A Study on Impact of Firms' Performance on Stock Returns -Evidence from NSE

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Abstract

This paper investigates the impact of firms performance on stock return, the data is taken from the pharmaceutical firms listed on the nifty50 Index, National stock exchange, over the period 2006 to 2016. To examine the five independent variables are taken to measure firms' performance on the one dependent variable that is stock return. The firms' performance can be depicted through the five independent variables which are Earning per Share, Net Profit Margin, Return on Assets, Return on Equity and Quick Ratio. The method used to analyze the relationship between independent variables and dependent variable is regression analysis and correlation.

The findings of the study identified are that ROA and EPS have direct impact on stock return whereas NPM has no significant impact on stock return. When EPS increases growth will be seen in stock returns of the stocks whereas when NPM increases, investors looking for short-term gain and in want od dividend will sell of their stock which will cause the stock returns of the company to decrease in coming future for the

reason of excess supply of that stock in the market, taking the other variables into consideration that is ROE and QR which shows no significant impact on the stock return.

Keywords:

Earnings per Share (EPS), Stock Returns (SR), Quick Ratio (QR), Net Profit Margin (NPM), Return on Assets (ROA), Return on Equity (ROE), Correlation and Regression Tools.

Introduction

In the present times, investment in stocks has become an investment avenue that excites the people outside and inside the country. Nowadays the regulatory system has made it easy to avail the stock market access, the investment instrument such as stock is now used as the source of the instrument by both top class as well as small class investors. The investors or a business are interested to invest in stocks for the higher rate of returns or the acquisition a firm.

In the stock market, the stock prices are affected by the factors such as monetary policy, financial policy, foreign trade policy and other

macroeconomic factors, other internal factors and financial information. Financial Information is an important element that the investors use for making decisions if they should invest in company's stock or not? The financial reporting has the role of providing information about the financial performance and fiscal health of the company. Investors use financial reports are used by the investors for evaluating the past, current, and future efficient performance and financial position of firms. Given below are the financial statements that are reported by companies in order to evaluate the performance and position of companies in the stock market.

☐ The Income statement (Profit and Loss A/C),

☐ The Position statement (Balance sheet)&

☐ The Cash flow statement.

Research Design

This study is conducted in order to study the impact of firms' performance on the stock return. To analyze this I have used regression and correlation as my tools and also used the ADF test and descriptive analysis to analyze some of the important measures . This study investigates the various variables that are used to measure the firms performance how much do they affect the stock return.

Statement of problem

Empirical results show that markets generally react when financial information is available to investors. Note that there is always a change in the market on announcement of financial information .Sometimes the reaction is positive which is indicated by a significant increase in the value of shares or in the volume of shares traded; while at other times it is negative, indicated by a reduction in the value and volume of shares traded. It is important to find out the dynamics that set the pace for the differential between the theory and practice due to various financial performance indicators. There has been no consensus on how markets generally reacted to financial performance indicators and hence the need for study in India to advance contribution in this growing body of literature.[11]

Objectives

• To study the influence of quick ratio on stock return.

• To study the effect of earnings per share on stock return.

• To study the influence of return on assets on stock return.

• To study the effect of return on equity on stock return.

• To explain the influence of net profit margin on stock return.

Methodology

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- **Sample size-** stocks listed in NSE
- **Data type-** secondary data
- **Data collection-** NSE website and other sources
- **Time frame for data collec**tion- 10years
- **Dependent variable-** Stock returns
- **Independent variable-** NPM, EPS, ROA, ROE, QR

Hypothesis-

- H_{01}: There is no statistical significance of quick ratio on stock return.

- H_{02}: There is no statistical significance of return on assets on stock return

- H_{03}: There is no statistical significance of earnings per share on stock return.

- H_{04}: There is no statistical significance of Return on equity on stock return.

- H_{05}: There is no statistical significance of net profit margin on stock return.

Source of data

- For the collection, we will use secondary data
- Annual reports of the selected firms listed on nifty 50 index, NSE
- NSE Website for stock prices

Tools for analysis

- Regression
- Correlation analysis.
- Descriptive statistics
- ADF test

Review of Literature

On the basis of the literature review mentioned a many research can be done which explains the correlation between capital structure and performance of listed companies.

Basu (1977), studied about the P/E ratio having no significant impact on the share price and investment performance in a short span of time, and in general terms it may appear that stock return in different profit coefficient has not been priced correctly in comparison to other types of pricing and there may be options for the investors to get "abnormal return".

