

# Share Price

# Dividends



## The Effect of Dividend Policy on Share Price: An Evaluative Study

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### Abstract :

The most debated issue in the field of finance is over the effect of dividend policy on market price per share. There are huge literatures for and against this wisdom. The current study has been undertaken aiming at evaluating the effect of dividend policy on market price of share in the context of Bangladesh. The study has covered secondary data and analyzed the data by employing descriptive statistics, correlation and multiple regression models. It has tested hypothesis by using F test. The study has found that the market price is more affected by dividend payout than retention. This dependency is significant at 1%. Finally, the paper concludes that the findings over the effect of dividend policy on market price supports the relevance theory of dividend policy.

**Key words :** Dividend policy, Market price per share, Earning per share

### Introduction :

Forecasting is a real world challenge, especially in a stock market scenario where investors strive to allocate investment in optimal financial securities and time the execution of the transactions to maximize returns.

Stock returns can depend on a variety of internal variables ranging from volume of trade, P/E (price earning) ratio, retained earnings, dividend payout ratio and external variables such as economic policies, political situations and state of global economy and even on investors' psychology which is studied under the umbrella of behavioral finance.

Eugene Fama (1970), often called the father of modern finance, postulated a theory called 'efficient market hypothesis' where he classified stock market in to three broad forms: strong form, semi-strong form and weak form.

To understand the significance of our proposal to test predictability of stock returns, we need to understand

the above three forms. As per Fama, in a weak form market, it is not possible to gain in stock returns based on historical data. In a semi strong form market, an investor can only make profit from stock investment if he has access to all public and private information regarding the stock. Finally in a strong form market, stock price already reflects all publicly available information.

Given our general understanding and observations, stock market crash of 1996 and 2011 have led us to safely assume that Dhaka Stock Exchange [referred to as DSE] is a weak form market where market information does not get reflected in stock prices. It creates room for price manipulation and makes it almost impossible for investors to gauge future price changes based on historical indicators. Therefore our study will test whether there exists a causal relationship between price changes and dividend per share (DPS) and Retained Earnings per Share (REPS).

After the Modigliani-Miller (1961) paradigms on firms' dividend policy and their market values, there have been considerable debates, both in theoretical and empirical researches on the nature of relationship that exists between a firm's choice of dividend policy and its market value.

Debates have centered on whether 100% dividend payout ratio or 100% retention ratio or the mix of dividend payout and retention is optimal dividend decision that affect the value of the firm and shareholder's return. Although, there have been substantial research efforts devoted by different scholars in determining what seems to be an optimal dividend policy for firms, yet there is no universally accepted theory throughout the literature explaining the dividend payout and retention choice of firms. But in the last decades, several theories have emerged explaining firm's dividend policy and the resultant effects on their market values.

The economy of Bangladesh is characterized by different kinds of firms. So firms differ on sizes, registered or unregistered, ownership structure, listed or unlisted etc. So, dividend decision thereto differs from firm to firm. An optimal dividend decision is taken on some important criteria- shareholders' return, growth of a firm, value of a firm, borrowing capacity, and regulatory landscape [Weston & Brigham, 1972; Brandt, 1972; Van Home, 1976].

### Objectives of the study :

The main objective of the study is to assess the implication of dividend policy and ratio of retained earnings on share price of some selected listed companies in Bangladesh. At the end of the study we shall strive to shed lights on below objectives:

- To highlight the dividend policy of each industry:
- To analyze the relationship between dividend policy and share Price:
- To assess the relationship between retained earnings and share Price:
- To evaluate the dependency of dividend per share and retained earnings on share price:
- To draw relevant inferences on the basis of analysis.

### Hypotheses of the Study:

Hypothesis is the statement that shows the inferred relationship among different variables. These relationships can be tested using numerous statistical techniques. As per the objectives of the study, the following hypothesis was developed for testing:

HO : There is no significant effect of dividend policy on share price

HA : There is a significant effect of dividend policy on share price

### Data and Methodology :

#### The Data:

We have used weekly closing prices, annual dividend payout ratio and retained earnings of 7 companies each from 4 different industries, namely, Engineering, Cement, Textile, and Pharmaceuticals & Chemicals industries. Time horizon of collected data ranges over approximately 3 years 2015 to 2017. Data sources include Dhaka Stock Exchange [DSE] website, Bangladesh Securities and Exchange Commission [BSEC] and other financial literatures. Weekly closing price is the price at which the stock price settles down at the end of each week's trading hour. This is the dependent variable in our study.

Independent variables include dividend per share and retained earnings per share.

#### Methodology :

Minitab and Excel have been used to process and analyze the data. Dependent and independent variables are analyzed by using correlation and linear

regression. We have also resorted to many different tools such as like regression analysis, F-test, multi-collinearity etc. to estimate and interpret data. Regression analyses have been used to analyze the relationship of dividend policy with share price of companies. F-tests have been performed to test the statistical significance of the parameters at 1% level of significance. Multi-collinearity test has been used to assess inter correlation among the independent variables themselves.

### Definition of Variables :

#### Explanation of test parameters :

There are total 3 variables in this project. One of them is dependent variable and other two are independent variables. Market price per share is our dependent variable while we have taken Dividend per share (DPS) and Retained Earnings per Share (REPS) as independent variables.

