Impact of Financial Management Decisions on Profitability-A Study of Steel Companies in India

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Abstract

The present study analyzes the impact of financial management decisions namely financing decision, dividend decision and working capital management decision on profitability of selected 20 steel companies for the period of 10 years starting from 2007-2016. Current ratio, debtor turnover ratio, debt equity ratio, interest coverage ratio and total dividend as % of profit after tax collectively represent the financial management decisions. Profitability of steel companies has been measured by return on assets. Panel data regression model has been applied for analyzing the results. The empirical results found that current ratio, debtor turnover ratio, debt equity ratio, interest coverage ratio are significant while total dividend as % of profit after tax is a non- significant determinant of profitability of steel companies.

Keywords: Dividend, investment, liquidity, profitability, steel companies.

Introduction

One amongst the major objectives of the business is to maximize the profits. Financial management is that activity of the business which plans and controls the financial resources of the firm. There are mainly three functions of financial manager – Financing decision, Dividend decision and Working Capital Management decision. These decisions affect the profitability of a company most. In financing decision, financial manager decides about the proportion of various financial resources i.e. equity and debt. The mixture of equity and debt is termed as capital structure. The financial manager's main objective is to maintain the capital structure at optimum level and at the same time minimizing the cost of capital and maximizing the firm's value. Under dividend decision, the financial manager decides about how much part of the profit should be distributed i.e. dividend payout ratio and retained i.e. retention ratio for future opportunities. Here the financial manager has to make a balance between the shareholders demand for regular dividend and available investment opportunities. Optimum dividend policy implies that market value of the firm should be maximized. Working capital management decision is the next major decision taken by the financial manger. Working capital refers to the firm's investment in current assets. There are two aspects of working capital management first one is optimization of investment and other is financing of current assets. Working capital management decisions are one of the important decisions taken by financial manager since excessive and inadequate investment can be harmful for profitability of the firm.

Steel industry is one of the important industry of India. As per the statistics of 2015, India stood at third position in production of raw steel1. In the present study, the researcher attempts to find out the impact of major financial management decisions on the profitability of selected steel companies listed in Bombay Stock Exchange of India. This study will help the decision makers to point out the major factors of financial management decisions that affect the profitability position with reference to steel industry of India. Present study has been organized as follows: Section I comprise of Introduction part, Section II consists of literature review of relevant study, next Section III contains the research methodology of the study, further Section IV relates to results and discussion and finally Section V concludes the study.

