FINANCIAL DETERMINANTS OF FIRM'S VALUE: EVIDENCE FROM ENERGY SECTOR FIRMS

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ABSTRACT

This paper empirically investigates the impact of the financial determinants on the firm's value. For this purpose, we have taken eight companies from the energy sector, Reliance industry, GAIL, Power grid corps, BPCL, IOC, HPCL, ONGC, and NTPC into consideration. Taking evidences from numerous literatures, financial determinants such as net profit, sales, current ratio, quick ratio, debt-equity ratio, fixed asset and asset turnover ratio are used. Money control, National stock exchange, Bombay stock exchange and many other websites were used for collecting relevant data. We have used least squared test to derive conclusions regarding the same. This research outcome suggests that Total debt equity ratio, asset turnover ratio, quick ratio, profit and loss for the period have a significant impact on the value of the firm. Other significant factors identified through proposed model are fixed assets and net sales.

KEYWORDS: Financial Determinants, Firm's Value, Least Squared Test, Market Capitalization

I. INTRODUCTION

Firm's value is of prior importance for the determination of the company's financial health. The shareholders wealth is the key objective of all the establishments, because of which all the financing, investing and dividend decisions are being focused on. Market capitalization is obtained by multiplying the stock price and the total number of outstanding shares of the company. The main objective of the company is to increase the firm's value. For determining the impact of the firm's value, various variables pertaining to the financial determinants are being analyzed and interpreted in this study. For the purpose of the study, various variables such as net profit, sales, current ratio, quick ratio, debt-equity ratio, fixed asset and asset turnover ratio are taken into consideration. Data analysis tool least squared Test was being used to derive the impact of the financial determinants affecting the value of the firm.

II. REVIEW OF LITERATURE

(Rajhans & Kaur, 2013) This article scrutinizes the various financial determinants that make an impact on the firm's value. The study is confined to16 companies belonging to the four sectors namely Metal, Fast Moving Consumer Goods (FMCG), Information Technology (IT) and Automobile industry listed on Bombay Stock Exchange (BSE). Key tools such as Net sales, Profit, Fixed Assets, dividend pay-out ratio and capital structure, were investigated and analyzed for this purpose. From the authentic evidences obtained, it's been observed that the capital structure and the net profit make a significant impact on the

market capitalization largely. As a lot more sectors are ignored for the purpose of study, it might not result in the concrete picture of the impacts created, hence turns out be a limitation. On the whole, study has helped in understanding the impacts of the financial determinants in regards with market capitalization.

(Adetunji, Akinyemi, & Rasheed, 2016) According to this study, a significant relationship exists between financial leverage and firm's value, and the relationship could be positive or negative. This was determined by analyzing the manufacturing firms of Nigeria and by using the ordinary least square test for data analysis. Various tests were done to check for the significance of the estimated parameters. This paper also states that optimum capital structure will lead to maximization of firm's value.

(Klimenok, 2014) This study is all about identifying market value depending on the factors related to structure of capital for oil and gas companies in the region of northern Europe. The research is focusing on how to optimize capital structure for both small and global corporations. Here, Modigliani Miller theorem was used to find out the factors that affect firm's value. The study is limited only to oil and gas companies which does not provide a wider scope of other companies and the study is confined only to particular year.

(Cheng & Tzeng, 2011) This article deals with how the debt finance and equity finance have a command over the firms value by using and analyzing the information of 645 companies that are listed in Taiwan Securities Exchange (TSE). For this purpose, the Generalized Method of Moment (GMM) is used to draw results. The results suggest that the value of a leveraged firm isgreater than that of an unleveraged firm if bankruptcy probability is not taken into consideration. It also indicates that the positive influence of leverage to the firm valuetends to be stronger when the firm financial quality is better. This article provides insight of how the firm's debt- finance decision helps in the maximization of the firm's value.

(Maina, 2016) This paper establishes that there are many factors that influence the share prices of firms other than accounting profitability. This paper also establishes the relationship between financial performance and share market prices using evidence from fourteen manufacturing companies listed in the Nairobi Stock Exchange. The research design used was empirical causal quantitative survey and data analysis was done using correlation and regression techniques. This paper has helped in understanding the influence of accounting profitability on stock prices and also the extent of influence.

III. RESEARCH DESIGN

To identify the determinants that impacts the value of a firm. Our sample included 8 companies from energy industry. The companies selected are Reliance industry, GAIL, Power grid corps, BPCL, IOC, HPCL, ONGC, and NTPC. The selection of these companies is based on energy industry companies in Nifty. Data from 2014 to 2018 were collected for all these companies from money –control websites. Hence, data under considerations are all secondary data. The main purpose of this research is to identify which financial factor affects the firm's value the most, and work on such factor to improve the financial position of the firm. The question whether capital market returns and firm's value can be predicted from the financial variables has occupied many researchers in this area. Due to the increasing significance of the capital markets for the growth of the economy, this research has been undertaken.

HYPOTHESIS

H0 – financial determinant does not affect the value of the firm.

H1 – financial determinant of the firm will affect the value of the firm.

The level of significance is fixed either at 0.05 or 0.01. If the significant value is less than 0.05, then reject the null hypothesis and accept the alternate hypothesis. If significant value is more than 0.05, then accept the null hypothesis and reject the alternate hypothesis.