#### Specification of the Models:

The primary objective of the study is to test the effect of dividend policy on share price by using multiple regression analysis and least square estimation method. Assumption of the study includes: a) relationship between dependent and independent variables is linear, b) residual term to be normally distributed with zero expectation, not correlated with independent variables and have constant variance. According to these empirical models, the equation stands at:

$$MPPS = \beta \alpha \varepsilon$$

Where,

MPPS = Market price per share

DPS = Dividend per share

REPS = Retained earnings per share

$\alpha$  = Constant term of the model

$\beta$  = Coefficients of the model

$\varepsilon$  = Error term

#### Dependent variables : Market price per share (MPPS)

#### Independent variables:

- a) Dividend per share
- b) Retained earnings per share

**Table-I: Descriptive Information of Variables**

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
DPS	140	.00	75.00	8.7017	14.16760
REPS	140	-159.54	202.02	12.6375	38.24242
MPPS	140	2.88	3365.00	402.2445	620.51918
Valid N (list wise)				140	

The analysis will attempt to measure the inherent relationship between the variables and how each of the independent variables affect the prices of selected shares.

### Findings and Analysis:

#### Dividend Payout Policy

The dividend payout policy of the some listed companies under different industries in Bangladesh is explained by the table-2.

**Table-2: Results Showing the Dividend Payout Ratio**

Year	Engineering	Cement	Textile	Pharmaceuticals and Chemicals
2005	0.334369	0.07571	0.54	0.6
2006	0.342143	0.128	0.4	1
2007	0.134143	0.085	0.054	0.53
2008	0.134286	0.20142	0.053	1
2009	0.103143	0.19285	0.6	0.82
Average	.21	0.1366	0.3294	0.79
Standard deviation	0.118146	0.05876	0.262108	0.219545

Source : The data are the summarized financial information of dividend payout ratio. [Note: DPR= DPS/EPS].

The dividend payout ratio is an important concept in finance literature. It is up to a company to decide whether it will pay out dividend at a low or high ratio. Low payout retains more equity than high payout and as a result, earnings, dividends and equity grow at a higher rate than that of high dividend payout.

Low payout policy results in less current dividend payment, higher capital gains, more amount of retained earnings and most likely a higher market price per share. On the other hand, a high payout ratio could mean more current dividends and less retained earnings, which may lead to slow growth and lower market price per share. From the above table we can see that the average payout ratio is higher for pharmaceuticals industry compared to other industries. The average payout ratio is lower for cement industry compared to other industries. Another important finding to note is that earnings volatility is high in textile industry compared to rest of the industries in the table as the standard deviation of DPR of textile industry is higher than other industries.

### Relationship between Dividend per Share and Share Price:

The study has identified the magnitude of the relationship between dividend per share and share price. This relationship is shown by correlation coefficient matrix. Table-3 shows the correlation coefficient matrix.

**Table-3: Correlations between DPS and MPSP**

	DPS	MPSP
DPS Pearson Correlation	1	0.856(**)
Sig. (2-tailed)		0.000
N	140	140
SP Pearson Correlation	0.856(**)	1
Sig. (2-tailed)		0.000
N	140	140

\*\* Correlation is significant at the 0.01 level (2-tailed).

From the analysis of correlation coefficient the study has identified that the relationship between dividend per share and share price is positive because the correlation between DPS and MPSP is 0.856 and the result is significant at lower than 1% level of significance. The result supports the theory of relevance theory of dividend policy which means there is a significant positive relationship between dividend per share and market price per share.

### Dependency of Share Price on Dividend Policy :

The results of the regression analysis related to hypothesis drawn on shareholder's return are presented by table-4:

**Table-4: Regression Analysis [Shareholder's Return (EPS)]**

Variables	$\alpha$ and $\beta$	Std. Error	t-stat	Level of sig.	R2 (Adj. R2)	F-stat with (sig.)	VIF
MPPS		304.54			.763 (.759)	220.043 (.000)	
Constant( $\alpha$ )	87.409	30.366	2.88	0.005			
DPS( $\beta_1$ )	30.76	2.46	12.53	0.000			1.85
RE ( $\beta_2$ )	3.73	.91	4.10	0.000			1.85

Source :The data are extracted and compiled from the results of statistical analysis of summarized financial information regarding MPPS, DPS and RE.

From the above study regarding dividend policy on the share price, we have found that when the companies pay the dividend then the MPPS is increased by TK 30.76 because slope ( $\beta_1$ ) =30.76 and when the companies retains the earnings then the MPPS is increased by TK 3.73 because slope ( $\beta_2$ ) = 3.73. Both the constant and the coefficients are significant at less than 5% level of significance. The model developed for MPPS is strong enough because Coefficient of determination (R2) = 0.763. It can be said that the MPPS depends upon the dividend policy by 76.3% and other variables by 23.7%. The result of the model is not biased by the independent variables because adjusted coefficient of determination (AR2) =0.759 which is nearer to the value of R2 and less than 1. The multi-co linearity has been checked. The independent variables are not strongly correlated with each other because the value of variance inflation factor (VIF) is less than the upper limit of 10. But it is noteworthy that the sign of beta for the DPS and MPPS, & beta for REPS and MPPS are positive; meaning that if DPS is increased then the MPPS will be increased at an increasing rate and if REPS is increased then the MPPS will be increased at a decreasing rate. From the F test statistics there is no significant evidence to accept the null hypothesis. So, the study has found that there is a significant effect of dividend policy on Share price and the result supports the relevance theory of dividend policy.

### Conclusion:

This study has investigated the relationship between dividend policy and market price per share. It is hypothesized that there is a significant effect of dividend policy on the share price. The regression model has shown that there is a positive relationship between the dividend per share, retained earnings per share and market price per share. The result has also indicated that highly payout industries have more MPPS than low payout industries. The study has proved that there is a significant effect of dividend policy on MPPS which supports the relevance theory of the dividend policy. 

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