

The Impact of Dividend Policy on Stock Price Volatility: A Case Study of Selected Firms from Textile Industry in Pakistan

Hidayat Ullah

Government College of Management Sciences-II Mardan, Khyber Pakhtunkhwa

Shahab e Saqib

Lecturer in Economics, Government College of Management Sciences-II, Mardan, Khyber Pakhtunkhwa

Email: shahabmomand@gmail.com

Hazrat Usman

BBA GCMS Ghallanai, M. Agency

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Abstract

The study aims at investigating the relationship between dividend payout and the stock price of listed companies in Karachi Stock Exchange and to establish the extent of the relationship between them. The data were collected from Karachi Stock Exchange from 2003 to 2008. Five firms from textile industry were selected purposively. Stock price was dependent variable while the independent variable was dividend payout ratio. The size of firm, earning volatility and growth were selected as controlled variables. Multiple regression model was employed to explore the relationship of dependent with independent variables. Results showed that overall models were good fit showed by coefficient of determination values. Dividend payout ratio was significantly affecting the stock price. Other variables showed mixed results in some models were found significant.

Keywords: Dividend Policy, Stock price, Textile Industry, Pakistan.

Introduction

Dividend is that portion of profit which is distributed among the stock holders according to their stock investment. Dividend policy refers to the policy or guidelines used by the company to decide that how much share to payout to stock holders as dividend and how much to be kept in the company as retain earning (Hashemijoo et al., 2012). From the stock valuation model the value of stock highly depends on the amount of dividend. Dividend is usually distributed in the form of cash or stock. If a company wants to distribute its cash dividend, it must possess sufficient cash to do so. This will create a cash flow problem because, on the other hand, the profit may not be generated in form of cash. Investors earn from their stock

in the form of capital gain and dividend yield (Jo and Pan, 2009). Dividend policy proposed by Miller and Modigliani (1961), argue 'that if a company distributed high dividend now, it can reduce its dividend later and thus the total effect is zero in time value. "A sudden increase in dividend is not a good sign. In an efficient market the investors are able to distinguish between a genuine dividend increase and an artificial dividend increase.

In corporate finance, the most important decision by the firm is to address the question that what amount of the profit should be distributed to the shareholders and how much of it have to be reinvested in the business. To address these question, the entrepreneurs must analyze the dividend policy and sort out which policy will be optimum which leads maximization of the shareholders income and assets. The dividend is also linked with stock prices, therefore, its impacts on stock prices must be considered (Hashemijoo et al., 2012). The dividend policy is also associated to capital structure indirectly and various dividend policies may need different capital structures. Hence, capital structure and dividend policy both can influence the wealth of shareholders, moreover, the dividend policy can also influence the capital structure, and thus, dividend policy is intricate.

The dividend policy was a widespread explorative area in corporate finance since last 50 years and it has investigated many critical corporate issues like clientele effect, agency cost, and share assessment (Zakaria et al., 2012). Many researchers have tried to link the dividend policy to shares price of company or firm but resulted with conflicting findings and there is no consensus among the researchers about the impacts of dividend policy on share prices. Likewise, there is plethora of literature that has investigated the correlation of stock price volatility with dividend policy. The stock's volatility is a yardstick for determining risk. It directs the changing pace in the stock's price over a specified period; significant volatility infers the higher loss or gain in short-term. So the price of volatile stock would vary significantly over time and it is very difficult to forecast the future price of this stock. Investors generally choose less risky investment which they opt to be better than high risk investment (Kinder, 2002).

Therefore, there is wide research that has investigated the association between dividend policy and stock price volatility for different times periods (Allen and Rachim, 1996; Asghar et al., 2011; Baskin, 1989; Hussainey et al., 2011; Kinder, 2002; Nazir et al., 2010a; Nishat and Irfan, 2004). Nonetheless, their findings are different in different scenarios. Baskin (1989) reported a significant negative relationship of dividend yield with volatility of stock's price. In contrast to the findings of Baskin, Hussainey et al. (2011) reported positive relationship.

There is no consensus among the researchers regarding the nature of association and the impact of dividend policy on volatility of stock's price. Therefore, this study has tried to examine the impacts of dividend policy on stock price volatility in Pakistan's stock market of KSE-100 Index. Although, many of the previous studies have analyzed the impacts of dividend policy on stock price in different industries, however, to best of our knowledge, there is not available literature on this issue. While filling the gap, the purpose of this study is to explore the impact of dividend policy on stock price volatility in Textile industry in Pakistan.

