

Impact of Dividend Policy on Stock Return Behaviour

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Abstract — Dividend policy remains to be a topic of debate even after continuous research held, which states the relationship of dividend policy and stock price behavior. This paper tries to bring out a light on to the effect of dividend policy on stock price behavior of four different industries in India for a period from 2010-2015. Analysis of the data has been conducted through panel data analysis from which it showed that there is a significant relationship between stock returns and dividend policies after taking the following controlling variables such as Earnings per share (EPS), book value per share (BVPS) and size of the firm. The result also showed that there is a positive significant relation between stock return and earnings per share. It also showed there is a non-significant but negative relationship between the stock return and size of the firm. The yearly data has been collected from CMIE prowess for the years 2010-2015 for each industry.

Keywords- Stock price behavior, Dividend policy, prowess, fixed effect model

I. INTRODUCTION

This paper tries to bring out a light on to the effect of dividend policy on stock price behavior of various industries of Indian market. For the purpose of the study, companies have been selected from different industries like Automobile industry, FMCG, Mining industry and telecom industry for the year 2010 to 2015. Dividend policy is set of instructions a company uses to decide on how much portion of the profit earned by the company will be given to the shareholders in the form of dividends. In order to determine the dividend policy, two measures have been considered, that is, dividend payout ratio and dividend yield. With the help of panel data analysis, this paper analyses the secondary data that has been collected from Prowess, NSE and BSE in order to identify the significance level between dividend policy and stock price for industries taken into the study. According to the various researchers and economists view tells that dividend policy may be not relevant to the company, but there are many investors who look towards the dividend as a way of income. As the dividends implies to be an important source of income for various types of investors, an organizations dividend policy can be considered to be important for investors as well as for the leadership of the company.

II. LITERATURE REVIEW

There have been previous studies conducted to know the relationship between the dividend policy and stock price volatility. Reference [1] explains a model was developed in order to describe the dividend price ratio. With the help of created model it concluded that a high dividend price ratio would have low sensitivity towards discount rate and may result in low price volatility. There were a number of theoretical mechanisms which caused the measures of dividend policy to change inversely with the stock price volatility. The mechanisms were rate of return effect, duration effect, information effect and arbitrage pricing effect. In this, duration effect states that high dividend yield can have more near term cash flows whereas, if dividend policy remains constant, a high dividend policy will be having lesser duration. As per the rate of return effect it states that a firm which is having less payout ratio and yield might have valued high in the case of investment opportunities and over distant time periods there are chances for the stocks to have high sensitivity as the approximate values of rate of return changes. If profit forecasts made on growth opportunities are less dependable than forecasts made on the return on assets, those companies with less payout and less dividend yield might see a high volatility in the stock price. As per duration effect and arbitrage effect, relevant measure is the dividend yield.

According to reference [2], results didn't support the argument that dividend yield has a correlation with the stock price volatility. In this paper work was featured on the basis of cross sectional regression analysis to identify how the dividend policy and stock price risk is related, after taking various control variables like firm size, earnings volatility, leverage and growth. Even though there was no correlation among the dividend policy and the stock price, it was noted that there was a significant positive correlation between the stock price volatility, earnings volatility and leverage. Similarly there was significant but negative correlation with payout ratio. It was also discovered that there is a significant positive relation between size and stock price volatility which is explained by the tendency for large companies to incur more liabilities. Apart from this, from the sample data collected it was evident that there was a significant negative correlation among earnings volatility and the size

of the firm. The result of this paper was entirely contrary to the reference [3].

Reference [4] of the Bangladesh evidence was entirely different from the result of reference [2]. In this, through the cross sectional regression analysis it was found that there is a positive but non-significant relation between the dividend policy and the stock price volatility by controlling variables like earning volatility, growth in assets, payout ratio and firm size. One of the important findings that have been made in this study was the share price behavior to the earnings announcement is not as same as in other developed countries, so there is less chance for the managers to employ dividend policy in order to have an influence over the stock price risk. This study tries to find out whether earnings announced in the form of dividend will have an influence on the future market prices of shares by in Bangladesh. This study was an extension of reference [3] study in the United States context and reference [2] in Australian context.

Reference [5] examines the correlation among dividend policy and share price volatility of the FMCG companies listed in the Malaysian stock market. They used a sample of 84 listed companies and the relationship between the stock price volatility with the dividend policy was found out by using a multiple regression test for six years by controlling for size, volatility in earnings, leverage and growth. The result of this analysis showed that there was a significant negative relationship between the share price volatility and the two measures used for dividend policy, that is, dividend payout and dividend yield ratio. A part from this there was a significant negative relationship between share price volatility with two important measures of dividend policy and among the other variables dividend yield and size of the firm had most impact on the share price volatility.

