Impact of Dividend Policy on Share Price Evidence from Textile Sector PSX-100 Index

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Abstract

This paper attempts to determine the impact of dividend policy on stock price in Pakistan. A sample of 20 textile listed companies in PSX is examined for a period from 2010 to 2017. The empirical estimation is based on a panel regression analysis of the relationship between dividend policy and share price and also used fixed effect model. Secondary data were used by the researcher in the study. The study has taken share price as a dependent variable while the dividend policy is an independent variable. The dividend policy was measure by different proxy such as SDS, DPR, EPS, PAT and ROE. The result explained that the ROE and EPS have significant positive relationship with share price while the SDS, PAT and DPR have negative association with share price. Although the results are not robust enough as in the case of developed markets but are consistent with the behavior of emerging markets.

Key Words:

Dividend Policy, Share Price

Introduction

Dividend policies are a key element of in a large business. In initial east India Company issued their bonds in sixtieth centuries and make disbursement of payment in 1661, if the study talk about dividend policy its nature dimension and disbursement issues without Lintner work it would be worst. Dividend policy is most important financial decision by the firm. A payment to shareholders is done through dividend policy. Dividend policy is one of the most investigative issues in the area of economics but the puzzle is still consisting that is there any impact of dividend policy on share price or not. Dividend policy is most important for

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shareholders not only in the case of earnings but also is the way of investment. Many investors look for the payout ratio. DPR is measures by total dividend paid to shareholders divide by numbers of shares issued by the firm. Now the question is occur that the Dividend payout ratio have positive impact or negative impact on share price. Developed firm have high DPR which bring increase in share price.

Government and private sectors firm’s shareholders have a goal to increase revenue and development on advanced level. In Pakistan there are numbers of issues exist which disturb the perception of shareholders about dividend policy and share price therefore Pakistani researchers recommended that share price is effected by different variables like dividend yield retention ratio, PAT, earnings per share and ROE. According to mention variables it’s exposed by deferent studies that the dividend policy most important object for the share price.

Objectives

- To know about the relation of dividend policy with share price.
- To identify the link between dividend policy and price of the stock market.

Literature review

Share Price

Share price is price of a stock which offers by a firm for selling purposes. Price of a share identify a balance between share seller and share buyers sometime selling and buying of a stock could be done by a broker.(Sharma, 2011). According to many studies there is a strong positive association between share price and dividend further show lower coefficient as compared to dividend with retained earnings. (Chhetri, 2008). The interviews of twenty eight different firms were conducted by the researchers they state that there is a strong positive association between dividend policy and share price.

However opposite results were also found by some researchers. (M&M, 1961) planned irrelevance theory suggesting that the share price is not affected by dividend policy. He argued that the firm have main goal to increase their earnings and firm performance so could be come through good investment decision..

Stock Dividend Per Share

Dividend is the portion of net income which is distributed among the shareholders for bearing risk and investment. Dividend disbursement is on the bases of a firm dividend policy which is set by managers and majority shareholders. According to (Gordon 1959; Akbar and baig) the rate of a dividend has full influence on the stock price while other studies use this variable because it’s have an association.
And shows positive relationship between share price and dividend policy. Based on these arguments, it’s explained that there is a strong positive association between SDS and share price. Therefore, the hypotheses build.

**H1:** There is a positive relationship between stock dividend per share and share price.

**Dividend Payout Ratio (DPR)**

DPR shows the payout ratio of a firm to shareholders. Its measure by dividend paid/number of share outstanding. It can be also found by dividend per share/earnings per share, its shows link between DPR and EPS. It means that there is a link between DPR and share price change. (Sharma, 2011; zakaria et al. 2012).

However, a lot of studies were in the favor of negative association because they proved that there is an adverse link between DPR and share price. (Husainey, Oscar Mgbame, et al. 2011; Hashemijoo et al. 2012) according to Ilaboya & Aggreh (2013) conducted the study from 2004 to 2011. According to the interpretation highlight that DPR imposes an adverse and no link share price with an adverse coefficient of -0.092.