Review of Literature

Abrar-ul-haq et al (2015), conducted a research on the stock price volatility and dividend policy in Pakistan. The study used a stratified sampling containing companies listed in Karachi Stock Exchange (KSE). Time series data were analyzed from year 2001-2014. Their results revealed that dividend policy had no impact on stock price volatility in Pakistan.

Ali et al (2015), also conducted a similar type of research to investigate the impact of dividend policy on stock prices. They have analyzed 45 non-financial companies listed on KSE-100 index that earned profits for a period of twelve year w.e.f. 2001 on paid dividend. They have adopted convenient sampling. The pooled regression, fixed and random effect tests were employed. The results showed negative significant relation between return on equity and share prices.

Masum (2014), analyzed the impacts of dividend policy and its impact on stock price in Dhaka Stock Exchange. He empirically estimated excess stock market returns thirty banks listed in Dhaka Stock Exchange from 2007 to 2011. Panel data approach was adopted to explain the relationship between dividends and stock prices. Return on equity and retention ratio had positive relation with stock prices. The results revealed that dividend policy has significant positive effect on stock prices.

Zakaria et al (2012), conducted a study to investigate the impact of dividend policy on the share price volatility in Malaysian construction and material companies. They employed a least square regression model in their study. Their results reported that dividend payout ratio significantly influences the changes in share price and leverage is negatively influencing the movement of the share price.

Another study was conducted by (Khan, 2012). In order to find out the effect of dividend Policy on stock price, a simple of 55 companies listed on KSE-100 Index is selected for the period of 10 years i.e., 2001-2010. After using random effect models, they found that dividend yield, earning per share, return on equity are positive related to stock price, however, retention ratio have significantly explained the variations in the stock market prices.

Khan et al (2011), investigated the effect of dividend policy on share price of 55 non-financial firms listed in Karachi Stock Exchange (KSE) and found that there is positive link between dividend yield and negative relationship of retention ratio with the share price movements.

Nazir et al (2010a) had studied non-financial firms in Pakistan capital market. 73 firms' data were analyzed for a period of six years from 2003 to 2008 and they used panel data and applying regression model analysis and found a negative and significant relationship between dividend policy and stock price fluctuation.

Nazir et al (2010b) explored the effect of dividend policy on the stock price. Fixed effect regression analysis was performed to see the impact of dividend policy on the stock price. The result of this analysis showed that there is significant negative relationship between dividend payout and price volatility. Moreover, they find out that dividend policy is important in setting the stock price.

Huang et al (2009), analyzed the role of payout ratio on the stock price and reported that there is positive relationship between the payout ratio and subsequent earnings growth remains positive throughout the study. They also analyzed that if dividend price ratio is dividing into payout ratio and earning price ratio components, then it increases its ability to estimate future returns. There is positive and statistically significant relationship between a dividend payout ratio and stock price.

Objectives of the Study

Following are the objectives of the study

1. To establish the relationship between dividend payout and the stock price of listed textile companies in Karachi Stock Exchange.
2. To establish the extent of the relationship between dividend payout and the stock price.

Hypothesis of the Study

H₁₁: There is significant association between stock price volatility and dividend Yield.

H₁₂: There is significant effect of dividend payout ratio on stock price.

Material and Methods**Sample size and data**

The sample size is of five textile firms listed in the Karachi Stock Exchange for a continuous period of six years from 2005 to 2010. Only those companies have been selected whose data was easily available. The data is collected from audit report of KSE-100 index companies.

Study Variables**Dependent Variable****Stock Price Volatility**

Stock price is the dependent variable. Which is calculated by taking the high and low market price of stock. Then we have averaged the high and lower prices and square it (Hussainey et al., 2011; Nazir et al., 2010a; Rashid and Rahman, 2008; Zakaria et al., 2012).

Independent Variables**a) Dividend payout ratio**

Dividend payout ratio is independent variable. It is significantly explaining the effect of dividend policy on stock price. It also shows that how much of the profit is distributed as dividend to stock holders. The higher the dividend payout ratio, the more attractive the stock is to the stock holders. This variable has been opted by (Malhotra and Tandon, 2013; Nazir et al., 2010a; Oyinlola and Ajeigbe, 2014; Zakaria et al., 2012).

