratios and turnover ratios are differ among these two groups? In general, what are all the variables which significantly discriminate the respondents of one group (Large cap companies) from other group (Mid cap companies). Discriminant Function Analysis answers these questions.

Table 1.Summary Table

Step	Ratios	Min. D Squared Statistic	Exact F Statistic	df1	df2	P
1	Debtors Turnover Ratio	1.61	27.60	1	68	0.000
2	Earnings Per Share	2.917	24.63	2	67	0.000
3	Interest Coverage Ratio	3.638	20.17	3	66	0.000
4	Net Profit Margin	4.473	18.32	4	65	0.000
5	Return On Net Worth	5.214	16.83	5	64	0.000
6	Earning Retention Ratio	6.043	16.00	6	63	0.000
7	Inventory Turnover Ratio	6.67	14.89	7	62	0.000
8	Dividend Per Share	7.879	15.15	8	61	0.000

Source: SPSS Output

Table 1 provides the overall stepwise Discriminant analysis results after all significant variables have been included in the Discriminant Function. The summary table indicates that out of 21 variables considered for the analysis 9 variables were included in the model, leaving six variables namely ''Debtors Turnover Ratio, Earnings Per Share, Interest Coverage Ratio, Net Profit Margin, Return On Net Worth, Inventory Turnover Ratio & Dividend Per Share' for Dependents from the function. The significance of the discriminating variables were tested using Wilk's Lambda and Min D^2 values which are given in the table.

Table 2 Canonical Discriminant Function

Source: SPSS Output

Canonical Correlation	Wilks' Lambda	Chi-square	df	P value
0.810	0.343	68.97	7	0.000

Table 2 provides the multivariate aspect of the model given under the heading 'Canonical Discriminant Function'. Note that Discriminant Function is significant at 1% level and displays a correlation of 0.81. By squaring it we get 0.656 and may be interpreted as 65.6 % of the variation in the dependent variable, may be explained by all the discriminating variables included in the model and the Wilk's Lambda and its chi-square value explains that the model is significant in discriminating between two companies at 1% level.

Table 3 Canonical Discriminant Function Coefficients

Variables	Net Profit Margin	Return On Net Worth	Interest Coverage Ratio	Inventory Turnover Ratio	Debtors Turnover Ratio	Dividend Per Share	Earnings Per Share	(Constant)
Function	-0.177	0.055	0.062	-0.208	0.109	0.206	-0.021	-0.15

Source: SPSS Output

Table 3 gives the coefficients of the discriminating variables finally derived for the Discriminant Function.

The Discriminant Function (Z) for the problem under study can be written as, $Z = -0.15 - 0.177X_1 + 0.055X_2 + 0.062X_3 - 0.208X_4 + 0.109X_5 + 0.026X_6 - 0.021X_7$

Where, X_1 - Net Profit Margin, X_2 - Return On Net Worth, X_3 - Interest Coverage Ratio, X_4 - Inventory Turnover Ratio, X_5 - Debtors Turnover Ratio, X_6 - Dividend Per Share, X_7 - Earnings Per Share

Table 4 Canonical Discriminant Functions Evaluated at Group Means

Source: SPSS Output

Functions at Group Centroids	
HB companies	**Function**
Large Cap	1.181
Mid Cap	-1.574

Using the Discriminant Function given in (A) the Discriminant score for each respondent is calculated by substituting the values for discriminating variables from the study data. Then mean scores for Large Cap companies (Z_0) and Mid Cap companies are calculated, which are called Group Centroids. The results of these Group Centroids are given in Table 4.