**H2:** There is a negative relation between dividend per share and share price.

**Profit after Tax (PAT)**

PAT is a free factor. There is immediate connection between offer qualities and benefit after duty. The primary point the PAT is to subtract CGS and random cost from the gross benefit. PAT was utilized by Pani as control variable. (Pani 2008), Adasola & Okwang (2009), Ahmed Javid(2009) & Al-Kuvari (2010) utilized PAT as autonomous variable in their examinations and discovered positive connection between offer costs and benefit after duty. They think about benefit after duty as an imperative variable to clarify the variety in offer costs. So according to the above explanation the hypotheses build.

**H3:** Profit after Tax (PAT) has positive effect on Share price.

**Earnings Per Share**

Earnings per share is an independent variable. It represents the amount of earnings attributable to each share of a company stock. Many researcher study the relationship between EPS and share price. Their finding shows that there is a positive link between share price with earnings per share. (Asghar, Shah, Hamid, et al. 2015; Adnan, Jan, Sharif. 2011; Khan, Aamir, Qayyum et al. 2011). Azim.
(2011) was taken a sample of 131 firms listed on PSX for the sample period of ten years and also used panel data approach. The result of his study showed that EPS has significant optimistic relation with share price.

However, the study was conducted by Manandhar (1998) in the context of Nepal; his result shows a negative link between share EPS and share price.

According to the above statement, it represents that EPS and share price have a positive association; therefore, the hypotheses build.

**H4:** There is a positive impact of EPS on share prices.

### Return on Equity (ROE)

ROE is an independent determinant and is defined as profit of firms/shareholders equity. (Ling, 2008; Azeem & Kouser, 2011; Raballe & Hedensted, 2008; Liu & Hu, 2005) According to the above studies, it shows that there is a positive association between ROE and share price; while the other study was conducted by Liu and Hu on dividend payers in Denmark; they were used ROE as one of the main determinants which have more influence on share price. The result of his study shows that the ROE and share price have a more positive link with each other’s. Therefore, the study developed below assumption in favor of a positive association.

### Research Methodology

#### Population of the Study

Area of the research comprised the non-financial sector in Pakistan stock exchange. However, the target population is the textile industry. The data for the current study will be collected from 2010 to 2017.

#### Population and Sampling

In current study; the study has been selected textile sector for analysis. The textile sector has been chosen due to availability of the data and also effort to include those firms which had to receive profit and distribute dividend. Therefore, the study selects the top twenty companies listed in PSX as a sample.

#### Data Collection

In the current study, the study will collect secondary data from Pakistan stock exchange website and from companies’ annual reports. The sample period of the
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data is 2010 to 2017. In this study convenient sampling technique will be used for data collection.

Hypothesis

**H1:** There is a positive relationship between stock dividend per share and Share Price.

**H2:** There is a negative relationship between dividend payout and share price.

**H3:** PAT has positive effect on Share price.

**H4:** There is a positive impact of EPS on share prices.

**H5:** There is a significant positive relationship between ROE and share price

Model Specification

The current study has work on dividend policy and share price to identify the connection between both multiple regression analyses. Study have consist five independent variables and one is dependent variable for the analysis. Independent variables include SDS, DPR, PAT, EPS and ROE. Against dependent variable is share price. These variables are comprised in regression estimate. The next regression equation will be implemented to develop an association between dividend policy and share prices.

\[ Y_{it} = \beta_1 S_{Di} + \beta_2 D_{Pi} + \beta_3 P_{Ai} + \beta_4 E_{Pi} + \beta_5 R_{Oi} + e_{it}. \]