The formula of dividend payout ratio is:

$$DPO = \frac{\text{Dividend}}{\text{Net Income}} \quad (i)$$

Control Variables**b) Firm Size**

This is one of the control variable, and calculated by taking log of the total assets. Being a control variable several studies such as Nazir et al. (2010a), Hashemijoo et al. (2012), Zakaria et al. (2012) and Abrar-ul-haq et al. (2015) have employed.

c) Earning Volatility

Earning volatility is the control variable. It limits the effect of changes in earning stream on price volatility (Zakaria et al., 2012).

$$EV = \frac{\text{Operating Income}}{\text{Total Asset}} \quad (ii)$$

The deviation from average is computed and thereafter, the standard deviation is taken. It was considered as an indicator for measuring the profitability of the companies. It significantly explained the variation in the stock price. They also report the positive relation between them.

d) Growth

Growth was taken as market to book to book asset ratio (Hu and Kumar, 2004; Ling et al., 2008).

$$\text{Growth} = \frac{(\text{Book value of assets} - \text{Book value of equity}) + \text{market value of equity}}{\text{Book Value of assets}} \quad (iii)$$

Econometric model of the study

Regression model is used to study the relationship between dependent and independent variable, and in this research we will find the relationship between stock price and dividend with the help of regression.

Due to the problem of multicollinearity between dividend policy variables as suggested by (Zakaria et al., 2012), the model including control variables was adopted. To control the problem of multicollinearity, we have employed other control variables such as earning volatility, size of firm and growth.

The formula of the regression model is as under;

$$SP_i = \beta_0 + \beta_1 FS + \beta_2 DPO + \beta_3 EV + \beta_4 G + \varepsilon \quad (iv)$$

Where

SP = Stock Price $i=1, \dots, 5$

FS = Firm Size

DPO= Dividend Payout Ratio

EV= Earnings Volatility

G = Growth

β_s = Coefficients

ε = Error term

Results

Descriptive Statistics of Variables

Time series secondary data has been collected from the stock exchange from 2003 to 2008. The statistical findings are given in Table 1 and interpretation has been given below.

The given Table 1 illustrates the basic statistical information about the five firms for dividend payout ratio and their impact on stock price. Statistical data provided information for Accord Size (a textile firm) and proved to have the lowest mean value among the given five textile firms. In stock price volatility and its standard deviation was 0.51, whereas, the Ahmad Hassan textile Ltd., had the highest mean value of 4.5. Among standard deviations, Al-Azhar Ahmad textile Ltd., had the highest variability in stock price volatility (SD=0.83). Regarding independent variables, in firm size, the highest value were recorded for Adil textile Ltd and Ahmad Hassan textile Ltd, each had a mean value 7.51. Likewise, for payout ratio, Adil textile Ltd and Ahmad Hassan textile Ltd, had the highest mean value 2.81 and for Al-Azhar textile Ltd, had the highest standard deviation 27.1. Earning volatility as an independent variable Adil textile Ltd, had the highest mean value and the lowest was recorded for Al-Azhar textile Ltd. Regarding growth of firm, the highest mean growth was recorded for Al-Qadir textile Ltd, whereas, the lowest was 0.41 for Al-Azhar textile Ltd.

Table 1

Descriptive statistics of study variables

Variables	Accord		Adil		Ahmed Hassan		Al-Azhar		Al-Qadir	
	Textiles Ltd.		Textile Ltd.		Textile Ltd.		Textile Ltd.		Textile Ltd.	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Dependent										
Stock volatility	0.57	0.51	0.72	0.491	4.5	0.56	1.5	0.83	2.3	0.57
Independent										
Firm Size	5.66	0.26	7.51	0.26	7.51	0.26	6.19	0.22	6.73	0.08
Payout ratio	1.93	6.91	2.81	0.83	2.81	0.83	1.65	27.13	1.73	2.02
Earning Volatility	13.83	0.07	134.7	0.52	58.0	1.29	4.1	01.5	29.86	0.52
Growth	1.34	0.92	0.51	0.20	2.28	5.59	0.41	1.50	1.56	0.60