Fama& French (1992), analysed the relationship between the value and accounting variable which are different for the given companies. Relationship coefficient the middle of attempting capital proportion on the quite a while with quite a while groundwork and the impart cost variables which will be rise to:: R=. 036, R2=. 001 Furthermore this indicates that present proportion Might point out. 001% of the variable of the impart cost. The discoveries of the consider rundown that there will be an effect

for attempting capital proportion looking into stake cost.

Fama and French (1993), studied the stock return average on market risk, size of the company, Stockholders' compensation security worth of the advertise value, stockholders' pay Furthermore benefits on value proportion utilizing relapse investigation. The discoveries show that business danger What's more particular organization size need no association.Monetary leverage, alternately no huge effect once stock profit average, inasmuch as on the great holders kept all stock give back Normal need the inconsequential effect with respect to monetary influence bond esteem and likewise need a critical sway once monetary influence market.

Matthew J. Clayton, Jay C. Hartzell, and Joshua Rosenberg, (2000) This paper studies the impact of CEO turnover on the equity volatility which is said to have an impact on the shareholders wealth for a short time and the affect the firms operation in the long term.

Hobarth (2006), examined the relationship between financial indicators and firm's performance of listed firms in USA for 19 years period by using 17 financial indicators and three variables to measure firm's performance, namely market performance (stock market value), cash flow performance (dividend per share), and profitability (ROI).

Muhammad Saleh, (2015) This worth of effort analyzes the degree on which determinants like net benefit margin, give back around benefits What's more return looking into value. Impact stock returns for reference to oil Also the gas division of Pakistan. Five years' auxiliary board information starting with 10. Organizations need utilizing from 2010 should 2014

Irungu (2013) the investigation indicates the sway about monetary execution indicators on the stock costs. To this study, the ten business banks bring been made Similarly as recorded on the Nairobi stock trade (NSE), Kenya for those quite a while 2011.

Umar ,Musa (2013) those analysts in this article needed should analyze the relationship between winning for every offer Also stock costs from claiming organizations recorded for Nigerian stock trade (NSE), Nigeria. Those strategies should investigation this goal that needs utilizing within this paper will be the straight relapse.

Jatoiet. Al (2014) demonstrated previously, her Investigation of the impact of winning for every offer around market offer value. To this ponder with make led 13 bond organizations were taken,

which were recorded with respect to Karachi stock trade for those time of 2009 should 2013.

Research Gap & Motivation for the study

There are many scholars who have studied and investigated the impact of the firm performance on stock returns, taking evidence data from different stock markets of different countries. Some of the researchers have found significant positive impact and some found that significant negative impact, and some found that insignificant impact of firm performance on stock returns by taking two or three independent variables. So that's why the problem is still present there that what should be the actual impact of firms performance on stock returns. For that purpose the researcher increase the number of variables for in depth and better results.[1]The researcher must incorporate more independent variables. The period of the study should be more than 20 years for better results. The researcher must collect the data more the 50 companies for better results

Methodology

a) Description of the study

Research Methodology[1] is the study of methods by which the work plan for the research is obtained. Theresearch is conducted to test the impact of firm performance on stock returns, evidence from the firms listed on Nifty-50 Index, National Stock Exchange from last one decade. This study has five independent variables and one dependent variable.

b) Sample Set

Secondary data was used to empirically investigate the effect of firms' performance on stock returns. A sample size of top 9pharmaceutical firms has been selected from Nifty-50 index of National Stock Exchange for the

purpose of exploring the impact of firms' performance on stock returns. The panel data has been collected for the period of 10 years i.e. from 2006 to 2016 in order to ascertain the relationship between financial ratios and stock returns of the firms listed on Nifty 50 index of the National Stock Exchange. List of the firms used in the study.

c) Data Collection Methods

For the data collection, the researcher has used secondary data i.e.; Annual reports of the selected firms listed on Nifty 50 Index, National Stock Exchange and stock price data has been collecting from

d) Theoretical Framework / Conceptual Framework

The study uses following variables to investigate the relationship between firms' performance and stockreturns.

Independent Variables

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The study uses the five independent variables to measure the performance of firm that includes Net Profit Margin Ratio (NPM) , Earning per Share (EPS), Return on Equity (ROE), Return on Assets (ROA), & Quick Ratio (QR) as Independent Variables.

ii. Dependent Variables

Dependent variable are the variables which its value from other independent variables, here in this study stock return is being used as dependent variable.