Findings and Conclusion

Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean,</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPR</td>
<td>1.038</td>
<td>1.050</td>
<td>-0.795</td>
<td>1.889</td>
</tr>
<tr>
<td>SDS</td>
<td>0.680</td>
<td>0.660</td>
<td>0.037</td>
<td>2.274</td>
</tr>
<tr>
<td>PAT</td>
<td>0.804</td>
<td>0.761</td>
<td>0.004</td>
<td>1.976</td>
</tr>
<tr>
<td>EPS</td>
<td>0.981</td>
<td>0.848</td>
<td>-1.154</td>
<td>2.927</td>
</tr>
<tr>
<td>ROE</td>
<td>0.927</td>
<td>0.933</td>
<td>-1.154</td>
<td>1.903</td>
</tr>
<tr>
<td>Share price</td>
<td>1.389</td>
<td>1.541</td>
<td>-0.259</td>
<td>3.089</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Std. Dev.</th>
<th>Skewness</th>
<th>Ex. Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPR</td>
<td>0.507</td>
<td>-0.772</td>
<td>1.157</td>
</tr>
<tr>
<td>SDS</td>
<td>0.336</td>
<td>0.686</td>
<td>1.870</td>
</tr>
<tr>
<td>PAT</td>
<td>0.470</td>
<td>0.471</td>
<td>-0.592</td>
</tr>
<tr>
<td>EPS</td>
<td>0.616</td>
<td>0.710</td>
<td>1.207</td>
</tr>
<tr>
<td>ROE</td>
<td>0.428</td>
<td>-0.707</td>
<td>2.443</td>
</tr>
<tr>
<td>Share price</td>
<td>0.672</td>
<td>-0.125</td>
<td>-0.316</td>
</tr>
</tbody>
</table>
The above table show share price as a dependent variable. The above table shows the mean value for the share price is 1.389 while dispersion shows through the standard deviation which is 0.672. These two values show that there is very little dispersion among different determinants of the data. However the analysis shows that the maximum and value for study is 3.089 and -0.259 the maximum value indicate that highest value of the share price is (3.0891) and minimum show lowest value which is -0.259. The study also highlights the value of skewness and kurtosis which are -0.125 and 0.686.

Dividend payout ratio is an independent variable in this study. The DPR result showed many value like mean, median and std devi of dividend payout ratio in Pakistan textile sector are 1.038, 1.050 and 0.507 respectively. And the other hand, the maximum for DPR is 1.889 and the lower value is record at -0.795. The normal value of DPR is 1.038 it shows that average dividend per share is about 1.038 of the share price for 20 listed textile firms in Pakistan from year 2010 to year 2017. However the skewness and kurtosis of the study is -0.772, 1.157 Stock dividends per share is an independent variable in the current study. Here the SDS result show the different values of the statistical tools which include mean median maximum and minimum and the other side skewness and kurtosis the values of these tools include mean have 0.680 median 0.660 maximum 2.274 minimum 0.0374 and skewness and kurtosis 0.772, 1.870 while the standard deviation of the study is 0.672. According to the above analysis it’s shows that the SDS have no issue of abnormality while the Standard divination explained that there is not more dispersion in the data.

Profit after tax is an independent variable in this study. Here result of the study shows the value for the mean 0.680 median 0.660 it indicate that the average of the value is near to (0.680) while the midpoint for the study is 0.660. However the study also shows that the maximum value for the study is 2.274 and minimum value for the study is 0.0374. Dispersion of the data shows by standard deviation which is 0.336 its mean that the SDS is normal spread and there is no chance of outliers in SDS. While the kurtosis and skewness values shows 1.870, 0.686.

In this study EPS is an independent variable. Descriptive statistics of the EPS shows that mean for the EPS is 0.981 it indicate that the average of the value is near to mean while the midpoint for the study is 0.848769. The maximum and minimum values of the study is 2.927, -1.154 while standard deviation skewness and kurtosis of the study is 0.616, 0.710 and 1.207.

According to the above statement it’s indicate that dispersion in the data is normal and the data have no outliers.