Source: Author's Calculations based on the data from Karachi Stock Exchange KSE

Regression Results

The regression model was run for five firms separately and the results are stated in Table 2. For Accord Textile Ltd. 95% of the variation in stock price is explained by firm size, dividend payout ratio, earning volatility and growth. Payout ratio had a coefficient of 0.057 and was found significant at 99% level of confidence. Earning volatility was had coefficient of 1.24 and was significant at 99% level of confidence. The regression results of Adil Textile showed that 36% of the variation in the stock prices of this firm is explained by firm size, dividend payout ratio, earning volatility and growth. The growth was negatively affecting the stock price (Coefficient, -0.423) and was found significant at 95% confidence level. Likewise, the regression results of Ahmad Textile revealed that 47% of the variation in stock price is explained by the model. Dividend payout ratio was found insignificant as per the rule of thumb for t-test. The calculated t-test value was 1.239, which is less than 1.96, therefore, this is insignificant. Whereas, earning volatility was significant at 95% level of significant and was positively affecting the stock price volatility. In the case of Al- Azhar Textile Ltd., 76% of the variation in stock prices is explained by firm size, dividend payout ratio, earning volatility and growth. Dividend payout ratio had a coefficient of 0.001 and was significant at 95% level of significance. Likewise, earning volatility had a coefficient of 0.761 and was significant at 99% level of significance. For Al-Qadir Textile Ltd, 54% of the variation in the stock prices are explained by firm size, dividend payout ratio, earning volatility and growth. Dividend payout ratio had a negative relationship and was significant at 95% level of significance. Similarly, Growth was also found significant at 99% level of significance and had a positive coefficient 1.45. Results obtained from five models above, it is concluded that only in the case of Adil Textile Ltd. and Al-Azhar Textile Ltd. the payout ratio was not significant while in rest of three models, it was significant. In summary, dividend payout ratio was affecting stock prices.

Table 2
Results of regression models

Variables	Accord Textile Ltd.		Adil Textile Ltd.		Ahmed Hassan Textile Ltd.		Al-Azhar Textile Ltd.		Al-Qadir Textile Ltd.	
	Coefficient	T- Test	Coefficient	T- Test	Coefficient	T- Test	Coefficient	T- Test	Coefficient	T- Test
Firm Size	-0.048 (0.0975)	-0.492	-0.993 (0.7579)	-1.307	-0.225 (1.02)	-0.220	-0.990 (0.946)	-1.046	-3.448 (1.9590)	-1.765
Payout Ratio	0.057** (0.0036)	15.536	0.163 (0.2425)	.672	-0.371 (0.299)	-1.239	.001* (0.002)	2.139	-0.057* (0.0286)	-1.992
Earning Volatility	1.24** (0.3863)	3.21	0.854 (0.711)	1.2	0.524* (0.227)	2.3	0.761** (0.235)	3.24	0.021 (0.0820)	0.256
Growth	0.231 (0.1519)	1.523	-0.423* (0.201)	-2.1	0.417 (0.3232)	1.291	1.034 (0.814)	1.27	1.45** (0.322)	4.5
R ²	0.95		0.36		0.47		0.76		0.54	

Source: Author's Calculations based on the data from Karachi Stock Exchange KSE

***, ** indicate significance at the 1 % and 5% levels respectively.

Note: Figures in parenthesis are standard err

Discussion and Conclusion

Our results in three models for Accord Textile Ltd, Al-Azhar Textile Ltd and Al-Qadir Textile Ltd, showed that the dividend payout ratios were significant. In the case of Accord Textile Ltd and Al-Azhar Textile Ltd, the dividend payout ratio had positive association with stock price volatility. Our findings are in accordance with findings of Ali et al. (2015), Zakaria et al. (2012), and Oyinlola and Ajeigbe (2014). They reported that dividend payout ratio is positively affecting the stock price volatility. Whereas, our findings are in disagreement with the findings Hashemijoo et al. (2012) and (Nazir et al., 2010a). Accord Textile Ltd and Al-Azhar Textile Ltd and with agreement in results of Al-Qadir Textile Ltd. They all reported a negative relationship between dividend payout ratio and stock prices.

The results for size of the firms are insignificant in all models. Our findings for size of the firm are in contrast with the findings of Nazir et al. (2010a), (Hashemijoo et al., 2012) and Zakaria et al. (2012), who reported that there is a significant relationship between firm size and stock price. Moreover, our findings show that there is a significant and positive relationship between earning volatility and stock prices. Likewise, our results for earning volatility was significant in case of Al-Qadir Textile Ltd, whereas, it was insignificant for the rest of firms. Our findings in this case confirm the findings of Hashemijoo et al. (2012) and Nazir et al. (2010a). The hypotheses of the study are supported by the results obtained.

The study as aimed to investigate the relationship between dividend payout ratio and stock price. We have concluded that dividend payout ratio and its impact on stock price has been proved to be influential for the time period of 2003-2008. This suggests that dividend payout ratio have a significant impact on stock price. Moreover, among the control variables; earning volatility and growth were also found significant in some of the regression models.

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Corresponding Author

Hidayat Ullah

Assistant Professor in Commerce and Vice Principal Government College of Management Sciences Mardan-II, Khyber Pakhtunkhwa, Pakistan

Email: hidayat117921@gmail.com

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