Empirical Evidences\Results

a) Descriptive Statistics

The descriptive statistics is used to determine the value for mean, median, maximum, minimum, standard deviation, kurtosis and skewnessfor the study in order to evaluate the data variation in the firm's listed on the Nifty50.

 The Augmented Dickey-Fuller Test shows the reliability of the variables, it checks the stationarity of the variable. For this study the variables are stationary as the prob. Value is less than 0.05.

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.741323	0.0289
Test critical values: 1% level	-4.582648	
5% level	-3.320969	
10% level	-2.801384	

Table 1: Shows the values of descriptive statistics between variables

	NPM	EPS	ROA	ROE	QR	SR
Mean	32.35	38.24	14.91	20.98	3.14	0.01
Standard Error	2.75	7.62	1.51	1.48	0.43	0.01
Median	33.29	28.80	14.62	19.15	2.99	0.01
Standard Deviation	9.11	25.26	5.00	4.91	1.43	0.02
Sample Variance	83.03	638.26	25.03	24.09	2.04	0.00
Kurtosis	-1.27	-0.18	-0.29	-0.58	1.18	-0.29
Skewness	0.06	1.10	0.64	0.85	0.94	0.25
Range	26.15	73.13	15.51	14.77	4.84	0.06
Minimum	20.00	15.20	8.69	15.01	1.43	-0.02
Maximum	46.15	88.33	24.20	29.78	6.27	0.04

The above table shows the results of the descriptive statistics. The earning per share(EPS) has the maximum and highest mean values in this case , here the maximum value of earnings per share is 88.33 and the minimum value is 15.2 whereas the mean value is 38.23with

standard deviation of 25.26 and at last in case of stock returns the maximum value is 0.04 and the minimum value is -0.02 while mean value and the standard deviation is 0.01 and 0.02 respectively.

b) Correlation Analysis

Correlation means the relationship between two variables. The correlation shows two things, first it shows the direction between two variables and secondly it shows the strength of associations between two variables. The below table shows the values of correlation among the variables

Table 2: Shows the values of correlation among variables

	NPM	EPS	ROA	ROE	QR	SR
NPM	1					
EPS	0.76857	1				
ROA	0.97692	0.81648	1			
ROE	0.86206	0.63301	0.89959	1		
QR	0.7967	0.45862	0.7533	0.83186	1	
SR	-0.0698	0.12632	-0.1239	0.00013	0.25299	1

The correlation analysis shows that correlation between return on assets and earnings per share is positive, the correlation between net profit margin and earnings per share is 0.768568,this implies that 76.85% positive relationship is there between NPM and EPS.

The relationship shown through correlation coefficient of quick ratio on earnings per share is 0.458622, that shows 45.86% positive correlation is there between QR and EPS.

The relationship shown through correlation coefficient of return on assets and earnings per share is 0.816482, which means that 81.64% positive correlation is observe between ROA and EPS. The relationship shows the correlation coefficient of return on equity and earnings per share is 0.633009, which means that 63.30% positive correlation is observe between ROE and EPS.

The correlation coefficient of stock returns and earnings per share is 0.126319, which means that 12.63% positive correlation is observe between SR and EPS.

The correlation coefficient of quick ratio and net profit margin is 0.796698, which means that 79.66% positive correlation is observe between QR and NPM.

The correlation coefficient of return on equity and net profit margin is 0.862057, which means that 86.20% positive correlation is observe between ROE and NPM.

The correlation coefficient of return on assets and net profit margin is 0.97692, which means that 97.69% positive correlation is observe between ROA and NPM.

The correlation coefficient of stock returns and net profit margin is -0.0438, which means that 4.38% negative correlation is present between SR and NPM, it means that when stock return will be increase than net profit margin will be decrease.

The correlation coefficient of return on assets and quick ratio is 0.753302, which means that 75.33% positive correlation is observe between ROA and QR.

The correlation coefficient of return on equity and quick ratio is 0.83186, which means that 83.18% positive correlation is observe between ROE and QR.

The correlation coefficient of stock returns and quick ratio is 0.252985, which means that 25.29% positive correlation is found between SR and QR.

The correlation coefficient of return on equity and return on assets is 0.899589, which means that 89.95% positive correlation is found between ROE and ROA.