Literature review

Takeh and Navaprabha (2015) in their study analyzed the impact of capital structure decisions on the financial performance of Indian steel industry. The sample of the study consists of 13 major steel companies analyzed for a period of 6 years. The researcher has applied multiple regression model, correlation matrix, ANOVA and descriptive statistics to accomplish the objectives of the study. The study indicates that there is a significant relationship between capital structure and financial performance. Further there is a negative relation between capital structure and financial performance as shown by the study. Chhatoi (2015) analyzed the relationship between profitability and dividend payout in Iron and Steel industries in India. The data has been collected from annual reports of selected companies from 2004 to 2012. The main objective of the study is to analyze the profitability and its relation with dividend. The author has applied the descriptive statistics, ANOVA and correlation techniques. The result of the study shows that dividend decisions are greatly affected by profitability and also the study reveal that dividend decisions make significant impact on financing decisions of a firm. Sharma et al. (2015) conducted a study to analyze the relationship between profitability and working capital management of steel authority of India ltd. The researcher has applied the ratio analysis, mean, standard deviation, coefficient of variation, correlation and regression tools in order to accomplish its objectives. The period of the study consists of 8 years i.e. from 2006-2013. The results conclude that there is a significant relation between working capital and profitability of SAIL. Further profitability ratios are negatively related with working capital ratios at the same time positively related with current ratio, liquid ratio, debtor turnover ratio and inventory turnover ratio. Noor and Lodhi (2015) by taking the sample of automobile companies listed on Karachi stock exchange have analyzed the affect of liquidity ratios on profitability. The research tools namely ratio analysis, descriptive statistics, correlation and regression has been applied by the researcher. The ratios namely current ratio, quick ratio and working capital ratio has been used to measure liquidity. The study shows that there is a negative relation between liquidity and profitability in selected sample which indicates that lesser the liquidity more is the profitability. Anojan (2014) conducted a study to analyze the liquidity management, capital structure and the association of both on profitability in selected Beverage, Food and Tobacco firms in Colombo Stock Exchange (CSE) in Sri Lanka. The sample consists of 8 listed companies for a period of 5 years. Regression analysis and correlation have been used by the researcher. The result of correlation shows that both liquidity management and capital structure are negatively related with the profitability. Further the regression shows that there is not a significant association of liquidity management and capital structure with profitability in selected sample. Singhania et al. (2014) has done a study to analyze the working capital management and profitability in selected Indian manufacturing companies. The researcher gathered data of 82 companies listed on BSE-500 index of Bombay stock exchange for a period of 8 years. Further the researcher used cash conversion cycle as a measure of working capital management and gross operating profit for profitability. The results show a negative relation between cash conversion cycle and profitability. Further the study implies that the top management can enhance the performance of the business by lessening the number of day's receivables and raising the number of days payable. Thafani and Abdullah (2014) in their study examine the impact of dividend payout on profitability in selected manufacturing companies on Colombo Stock Exchange. The sample consists of 21 listed companies for a period of 5 years. The regression model has been used by the author to accomplish the objectives. The result of the study concludes that there is a significant relation between dividend payout and profitability. Further the management should design the dividend policy in such way that increases the profitability as well as shareholders wealth. Akoto et al. (2013) by taking the sample of Ghanaian listed manufacturing companies examine the association between working capital management and profitability. The researcher applied panel data methodology and there are 13 companies analyzed for a period of 5 years. The results shows a negative relation between account receivable days and profitability however cash conversion cycle, current asset ratio, size, and current asset turnover has a positive relation with profitability. The study recommends that managers can enhance the performance by decreasing account receivables. Chisti et al. (2013) examined the impact of capital structure on profitability by taking the sample of Indian listed companies. The sample consists of 10 automobile companies for a period of 5 years. The researcher has applied ratio analysis to complete the required objectives. The result concludes the significant

relation between capital structure and profitability in selected sample companies. Further the debt equity ratio is negatively related to the profitability indicating that increase in debt will decreases the profitability. Afeef (2011) analyzed the impact of working capital management on profitability of SME's of Pakistan. The sample of the study consists of 40 Pakistani listed companies for a period of 6 years. The researcher has applied the tools namely descriptive statistics, correlation analysis and multiple regression analysis in order to accomplish the objectives. The study concludes that efficient management of working capital has a significant impact on profitability of an enterprise. Salawu (2009) conducted a study in order to analyze the impact of capital structure on profitability based on Nigerian sample. By taking the sample of 50 non-financial companies from 1990-2004 the objectives are accomplished by the researcher. The pooled ordinary least square model has been applied. The study shows the positive correlation between short term debt and profitability while negative relation with long term debt. Further Nigerian firms are using more external finance.

Objective of the study

The present study attempts to analyze the impact of financial management decisions i.e. financing decision, dividend decision and working capital management decision on profitability of selected steel companies. Current ratio, debtor turnover ratio, debt equity ratio, interest coverage ratio and total dividend as % of profit after tax (PAT) have been taken as explanatory variables.

Hypotheses of the study

For accomplishing the above objective following hypotheses have been framed:

H01= Current ratio is not a significant determinant of profitability of selected steel companies.

H02= Debtor turnover ratio is not a significant determinant of profitability of selected steel companies.

H03= Debt equity ratio is not a significant determinant of profitability of selected steel companies.

H04= Interest coverage ratio is not a significant determinant of profitability of selected steel companies.

H05= Total dividend as % of PAT is not a significant determinant of profitability of selected steel companies.

Research methodology

The present study is based on secondary data only. The data for the study has been taken for the period of 10 years i.e. 2007-2016. The data has been taken from CMIE PROWESS and Moneycontrol.com. In the present study, sample of top 20 steel companies on the basis of market capitalization have been taken. The study analyzes the impact of financial management decisions on profitability of selected steel companies. Return on assets i.e. dependent variable has been used as an indicator of profitability while current ratio, debtor turnover ratio, debt equity ratio, interest coverage ratio, total dividend as % of PAT have been used as independent variables. For analyzing the results, Panel data regression model has been used. Following is the equation of model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e_{it}$$

Where Y = Return on assets, X_1 = Current ratio

X_2 = Debtor turnover ratio

X_3 = Debt equity ratio

X_4 = Interest coverage ratio

X_5 = Total dividend as % of PAT

α = Intercept term, β = Vector of coefficients, e_{it} = Error term over the time t.