Return on equity (ROE) is used as independent variable. The above table shows the mean value for the study is 0.927 and standard deviation is 0.428 in Pakistan textile sector. Based on the current study, ROE has the maximum value 2.44308 while the minimum value of the study is -0.707. The skewness and kurtosis also show by the above table is -0.707 and 2.443.
Dignostic Test for Fregression Analysis

The regression diagnostic test involve graphical and statistical test. These procedures allows to explore whether the assumption of the regression model are valid and decides whether the subsequent inference results are genuine and trustworthy. To insure this several diagnostic tests were carried out to find out the suitability of the data for multiple regression analysis. In short the data for the regression model must fulfill the basic four assumption collinearty, Heteroskedasticity, normality and linearity.

Collinearty

According to first assumption the current study will examine collinearty among variables by using two important methods correlation matrix and VIF analysis.

Correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>DPR</th>
<th>SDS</th>
<th>PAT</th>
<th>EPS</th>
<th>ROE</th>
<th>Share price</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPR</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDS</td>
<td>0.1596</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAT</td>
<td>-0.3614</td>
<td>-0.0388</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPS</td>
<td>0.0174</td>
<td>0.1698</td>
<td>0.2238</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>-0.0979</td>
<td>0.0138</td>
<td>0.5239</td>
<td>0.2863</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Share price</td>
<td>-0.1232</td>
<td>-0.0375</td>
<td>-0.0868</td>
<td>0.2977</td>
<td>0.0761</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

The above table shows the correlation among all variables by using correlation matrix. By using this method the result shows that there is no Multicollinearty among all variables because the value of each variable is less than 0.6 so its indicate no high correlation among all variables.

Variance inflation factor (VIF)

<table>
<thead>
<tr>
<th></th>
<th>DPR</th>
<th>SDS</th>
<th>PAT</th>
<th>EPS</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPR</td>
<td>1.198</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDS</td>
<td>1.057</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAT</td>
<td>1.613</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPS</td>
<td>1.139</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>1.451</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result of analysis shows that there are all value of the different determinants is lower than 10 so it show that there is no chance of
Multicollinearity. The result enabled the researcher to use the data for further analysis.

**Heteroskedasticity Test**

<table>
<thead>
<tr>
<th>Tests</th>
<th>Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White’s test</td>
<td>43.009</td>
<td>0.203</td>
</tr>
<tr>
<td>Breuscheh-pagon/cook wesberg test</td>
<td>26.17</td>
<td>0.130</td>
</tr>
<tr>
<td>Breuscheh-pagon (konekor robust variant)</td>
<td>24.74</td>
<td>0.156</td>
</tr>
</tbody>
</table>

The result showed that the Chi squared computed for model. The result of chi squared are insignificant as the P value are greater than 0.05 which provide the sufficient evidence not to reject the null hypotheses data are homoscedastic the result enabled the researcher to use the data for further analysis.

**Normality**

There are two main way to test for normality. Graphical representation and statistical test. However the study will apply graphical analysis to check the accurate result of study. Graphical analysis should be done by Q-Q plot.

**Quantile- Quantile plot (Q_Q plot)**

![Graph 1: Quintile-Quintal plots.](image-url)
According to the above graphical analysis it show that the data is in normal shape because the values are near to actual line.

Linearity

The last assumption for the current study to any nonlinear relationship between dependent and independent variables. To ensure to relationship between dependent and independent variables, the current study assign log if the values are abnormal.

