

COMPARING CONNECTION BETWEEN STOCK PRICE & DIVIDEND POLICY IN PUBLIC AND PRIVATE SECTOR: PAKISTAN EVIDENCE

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Abstract

The paper establishes if dividend policy is a trustworthy indicator for the investors to predict a company's future growth in value to maximize their returns on their portfolios. The analysis technique used is cross-sectional regression analysis since the research focuses on various companies with numerous variables under a period of ten years. The study was conducted several times, with all companies together. Private companies and then public companies, individually, to see if the dividend policy has the same impact on the stock prices for both types of corporations. The results show that although Dividend Pay-out Ratio itself doesn't have a relationship with the stock price, the Dividend Yield of the company has a significant relationship with Share Price. Mixed results have been witnessed in result of data analysis from control variables. Although Leverage showed a significant relationship with the dependent variable when all companies were assessed altogether, it did not show any significance individually when the connections were analysed separately within public and private companies. On the other hand, Growth did not establish a significant relationship with share price volatility in the complete result; it had a significant one in the private companies' works. The study supports the fact that dividend policy does not necessarily have significance in

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determining share price changes for a sample of firms listed on the Pakistan Stock Exchange.

Keywords: share price volatility; debt-to-equity; pay-out-ratio; public company; private company

JEL Classification: G30; G38; G39; O16

1. Introduction

Dividend policy is one of the critical components for investors looking to invest in a corporation. It is a significant aspect of their investment strategy, especially if they are long-term investors. They would be especially attracted to a firm with a healthy dividend yield (DY) and dividend pay-out (DPR). This paper aims to confirm the link between stock price and dividend policy and establish if it is universal amongst the privately-owned corporations and government entities listed on the Pakistan Stock Exchange. Factors that incorporate dividend policy, DY, and DPR will be used to assess the connection amid the subject variables. Simultaneously, factors known to influence dividend policy itself will be used as control variables to obtain as accurate a result as possible. The sample of the companies would be across all industries, without discrimination on the PSX-100 Index. An equal number of companies would be selected for both private and public entities. The data covers a span of ten years (2009-2019) for the study from the selected companies.

This study will focus on determining if there is a relationship between stock price instability and dividend yield and if that link is common between privately-owned entities and government entities. While sufficient research has been done on the stock price fluctuations and dividend policy across the globe, this topic has yet to be thoroughly examined in Pakistan and on the ever-expanding PSX-100 index. At the same time, the second part of the problem hasn't been researched upon at all. During the background analysis of this topic, no research was available online that examined private companies and public companies independently; thus, a niche was known to be studied upon in this topic.

2. Description of the problem

Dividends are an essential means for investors to gain from their investment in a firm. In addition to dividends, the only way

investors earn returns refers to changes in share prices. The dividend policy has significant positive effect on stock prices, and firms make several considerations while developing a dividend policy (Masum, 2014). Historic dividend data, stability in earnings, forecasts of future and current returns and cash flows are the important factors in developing a firms' dividend policy (Ouma, 2012).

While testing the relationship between leverage and dividend in Indonesia, Erkaningrum (2013) found a negative relationship between dividend and debt. This was also tested in Bangladesh by Rashid and Rahman (2008), and they had the same conclusion.

El-Sady et al. (2012) underline that both the management perception of the level of the current and future earnings, and the liquidity constraints are the main factors that influence the dividend policy of listed companies in Kuwait. Other factors also play an essential role in the development of dividend policy, such as firm growth and government policy (Hooi, Albaity, and Ibrahimy, 2015).

In the early 1960s, Miller and Modigliani generated the theory according to which they suggested that the wealth of the investors is not affected by the dividend policy (Miller and Modigliani, 1961). Authors considered that the value of a company lies in its earnings, which has its foundations set up on the organization's investment policy. They pointed out that there are two avenues through which investors yield results for their investment and risks: dividend yield and capital gains yield. They also believed that the decision of a company to pay off the dividends will automatically reduce the price to the amount of dividend per share on the ex-dividend date. However, this situation is valid only in a perfect market (Ojeme, Mamidu and Ojo, 2015).