Using the sample sizes and Centroids for these two groups Cutting Score is calculated as follows:

$$Z_C = \frac{N_0 \times Z_0 + N_1 \times Z_1}{N_0 + N_1}$$

Where, Z_C = Cutting Score, Z_0 = Centroids for Large Cap companies, Z_1 = Centroids for Mid Cap companies, N_0 = Sample size of Large Cap companies, N_1 = Sample size of Mid Cap companies

Hence substituting the respective values the cutting score is

$$Z = [40*(1.181) + 30*(-1.574)]/(40+30)$$

Against this Cutting Score each respondent's discriminant score is examined. If his score is less than Z_C value, then he is classified in large Cap companies group, otherwise in Mid Cap companies group.

Table 5 Prior Probabilities for Groups

Source: SPSS Output

HB companies	Prior	Cases Used in Analysis
Large Cap	0.571	40
Mid Cap	0.429	30
Total	1	70

A prior probabilities are calculated for each group based on the proportionate size of the sample in the respective groups and the results are given in table 5.

Table 6 Classification Results

Original	HB companies	Predicted Group Membership		Total
		Large Cap	**Mid Cap**	
Count	Large Cap	39	1	40
	Mid Cap	1	29	30
%	Large Cap	97.50	2.50	100
	Mid Cap	3.33	96.67	100

Source: SPSS Output *97.3 % of original grouped cases correctly classified.

Using these prior probabilities, Centroids and cutting score the Classification Matrix is formed. Table 6 is the Classification Matrix giving how many of the respondents were correctly classified into the respective groups and the overall correct classification percentage, Thus it is seen that the Discriminant Function has predicted 97.5 % of the cases correctly in the Large Cap companies group and 96.67 % of the cases in the Mid Cap companies group and on the whole classified 97.3 % of the cases correctly.

Table 1 Structure Matrix

	R	R^2
Debtors Turnover Ratio	0.461	**0.2125**
Dividend Payout Ratio(a)	0.204	0.0416
Financial Charges Coverage Ratio(a)	0.178	0.0317
Earnings Per Share	-0.173	**0.0299**
Debt Equity Ratio(a)	-0.168	0.0282
Dividend Per Share	0.154	**0.0237**
Interest Coverage Ratio	0.15	**0.0225**
Earning Retention Ratio(a)	-0.132	0.0174
Return On Capital Employed(a)	0.104	0.0108
Return on Long Term Funds(a)	0.104	0.0108
Total Assets Turnover Ratio(a)	0.1	0.0100
Fixed Assets Turnover Ratio(a)	0.099	0.0098
Investments Turnover Ratio(a)	-0.088	0.0077
Quick Ratio(a)	-0.061	0.0037
Return On Net Worth	-0.058	**0.0034**
Inventory Turnover Ratio	-0.048	**0.0023**
Gross Profit Margin(a)	0.038	0.0014
Current Ratio(a)	-0.036	0.0013
Return on Assets (a)	-0.026	0.0007
Net Profit Margin	-0.018	**0.0003**
Operating Profit Margin(a)	-0.017	0.0003

A this variable not used in the analysis.

It is seen from the table that nearly 21.25 % of the variation in the Discriminant Function is due to Debtors Turnover Ratio, which contributes maximally, in discriminating between large cap companies and mid cap companies. Next comes, Earnings Per Share, which contributes about 3 % in discriminating between the two companies followed by Dividend Per Share and Interest Coverage Ratio. Net Profit Margin seems to contribute least in discriminating between large cap companies and mid cap companies.

Conclusion

In the global competition the production companies should grow with profitable and welfare of investor also very important to company for fulfilling of future financial requirement, 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 present study gives the highlight of liquidity, profitability and dividend discriminant of selected steel companies in India, finally it conclude that that nearly 21.25 % of the variation in the Discriminant Function is due to Debtors Turnover Ratio, which contributes maximally, in discriminating between Large cap companies and Mid Cap companies. Next comes, Earnings Per Share, which contributes about 3 % in discriminating between the two companies followed by Dividend Per Share and Interest Coverage Ratio. Net Profit Margin seems to contribute least in discriminating between large cap companies and mid cap companies. The selected companies should concentrate and take account on deviation in Liquidity, profitability and dividend for future financial plan.

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