Ols Model to Explain the Relationship Between Dividend Policy and share Price

The ordinary least square (OLS) or a linear least squares is statistical techniques used to determine unknown measurement in a linear regression model with goal of minimizing the sum of squares of difference between the observed responses in the given dataset and those predicted by linear function of a set of independent variables. In the present study, a multivariate analysis is conducted to check linear relationship between dividend policy and share price and its determinants. The dependent variable is the share price and the independent variable determinants are SDS, DPR, PAT, EPS and ROE. Besides all the regression model are used in the current study are estimated through Gretl (version 16) software for statistical analysis the following subsection explain the linear relationship dividend policy and share price and its determinants based on OLS.

\[
SP = \beta_1 SDt + \beta_2 DPRt + \beta_3 PATt + \beta_4 EPSit + \beta_5 ROEit + e_{it}
\]

Pooled OLS Model

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>T-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.599</td>
<td>12.712***</td>
</tr>
<tr>
<td>Stock dividend per share (SDS)</td>
<td>-0.157</td>
<td>-0.772</td>
</tr>
<tr>
<td>Dividend payout ratio (DPR)</td>
<td>-0.281</td>
<td>-3.968 ***</td>
</tr>
<tr>
<td>Profit after tax</td>
<td>-0.440</td>
<td>-2.267 **</td>
</tr>
<tr>
<td>Earnings per share</td>
<td>0.381</td>
<td>4.935***</td>
</tr>
<tr>
<td>Return on equity</td>
<td>0.183</td>
<td>3.162***</td>
</tr>
<tr>
<td>F statistics</td>
<td>6.274</td>
<td></td>
</tr>
<tr>
<td>P-value</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>R-square</td>
<td>0.169</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-square</td>
<td>0.142</td>
<td></td>
</tr>
<tr>
<td>Observation</td>
<td>160</td>
<td></td>
</tr>
</tbody>
</table>
According to the above table it shows that the coefficient of each variable are provided with the t-ratio along with their significant level of 1%, 5% and 10%. The model fitness is determined through R-square and F-value. The R squared for the model is reporting 0.16 which mean 16% of the total variation in the effect of dividend policy on share price by independent variables similarly the adjusted R-squared for model is 0.14 which mean 14% of the total variation of dividend policy and share price is impact by independent variables. The result of the F-value and P-value for the model shows that overall model is significant at 1% and can be used for further analysis.

**Summary of Hypotheses**

This section provides the summary of hypotheses that are developed to check the association between DP and share prices in textile area of Pakistan for the period of 2010 to 2017 on bases of regression analysis. The hypotheses are either rejected or accept on the bases of regression result. Those determinants that display significant relationship based on regression analysis are accepting hypotheses. However the determinist that does not show any significant relationship based on regression analysis is rejected. Table 8 show the summary of all hypotheses which is accepted and rejected on the bases of regression result.

**Summary of Hypotheses**

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share price</td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>Failed to accept</td>
</tr>
<tr>
<td>H2</td>
<td>Failed to reject</td>
</tr>
<tr>
<td>H3</td>
<td>Failed to accept</td>
</tr>
<tr>
<td>H4</td>
<td>Failed to reject</td>
</tr>
<tr>
<td>H5</td>
<td>Failed to reject</td>
</tr>
</tbody>
</table>

**Hausman Test**

**Model Specification**

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T ratio</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.467</td>
<td>0.198</td>
<td>7.381</td>
<td>&lt;0.000  ***</td>
</tr>
<tr>
<td>DPR</td>
<td>-0.164</td>
<td>0.110</td>
<td>-1.483</td>
<td>0.140</td>
</tr>
<tr>
<td>SDS</td>
<td>-0.224</td>
<td>0.148</td>
<td>-1.511</td>
<td>0.132</td>
</tr>
<tr>
<td>PAT</td>
<td>-0.470</td>
<td>0.130</td>
<td>-3.613</td>
<td>0.000   ***</td>
</tr>
</tbody>
</table>
Hausman test is specified to select the fixed effect model or random effect model based on P value. Here in the table the P value is less than .05 therefore the study need to choose the fixed effect model.

**Conclusion**

The major area of the study is check the effect of DP on share price. Sample size is 20 companies and 8 years of period. The study conducted based on secondary data. Fixed effect model and panel approach were used.

The result shows that the EPS and ROE have positive effect on Share price while the SDS DPR and PAT have no link with DP.

The study have some limitation like focused on one sector short time period and limit to one country.
References


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