Various research studies have been done on this matter. Some have borne positive results in confirming the relationship, while others have been negative or indecisive on the subject (Profillet, 2013). Researching the connection between share price and dividend policy registered on FTSE 100, they conducted multiple regression analysis to ascertain the relationship between share price and both dividend pay-out ratio and yields. They discovered a positive relationship between dividend yield and stock price, and a contrary relationship between share price and dividend pay-out ratio.

The study of Ilaboya and Aggreh (2013) found that in their sample of 26 firms in Nigeria, dividend yield had a positive while pay-out had a negative connection with the share price. Hooi, Albaity and

Ibrahimy (2015) reported that the market dividend yield and dividend pay-out have a negative relationship with share price volatility with statistical significance, while earning volatility and long-term debt have a positive relationship statistically to share price volatility.

The share price volatility is defined as the fluctuation in prices of the firms, as the dependent variable in the regression model of this study. By adjusting the returns by the average returns on an annual basis, they would be squared. Then, this would be averaged by the number of given years, and finally, the equation is squarely rooted.

$$\text{The volatility of share price} = \sqrt{\sum_{i=1}^n [(P_i - P_{AVG})^2]/n} \quad (1)$$

Where: P_i = the price for year i ; P_{AVG} = the average price of the whole period; n = number of years.

One of the two most significant explanatory variables highlights precisely how much the firm dividend weighs compared to its share price. It is the value of dividend per share divided by price per share.

$$DY = Di/Pi \quad (2)$$

Where: DY = Dividend Yield; Di = Dividend per share; Pi = Price of share.

DPR defines the percentage of net income that the company decides to use to pay off its investors in the form of dividends. The total compensation of a given year (i) is divided by the same year's net income to determine how much the company has allocated towards dividends and how much it has kept as retained earnings.

$$DPR = Di/Ni \quad (3)$$

Where: DPR = Dividend Payout Ratio; Di = Cash Dividend; Ni = Net income.

Growth is calculated by determining the change in earnings between the current and the previous year.

$$G = \Delta E/E_{i-1} \quad (4)$$

Where: G = growth in earnings; ΔE = change in earnings ($E_i - E_{i-1}$); E_i = current earnings (for year i); E_{i-1} = previous earnings (for year $i - 1$).

This ratio compares the company's long-term debt to its total equity.

$$Lev = LTD/TE \quad (5)$$

Where: Lev = Leverage; LTD = Long term debt; TE = Total Equity.

The primary model of the research is illustrated below.

$$PV = \beta_1 + \beta_2 DY + \beta_3 DPR + \beta_4 G + \beta_5 Lev + \mu \quad (6)$$

PV is the price volatility, and it is the dependent variable. At the same time, DY and DPR are dividends. Dividend pay-out ratio, which is the primary independent variable while G (Growth) and Lev (Leverage), will be used as a control variable because they are one of the few significant determinants of dividend policy hence can be used to make the function more stable and accurate. With this regression function, we will prove that a connection exists between share price volatility and dividend policy.

3. Method and findings

As per Pakistan Stock Exchange's data portal (dps.psx.com.pk) there are about five-hundred and forty-five companies on the Pakistan Stock Exchange as of December 31, 2020, with a total market with a market capitalization of Rs.8.04 billion as of December 31, 2020, this research will focus on the PSX-100 index. PSX-100 index is a benchmark created by determining the companies with the best market capitalization from each industry, 100 companies on the index.

The attention will not be on a specific industry in the market. Instead, the sample will be divided into two clusters of five companies, each determined whether they are government-owned or private companies. A total of ten companies are going to be chosen from hundred companies on the PSX-100 as a sample. At the same time, the period is going to be from 2009-2019.

A sample size of 10 companies was chosen since very few government entities were listed on the Pakistan Stock Exchange with sufficient data and research purposes. Both the sample pools of public and private companies needed to be the same. So, the sample size was finalized with five companies for each cluster.