The correlation coefficient of stock returns and return on assets is - 0.12392, which means that 12.39% negative correlation is observe between SR and ROA, it means when stock return will be increase the return on asset will decrease.

Finally the correlation coefficient of stock returns and return on equity is 0.00013, which means that 0.01% positive correlation is observe between SR and ROE.

c) Regression Analysis

Regression analysis is the analysis done in order to find the dependence of one variable on to the other. The change in dependent variable can be seen when there is a change in independent variable taken for the study.

Panel regression consists of three major effects which are Common Effect, Fixed Effect and Random Effect. For the purpose of selecting appropriate Effect Model for the study, Likelihood Ratio has been tested. The p – value of the cross-section F are some of the results that helps us to know the significance of the hypothesis and whether the model is good fit to study or not.

Table 3: Shows the values of common effect model regression analysis

Multiple R	0.886811328
R Square	0.786434331
Adjusted R Square	0.572868663
Standard Error	0.011227211
Observations	11

	Df	SS	MS	F	Significance F
Regression	5	0.002320838	0.000464168	3.682400531	0.089426639
Residual	5	0.000630251	0.00012605		
Total	10	0.002951089			

	Coefficients	Standard Error	t Stat	P-value
Intercept	.0081	0.030916814	0.26190067	0.803845069
NPM	.0020	0.002480692	0.800834687	0.459572694
EPS	.0010	0.000283297	3.396387596	0.019326702
ROA	0.0124	0.005733835	-2.167649763	0.042387132
ROE	.0024	0.002470688	0.973841085	0.374861384
QR	.0111	0.005826194	1.899084371	0.115999526

Here from this table we are able to understand coefficient of net profit margin which is 0.0020, it shows that with a change of 0.2 percent on the net profit margin of a firm there will be a change of 0.2 percent on the stock return. The value of t-statistics obtained for net profit margin is 0.80083 and p- value is > 0.05 which can be interpreted as there is no significant impact of net profit margin on stock return. Therefore we need to accept the null hypothesis and reject the alternate hypothesis. The coefficient of return on assets is - 0.0124, it shows that with 1.24 percent

change in return on asset there will be negative change in stock returns .The value of t statistics obtained for return on assets is-2.16764 and result from p- value shows<0.005 which means there is an impact of return on asset on the stock return.Therefore, we accept the Null hypothesis. The coefficient of return on equity shows a result of 0.0024, which means with a change 0.24 percent on return on equity there will be a change in stock return by 0.24 percent. The value of t-statistics in this case is 0.9738 and p-value is > 0.05 which shows that return on equity has got no effect of return on equity on stock returns. Therefore, Accept the Null hypothesis. The coefficient of quick ratio is 0.0111, it shows that with 1.11 percent change of stock returns can be understood with change in quick ratio. The value of t statistics of quick ratio in this case is 1.8990 and p- value is >0.05 which shows that there is no impact of quick ratio on the stock return. Therefore, Accept the Null hypothesis. The correlation coefficient is 88.68 percent. The coefficient of determination that is the R Square value is 0.786434, this implies that 78.64 percent change in stock returns has been seen by the change in net profit margin, return on assets, return on equity, quick ratio, and earnings per share that is the independent variables. The AdjR2 is 0.5728,

which shows if more or new variables are added to the study the study improves the model by 57.28 percent. The model used for the study is said to be statistically significant (F = 3.6824, p < 0.01) for the study; F-statistics is 3.68 and p-value is <0.05 shows that the model is good fit for the study.

Conclusions and Discussions

a) Conclusion

Tis study was carried forward to explain the relationship between the performance of the firms on their stock return, for this we have taken the top ten companies listed in nifty50, National stock exchange for the period from 2006 to 2016. To understand and elaborate on this topic the firms performance measures that have been used are ROA, ROE, EPS,QR AND NPM which are the independent variables as the performance of the firm is determined by these variables whereas the dependent variable used hare is the SR which may or may not be dependent on the above mentioned independent variables. The result of this study does indicate on some independent variables while others are not affected by this.There is the significant impact of EPS and ROA on SR.

Recommendation

This study have been conducted previously by many scholars as their research. There are some

points one should keep in mind before moving forward with this topic:

- The independent variables which have been used should more in numbers.

- The number of companies for the study should increase, it should be more than 50 companies.

- The number of years taken for study should be increased, it should be more than 20 years in order to get the significant result for the study.

If these points are kept in mind there might be some relevance of this data in the present scenario otherwise it may not be of any use.

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