METHOD

Least squared test is a form of mathematical regression analysis that finds the line of best fit for a dataset, providing a visual demonstration of relationship between the data points. Each point of data is a representative of the relationship between a known independent variable and an unknown dependent variable. Least squared method provides the overall understanding for the placement of the line of best fit among the data points that is being studied. The very common application of the least squared method, aims to create a straight line that minimizes the sum of the squares of the errors generated by the results of the associated equations, such as the squared residuals resulting from differences in the observed value and the value anticipated based on the model.

Dependent Variable: MARKET_CAPITAL
Method: Panel Least Squares
Date: 09/27/18 Time: 13:42
Sample: 2014 2018
Periods included: 5
Cross-sections included: 8
Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	400720.3	96377.55	4.157817	0.0002
ASSET_TURNOVER_RATIO_	-1747.473	402.4342	-4.342256	0.0001
CURRENT_RATIO	561614.0	255284.2	2.199956	0.0345
QUICK_RATIO	-775933.7	275945.7	-2.811907	0.0080
TOTAL_DEBT_EQUITY_RATIO	-108781.3	39169.86	-2.777168	0.0088

R-squared	0.466123	Mean dependent var	157888.1
Adjusted R-squared	0.405109	S.D. dependent var	166412.4
S.E. of regression	128352.5	Akaike info criterion	26.47942
Sum squared resid	5.77E+11	Schwarz criterion	26.69053
Log likelihood	-524.5883	Hannan-Quinn criter.	26.55575
F-statistic	7.639554	Durbin-Watson stat	0.744229
Prob(F-statistic)	0.000156		

Limitations of the study:

A good research is never possible without the occurrence of flaws. This study is no exception it that fact. The major hardships faced by the researchers during the course of the research are jotted down for further reference:

- The collection of the information of the various variables pertaining to the financial determinants, and to bring them into a desired shape was highly challenging as the data required for the study were largely scattered and were not in an organized manner.
- During the data processing and interpretation stage, various programs such as SPSS, Microsoft Excel and many more were used. Though all these programs are similar in nature, it requires keen knowledge and understanding about the programs by the researchers.
- As the study is confined only to a set of 8 companies from the energy sector, it doesn't result in a definite picture of the impact of the financial determinants.
- The scope of the study is limited and it might tend to produce relevant results, biased to the sector taken into consideration.

IV. DATA ANALYSIS AND INTERPRETATION

Dependent Variable: MARKET_CAPITAL
Method: Panel Least Squares
Date: 09/27/18 Time: 13:46
Sample: 2014 2018
Periods included: 5
Cross-sections included: 8
Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-53701.65	24766.78	-2.168294	0.0368
FIXED_ASSETS	0.195662	0.267182	0.732315	0.4687
PROFIT_LOSS_FOR_THE_PERI	17.66324	2.572154	6.867101	0.0000
SALES_TURNOVER	-0.112977	0.101648	-1.111458	0.2737

R-squared	0.838228	Mean dependent var	157888.1
Adjusted R-squared	0.824747	S.D. dependent var	166412.4
S.E. of regression	69665.61	Akaike info criterion	25.23544
Sum squared resid	1.75E+11	Schwarz criterion	25.40433
Log likelihood	-500.7088	Hannan-Quinn criter.	25.29651
F-statistic	62.17844	Durbin-Watson stat	1.636524
Prob(F-statistic)	0.000000		

For analyzing the data, we have taken into consideration the following variables: Total debt equity ratio, sales, profit and loss, current ratio, quick ratio, asset turnover ratio, fixed assets of eight companies from energy industry. From the application of the least squared method on the foresaid variables, we have derived few conclusions about the relationship between the market capital and the financial determinants affecting it. Interpretation is based on the level of significance fixed either at 0.05 or 0.01.If the probability is less than 0.05,then the null hypothesis is rejected and the alternate hypothesis is accepted.If the probability is more than 0.05,then the null hypothesis is accepted and the alternate hypothesis is rejected. For the better understanding of the test, we have taken the ratios (current ratio, quick ratio, asset turnover ratio, and total debt equity ratio) and the other variables (fixed assets, sales and profit and loss) separately. Based on the test of ratios, the probability of asset turnover ratio, quick ratio,current ratio,total debt equity ratio being less than 0.05,alternate hypothesis is accepted.Based on the test of other variables, the probability of profit and loss of a period being less than 0.05,alternate hypothesis is accepted.

Using the regression analysis,autocorrelation in the residuals can be measured.The test applied is the Durbin Watson test.This test gives values ranging between 2 to 4.Values between 0 to 2 indicates a positive correlation and values ranging from 2 to 4 indicates
a negative correlation.The Durbin Watson test for the variables under consideration for this paper gives a value less than 2 indicating a positive correlation.

V. FINDINGS AND SUGGESTIONS

The output suggests that asset turnover ratio, current ratio, debt equity ratio, quick ratio and profits of a period have significant impact on the value of a firm while the other variables do not affect firm's value. Durbin Watson statistics indicate that the variables do not have auto correlation problem and hence the model explains the dependent variable. Hence it is a best fit model.Therefore,this model suggests that profit is the most significant factor affecting value of a firm. Profit creation will increase the value of a firm. Further research could be done using evidences from other industries and sectors. The scope of the paper can be broadened and see whether the result is biased

VI. CONCLUSION

This paper makes an attempt to find the variables that impact the value of a firm.Pooled regression was applied on the data to evaluate the determinants. The outcome suggests that profit, asset turnover ratio, current ratio and debt equity ratio affect the value of the firm significantly.

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