Accordingly, the sampling technique that is going to be used in this research is cluster sampling is going to be used for this paper. At the same time, sub-sampling is going to be done based on simple random. Meaning that the companies are going to be grouped based on the cluster sampling technique while the companies that are going to be chosen for the cluster is going to be done through a simple random sampling technique, as in the companies selected for each group are going to be done as if their names are pulled out of a hat.

The instruments used for the data collections were legitimate online sources (scstrade.com) and financial reports of the subject companies from the fiscal year 2009 to the fiscal year 2019. So, the data was collected through secondary sources. SECP regulated the sources, hence the data was reliable and valid for the research.

The analysis technique used is cross-sectional regression analysis since the research focuses on various companies with numerous variables under ten years. The study will be conducted several times, with all companies together. Private companies and then public companies individually see if the dividend policy has the same impact on the stock prices for both types of corporations.

3.1. Pilot test

The pilot test was conducted after data mining and collection on E-Views. The technique used was cross-sectional regression. This was done on three organizations: two private companies, while the other, a public company. Price volatility calculations were done by extracting daily prices from online sources and calculating their standard deviation on excel, while the other variables were collected from financial reports.

3.1.1 Comprehensive result (pilot test)

This analysis conducted by using all the variables together and all the companies together, has led to the results presented in Table 1. The predictor explained 21.9% of the variance (Adjusted R² = .219, F= 2.40<3.5, p>0.05). It was found that only leverage significantly predicted price volatility ($\beta = 15.28$, T= 2.54>2, p<0.05), while growth ($\beta = 0.803$, T = 0.2831<2, p>0.05), Dividend pay-out ratio ($\beta = 13.06$, T = 1.1369<2, p>0.05) and Dividend yield ($\beta = -59.54$, T = -0.63<2, p>0.05) did not significantly impact price volatility.

Table 1
Cumulative Regression Results (public & private)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.33195	10.42098	0.223775	0.8258
DY	-59.54845	94.52005	-0.630009	0.5376
DPR	13.06975	11.49578	1.136918	0.2723
G	0.803198	2.836837	0.283131	0.7807
LEV	15.28668	5.998034	2.548616	0.0215
R-squared	0.375223	Mean dependent var		17.59812
Adjusted R-squared	0.219029	S.D. dependent var		13.5779
S.E. of regression	11.99914	Akaike info criterion		8.011804
Sum squared resid	2303.67	Schwarz criterion		8.2605
Log likelihood	-79.12394	Hannan-Quinn crit.		8.065777
F-statistic	2.402283	Durbin-Watson stat		1.905991

Source: Data extracted from company financials between 2009 and 2019.

- **Comprehensive result excluding dividend pay-out ratio (pilot test)**

Due to a high correlation between dividend yield and pay-out ratio, we excluded the dividend pay-out ratio and reran the analysis, making the model:

$$PV = \beta_1 + \beta_2DY + \beta_4G + \beta_5Lev + \mu \quad (7)$$

The analysis conducted by using all the variables except the dividend pay-out ratio and all the companies together has led to the results presented in Table 2. According to these data, the predictor explained 20.55% of the variance (Adjusted R2 =.205, F= 2.72<3.5, p>0.05); it was found that only leverage significantly predicted price volatility ($\beta = 15.89$, T= 2.63>2, p<0.05), while growth ($\beta= 1.09$, T = 0.3831<2, p>0.05). Dividend yield ($\beta= 4.72$, T = 0.061<2, p>0.05) did not significantly impact price volatility.