III. HYPOTHESIS DEVELOPMENT

According to the review of literature, following hypotheses have been developed –

- H_1 : Dividend payout ratio has a significant positive relation on price volatility
- H_2 : Dividend yield has a significant positive relation on price volatility
- H_3 : Earnings per share has a significant positive relation on price volatility
- H_4 : Size of the firm has a significant positive relation on price volatility

IV. DATA SOURCE AND RESEARCH METHODOLOGY

A. Data source

The data is taken from CMIE Prowess for the period 2010-2015 for firms for four different industries listed in India: Automobile, FMCG, Mining and Telecommunications. The stock returns are computed from the stock prices available in the database.

B. Methodology

Since the dataset is panel data, regression analysis is done with the help of fixed effects model. One of the tests involved in this study is the regression analysis of the dependent variable price volatility against two independent variables, dividend payout ratio and dividend yield. This test helps to show the relationship between the dividend policy and the stock return behavior.

$$PV = x_1 + x_2DY + x_3DPR + e$$

Where, PV = Stock price
 DY = Dividend Yield
 DPR = Dividend payout ratio

From the various studies conducted it was identified that the result from above regression analysis gives a significant negative relationship between the dividend policy and stock price behavior. One of the factor leading to this may be that the variables that are used to measure the dividend policy are likely to be related to each other, which may result in an unreliable result. Other reason would be because of the additional factors influencing dividend policy and stock prices.

So, in order to eliminate this limitation another regression analysis can be done by taking some other variables also into account. Size and EPS are taken as control variables.

$$PV = x_1 + x_2DY + x_3DPR + x_4EPS + x_5S + e$$

Where, PV = Stock price
 DY = Dividend Yield
 DPR = Dividend payout ratio
 EPS = Earnings per share
 S = Size of the firm

Here, x_1, x_2, x_3, x_4, x_5 , are corresponding coefficients of the independent variables.

e = Error term

V. VARIABLE DEFINITION

a) Dividend Payout Ratio –

It is the dividends paid to stockholders in regard to total net income of the organization. The amount which is not given as dividend to stockholders is used for growth of the company, which is called as retained earnings. It is calculated by dividing dividend with the net income

b) Dividend Yield –

It is calculated as a sum of annual cash dividends given to shareholders divided by sum of average market value of the company's stock of that year

c) Earnings per share –

It is a part of company's profit which is given towards each outstanding shares of common stock. It helps to know the profit earned by the company. It is calculated by subtracting preference dividends from net income divided by number of shares outstanding that is listed on the balance sheet.

d) Size of the firm –

The size of the firm has been calculated as the total assets of the firm over the years.

VI. RESULTS

The sample comprises of all companies available on CMIE Prowess from four industries, viz., Automobile, FMCG, Mining and Telecommunications. Table 1 and Table 2 show the pair wise correlation and descriptive statistics of the variables over the period 2010 – 2015. Dividend payout ratio and dividend yield are found to be positively correlated. However, the VIF values are not higher than 5. Therefore, the variables can be used in regression.

Table 1 – Pair wise Correlation

	PV	DPR	DY	EPS	BV	SIZE
PV	1.0000					
DPR	0.7476	1.0000				
DY	0.3778	0.7220	1.0000			
EPS	0.5233	0.2847	0.1263	1.0000		
BV	0.8230	0.8668	0.6742	0.4654	1.0000	
SIZE	0.8230	0.3823	0.6014	-.4774	0.3489	1.0000

Table 2 – Descriptive Statistics

Variable	Obs	Mean	Std.Dev.
PV	24	43846.91	48963.66
DPR	24	.0153475	.0158798
DY	24	14.19286	16.39622
EPS	24	965.545	1580.571
BV	24	12716.99	12558.29
Size	24	4575623	1408392

Table 3 – Fixed effects model

PV	Coefficient	Std. Err.	T	P> t
DPR	580551.4	1062817	0.55	0.593
DY	-3529.628	736.4677	-4.79	0.000
EPS	18.12052	6.203133	2.92	0.011
BV	2.117672	1.006759	2.10	0.053
Size	-.0055841	.0099261	-0.56	0.582
_cons	.9059191	53136.81	1.25	0.232

The Hausman test shows that fixed effects model is more appropriate for the sample. The results shown in Table 3 are significant. From the results it is evident that EPS are positively related to the stock price. However, surprisingly the dividend yield and size of the firm are found to have a negative relation to stock return though the coefficients are very small.

CONCLUSION

The study is motivated by the growing importance of internal financing and dividend decisions among business firms. Dividend decisions impact the internal availability

of funds which in turn affect the cost of capital and growth plans. The results indicate that dividend yield is negatively and significantly related to the stock returns. This indicates that a company pays out its dividend each year relative to its share price and it does have an impact on the stock price behavior. It also shows that the earnings per share and book value per share also has an effect on the stock price behavior. This paper throws light on the expectations of the shareholders and guides the management to take dividend decisions considering them.

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