Results and discussion

Before applying panel data regression model, there is an assumption of multi-collinearity, which should be satisfied from independent variables.

Table 1: Correlation matrix of independent variables

	Current ratio	Debtor turnover ratio	Debt equity ratio	Interest coverage ratio	Total dividend as % of PAT
Current ratio	1				
Debtor turnover ratio	-0.18123894	1			
Debt equity ratio	-0.085649612	-0.076603621	1		
Interest coverage ratio	0.196248027	0.185689283	-0.070141088	1	
Total dividend as % of PAT	-0.037749332	-0.02431387	0.012969814	-0.019369619	1

Source: Data Analysis

As per Table 1, the results reveal that the value of coefficients is less than 0.80, which shows the absence of multi-collinearity problem. For determining the factors of profitability of selected steel companies, Panel Data Regression Model has been used. After obtaining the output of fixed effect model and random effect model, Hausman test has been used to select the appropriate model. As per Table 2, the results of Hausman test show that random effect regression model is suitable for the study since the prob. value is more than significance level i.e. 0.05.

Table 2: Selection Criteria between fixed effect model vs. random effect model

Correlated Random Effects- Hausman Test			
Test summary	Chi- Sq Statistics	Chi- Sq d.f.	Prob.
Cross-section random	3.616674	5	0.6058

Source: Data Analysis

Table 3 reveals the results of random effect regression model. As per Table 3, the value of adjusted R2 i.e. 0.277863 shows that approximate 28 % changes in dependent variable is explained by independent variables. The value of F significance is 0.0000, which is statistically significant. It shows the fitness of our model. The value of Durbin Watson i.e. 1.298818 is less than 2, which solves the problem of auto-correlation.

Table 3: Random- effect regression results

Adjusted R Square - 0.277863		**Number of observations** - 200
F- statistics - 16.31418, **F Sig**.- 0.0000		**Durbin- Watson** - 1.298818
Variable	**Regression Coefficient**	**Probability value**
Current ratio	1.381960*	0.0116
Debtor turnover ratio	0.085000*	0.0085
Debt equity ratio	-0.067551*	0.0019
Interest coverage ratio	0.320287*	0.0000
Total dividend as % of PAT	-0.000212	0.8468

Source: Data Analysis, the asterisks * shows that estimates are significant at 5 %

The regression results show that debt equity ratio and total dividend as % of PAT show negative relationship while current ratio, debtor turnover ratio and interest coverage ratio show positive relationship with profitability of selected steel companies. The results show that the probability values of current ratio (0.0116), debtor turnover ratio (0.0085), debt equity ratio (0.0019) and interest coverage ratio (0.0000) are less than significance level i.e. 0.05. So by rejecting the null hypotheses (H01, H02, H03, H04) it is concluded that current ratio, debtor turnover ratio, debt equity ratio and interest coverage ratio are significant determinants of profitability of selected steel companies. On the other side, the probability values of total dividend as % of PAT i.e. 0.8468 is more than 0.05 significance level. So, acceptance of null hypothesis reveals that total dividend as % of PAT is not a significant determinant of profitability of selected steel companies.

Conclusion

The main objective of the study is to measure the influence of financial management decisions namely financing decision, dividend decision and working capital management decision on profitability of selected 20 steel companies. The findings of the study are as follows:

- The results of panel data regression indicates that approximate 28 % changes in profitability are caused by selected independent variables. This implies that there are some other variables which may affect the profitability of steel companies which should be explored in future.
- Further the study reveals that out of selected five explanatory variables four are significant while remaining one insignificant.
- Current ratio, debtor turnover ratio, debt equity ratio, interest coverage ratio are significant while total dividend as % of PAT is a non-significant determinant of profitability of steel companies.

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1https://en.wikipedia.org/wiki/Iron_and_steel_industry_in _India retrieved on 21-09-2017.