Table 2
Cumulative regression results excluding dividend pay-out ratio (pilot test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.632174	10.31029	0.449277	0.6589
DY	4.723318	76.4001	0.061823	0.9514
G	1.091665	2.849678	0.383084	0.7064
LEV	15.89237	6.02552	2.63751	0.0173
R-squared	0.324749	Mean dependent var		17.59812

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Adjusted R-squared	0.205588	S.D. dependent var		13.5779
S.E. of regression	12.10196	Akaike info criterion		7.994255
Sum squared resid	2489.776	Schwarz criterion		8.193212
Log likelihood	-79.93968	Hannan-Quinn crit.		8.037434
F-statistic	2.72528	Durbin-Watson stat		1.795686
Prob(F-statistic)	0.076473			

Source: Data extracted from company financials between 2009 and 2019.

- **Comprehensive result excluding dividend yield (pilot test)**

Due to a high correlation between dividend yield and payout ratio, we excluded the dividend yield and reran the analysis, making the model:

$$PV = \beta_1 + \beta_3 DPR + \beta_4 G + \beta_5 Lev + \mu \quad (8)$$

Table 3

Cumulative regression results excluding dividend yield (pilot test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.256263	8.570666	-0.146577	0.8852
DPR	8.738114	9.048145	0.965735	0.3477
G	0.10541	2.564942	0.041097	0.9677
LEV	16.05811	5.766628	2.784662	0.0127
R-squared	0.359724	Mean dependent var		17.59812
Adjusted R-squared	0.246734	S.D. dependent var		13.5779
S.E. of regression	11.78438	Akaike info criterion		7.94107
Sum squared resid	2360.817	Schwarz criterion		8.140027
Log likelihood	-79.38124	Hannan-Quinn crit.		7.984249
F-statistic	3.183685	Durbin-Watson stat		1.792733
Prob(F-statistic)	0.050581			

Source: Data extracted from company financials between 2009 and 2019.

In contrast, growth ($\beta = 0.105$, $T = 0.014 < 2$, $p > 0.05$) and Dividend pay-out ratio ($\beta = 8.73$, $T = 0.965 < 2$, $p > 0.05$) did not significantly impact price volatility.

Since this research aims to see if the relationships are similar in private and public companies, we will run the above analysis on private and public companies individually. The following results represent the characteristics of private companies separately, using the altered equations as above (first using DY and then exchanging it with DPR – equations 7 and 8).

3.1.2 Private companies result

This analysis was performed only for private companies by using all the variables except dividend pay-out ratio. The result described in Table 4 shows that the predictor explained -27.40% of the variance (Adjusted R2 = -0.274, F= 0.0679<3.5, p>0.05), It was found that leverage ($\beta = -0.27$, T= -0.022<2, p>0.05), growth ($\beta= 0.455$, T = 0.277<2, p>0.05) and Dividend yield ($\beta= 6.12$, T = 0.133<2, p>0.05) did not significantly impact price volatility.

Table 4
Private companies result excluding dividend pay-out ratio (pilot test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.859958	6.24714	1.578316	0.1456
DY	6.12949	45.81235	0.133796	0.8962
G	0.455875	1.644231	0.277257	0.7872
LEV	-0.110649	4.840949	-0.022857	0.9822
R-squared	0.019981	Mean dependent var		10.22823
Adjusted R-squared	-0.274025	S.D. dependent var		6.074708
S.E. of regression	6.856688	Akaike info criterion		6.923283
Sum squared resid	470.1418	Schwarz criterion		7.10587
Log likelihood	-44.46298	Hannan-Quinn crit.		6.906381
F-statistic	0.06796	Durbin-Watson stat		2.141746
Prob(F-statistic)	0.975711			

Source: Data extracted from company financials between 2009 and 2019.

The analysis performed only for private companies and conducted by using all the variables except dividend yield has led to the results presented in Table 5. It shows that the predictor explained -23% of the variance (Adjusted R2 =-0.23, F= 0.189<3.5, p>0.05), It was found that leverage ($\beta = 0.429$, T= 0.089<2, p>0.05), growth ($\beta= 0.114$, T = 0.074<2, p>0.05) and Dividend pay-out ratio ($\beta= 3.650$, T = 0.089<2, p>0.05) did not significantly impact price volatility.

Table 5
Private companies result excluding dividend yield (pilot test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.649963	5.809214	1.316867	0.2173
DPR	3.651698	5.961588	0.612538	0.5539
G	0.114135	1.529476	0.074624	0.942
LEV	0.42974	4.816825	0.089216	0.9307

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R-squared	0.053731	Mean dependent var		10.22823
Adjusted R-squared	-0.23015	S.D. dependent var		6.074708
S.E. of regression	6.737589	Akaike info criterion		6.888238
Sum squared resid	453.951	Schwarz criterion		7.070825
Log likelihood	-44.21766	Hannan-Quinn crit.		6.871336
F-statistic	0.189272	Durbin-Watson stat		2.153544
Prob(F-statistic)	0.901297			

Source: Data extracted from company financials between 2009 and 2019.

3.1.3 Public companies result

This analysis was conducted only for public companies, and by using all the variables except dividend pay-out ratio. The result in Table 6 shows that the predictor explained -19.26% of the variance (Adjusted R2 = -0.1926, F= 0.0676<3.5, p>0.05), It was found that leverage ($\beta = 18.28$, T= 0.526<2, p>0.05), growth ($\beta= 57.30$, T = 1.377<2, p>0.05) and Dividend yield ($\beta= -164.32$, T = - 0.562<2, p>0.05) did not significantly impact price volatility.

Table 6
Public companies result excluding dividend pay-out ratio (pilot test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	22.75185	48.36339	0.470435	0.6701
DY	-164.3223	292.2369	-0.562292	0.6132
G	57.30998	41.59331	1.377865	0.262
LEV	18.28184	34.74722	0.526138	0.6352
R-squared	0.403665	Mean dependent var		32.33789
Adjusted R-squared	-0.192671	S.D. dependent var		12.42457
S.E. of regression	13.56881	Akaike info criterion		8.348984
Sum squared resid	552.3377	Schwarz criterion		8.318075
Log likelihood	-25.22144	Hannan-Quinn crit.		7.966961
F-statistic	0.676909	Durbin-Watson stat		1.312341
Prob(F-statistic)	0.621895			

Source: Data extracted from company financials between 2009 and 2019.

The analysis performed only for public companies and conducted by using all the variables except dividend yield has led to the results presented in Table 7. It shows that the predictor explained 29.3% of the variance (Adjusted R2 =29.3, F= 1.83<3.5, p>0.05), It was found that leverage ($\beta = 4.23$, T= 0.154<2, p>0.05), growth ($\beta= 73.9$, T

= 2.26 > 2, p > 0.05) and Dividend pay-out ratio ($\beta = 37.53$, $T = 1.611 < 2$, $p > 0.05$) did not significantly impact price volatility.

Table 7
Public companies result excluding dividend yield (pilot test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.516347	34.84147	-0.129626	0.9051
DPR	37.53395	23.28688	1.611807	0.2054
G	73.92446	32.60714	2.267125	0.1082
LEV	4.234918	27.41887	0.154453	0.8871
R-squared	0.646735	Mean dependent var		32.33789
Adjusted R-squared	0.29347	S.D. dependent var		12.42457
S.E. of regression	10.44352	Akaike info criterion		7.825399
Sum squared resid	327.2012	Schwarz criterion		7.794491
Log likelihood	-23.3889	Hannan-Quinn criter.		7.443376
F-statistic	1.830735	Durbin-Watson stat		1.564105
Prob(F-statistic)	0.315889			

Source: Data extracted from company financials between 2009 and 2019.

The correlation matrix analysis reveals that the price variation is directly correlated with dividend pay-out ratio, dividend yield, and growth. At the same time, there is a negative relation between the company's leverage and share price on the stock exchange (Table 8).

Table 8
Correlation between variables

Variables	PV	DPR	DY	G	LEV
PV	1				
DPR	0.031	1			
DY	0.013	0.768	1		
G	0.219	-0.443	0.390	1	
LEV	-0.318	-0.712	0.759	0.311	1

Source: Data extracted from company financials between 2009 and 2019.

3.2. Final results

3.2.1 Final comprehensive results

This analysis was conducted by using all the variables together and all the companies together. The results described in Table 9 shows that the predictor explained 68.69% of the variance (Adjusted R² = .6869, $F = 6.40 > 3.5$, $p < 0.05$), It was found that dividend yield ($\beta = 5.329$, $T = 2.74 > 2$, $p < 0.05$) and leverage ($\beta = -5.32$, $T = 2.97 > 2$, $p < 0.05$) significantly predicted price volatility, while growth ($\beta = -1.50$, $T = 0.869 < 2$, $p > 0.05$) and Dividend pay-out ratio ($\beta = -5.35$, $T = 1.24 < 2$, $p > 0.05$), did not significantly impact price volatility.

Table 9
Actual cumulative regression results (public & private)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.66352	6.865505	1.99017	0.0564
DPR	-5.351705	4.303043	-1.243702	0.2239
DY	5.32997	1.942861	2.743361	0.0105
G	-1.502545	1.727767	-0.869646	0.3919
LEV	-5.320341	1.789891	-2.972439	0.006
R-squared	0.81415	Mean dependent var		16.65229
Adjusted R-squared	0.686989	S.D. dependent var		13.2363
S.E. of regression	7.405367			
Sum squared resid	1041.95			
Log likelihood	-103.7886			
F-statistic	6.40252			
Prob(F-statistic)	0.000167			

Source: Data extracted from company financials between 2009 and 2019.

3.2.2 Private companies results

This analysis was conducted by using all the variables together for all the private companies together. The result (see Table 10) shows that the predictor explained 64.34% of the variance (Adjusted R² = .6434, F= 4.15>3.5, p<0.05). It was found that dividend yield ($\beta = -11.32$, T= 3.63>2, p<0.05) and growth ($\beta = 2.70$, T= 2.65>2, p<0.05) significantly predicted price volatility, while leverage ($\beta = -1.48$, T = 0.70<2, p>0.05) and Dividend pay-out ratio ($\beta = 0.001022$, T = 0.00310<2, p>0.05”), did not significantly impact price volatility.

Table 10
Actual private company regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-21.65648	8.466656	-2.557856	0.043
DPR	0.001022	3.294207	0.00031	0.9998
DY	-11.32865	3.114361	-3.637552	0.0109
G	2.700806	1.017992	2.653071	0.0379
LEV	-1.488887	2.109836	-0.705688	0.5068
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.847213	Mean dependent var		7.891181
Adjusted R-squared	0.643497	S.D. dependent var		4.88722
S.E. of regression	2.918054			
Sum squared resid	51.09024			

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Log likelihood	-30.47565			
F-statistic	4.158798			
Prob(F-statistic)	0.049681			

Source: Data extracted from company financials between 2009 and 2019.

3.2.3 Public companies results

This analysis was conducted by using all the variables together and all the public companies together. According to data presented in Table 11, the predictor explained 68.55% of the variance (Adjusted R2 =.685, F= 5.63>3.5, p<0.05), It was found that only Dividend Yield significantly predicted price volatility ($\beta = -39.82$, T= 3.19>2, p<0.05), while Growth ($\beta=1.32$, T = 0.5636<2, p>0.05), Dividend pay-out ratio ($\beta= 11.04$, T = 1.76<2, p>0.05) and Leverage ($\beta= -19.22$, T" = 1.58<2, p>0.05) did not significantly impact price volatility.

Table 11

Actual public company regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-51.17739	22.71846	-2.252678	0.0508
DPR	11.04382	6.255401	1.765486	0.1113
DY	-39.82654	12.44965	-3.199008	0.0108
G	1.324186	2.349192	0.563677	0.5867
LEV	-19.22524	12.15135	-1.582149	0.1481
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.833527	Mean dependent var	23.95321	
Adjusted R-squared	0.685552	S.D. dependent var	13.63642	
S.E. of regression	7.646717			
Sum squared resid	526.2505			
Log likelihood	-55.91954			
F-statistic	5.632865			
Prob(F-statistic)	0.009049			

Source: Data extracted from company financials between 2009 and 2019.

4. Conclusion

The purpose of this research was to ascertain the connection between dividend policy and stock price stability and whether that connection is universal in public and private enterprises individually. With about five hundred and fifty-eight companies on the Pakistan Stock Exchange, ten companies were chosen as a sample with a

period of ten years from 2009 to 2019 used for the analysis. The three analyses above show that although DPR itself doesn't have a relationship with the stock price, the DY of the company has a significant relationship with the stock price. Mixed results have been witnessed in result of data analysis from control variables. While Leverage showed a significant relationship with the dependent variable when all companies were assessed altogether, it did not show any significance individually when the relationships were analysed separately within public and private companies. On the other hand, Growth did not show a significant relationship with share price volatility in the complete result; it significantly affected the private companies' results. Although the F-statistics in all three results have been greater than 3.5, which means that even though these variables do not have any relationship with share price volatility individually (except for dividend yield), together, these variables have a significant relationship; with share price volatility.

This shows that the pay-out ratio itself is not a valid predictor to predict the price volatility of a company; even though dividend yield can be used for this matter, dividend policy does not prove to be an accurate model as the predictions are at most only 68.69% accurate, according to the adjusted R-squared, in the above tables.

So, to sum up the findings, there is minimal predictive relationship between dividend policy and share price volatility. However, it is necessary to note that the data used was unable to develop a reliable relationship model as the highest adjusted R-squared observed in the several variations of the equation was only 0.6869. Which means that the model was only able to predict the correct result 68.69% of the time. Moreover, dividend yield ultimately has a stronger relationship with share prices as the dividend yields is more alluring to investors than the general pay-out ratio of the firm. In the end it does not matter how much money a company distributes in Rupee-term to the investors, but the percentage they earned on their initial investment is of more concern to them. Therefore, dividend pay-out ratio does not have a substantial impact on share prices, given that the pay-out ratio is associated with the management discretion.

References

1. Masum, A. (2014). Dividend policy and its impact on stock price—A study on commercial banks listed in Dhaka stock exchange. *Global Disclosure of Economics and Business*, 3(1), pp. 9-17.

2. Ouma, O.P. (2012). The relationship between dividend payout and firm performance: A study of listed companies in Kenya. *European Scientific Journal*, 8(9), pp. 199-215.
3. Erkaningrum, I.F. (2013). Interactions Among Insider Ownership, Dividend Policy, Debt Policy, Investment Decision, And Business Risk. *Journal of Indonesian Economy and Business: JIEB.*, 28(1), pp. 132-148.
4. Rashid, A., & Rahman, A.A. (2008). Dividend policy and stock price volatility: evidence from Bangladesh. *The Journal of Applied Business and Economics*, 8(4), pp. 71-81.
5. El-Sady, H., Hamdy, H., Al-Mawazini, K., & Alshammari, T. (2012). Dividends policies in an emerging market. *International Review of Business Research Papers*, 8(2), pp. 12-28.
6. Miller, M.H. & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares, *The Journal of Business*, 34 (4), pp. 411-433.
7. Ojeme, S., Mamidu, A.I., & Ojo, J.A. (2015). Dividend policy and shareholders' wealth in Nigerian quoted banks. *Canadian Social Science*, 11(1), pp. 24-29.
8. Profilet, K.A. (2013). Dividend policy and stock price volatility in the US equity capital market, *Theses, Dissertations & Honors Papers*. 145. Available at: <https://digitalcommons.longwood.edu/etd/145>
9. Ilaboya, O.J., & Aggreh, M. (2013). Dividend policy and share price volatility. *Journal of Asian Development Studies*, 2(2), pp. 109-122.
10. Hooi, S.E., Albaity, M., & Ibrahimy, A.I. (2015). Dividend policy and share price volatility. *Investment Management and Financial Innovations*, 12(1-1), pp. 226-234.