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### **Does the Dividend Policy matter for influencing Stock Prices in Pakistan: Pooled OLS Regression Approach**

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#### **Abstract**

The fundamental objective of this paper is to investigate the relationship between dividend policy and market prices (MP) of shares by capturing dividend per share as independent variable along with controlling of earning per share (EPS) & return on equity (ROE) of twelve listed companies at Karachi Stock Exchange, Pakistan for the period 2005-2010. A pool of 12 listed companies at KSE-100 Index with 6 years annual data from 2005 to 2010 is established and pooled OLS regression model is applied to examine that how the stock prices are affected by the dividend policy. After applying pooled OLS positive significant relationship between MP and DPS, EPS and negative but insignificant between ROE and MP is observed. These findings illustrate the value of dividend policy. In provisions of policy implications, this study depicts formulating dividend policy keeping in view the firm value and attention can be strained towards financing of the corporation as well.

**Keywords:** dividend policy; pooled OLS regression model; MP; DPS; EPS; ROE.

#### **Introduction**

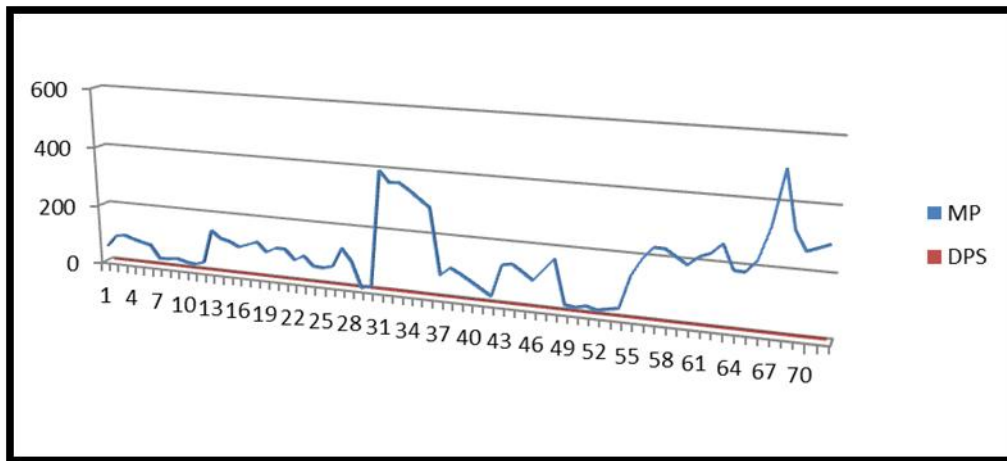
The main purpose of corporations is shareholder's wealth maximization. Financing and investing decisions direct managers to attain that goal. But the managers need to pay equal attention upon how to deal with earnings payments to owners regularly by minimizing agency cost [1]. Since the last many years dividend policy has faced many controversies in finance. Profits are just like the driving force of the company as management has to be decisive carefully with regard to its distribution among shareholders, dividends are the distribution of this business profit to its shareholders [2]. It serves as an indication of firm's performance and at the same time it is the

investor's income or return. Finance managers have the key role of taking significant decisions of drafting appropriate dividend policy and investment. So needless to say that the dividend policy is one of the most imperative decisions of the organization.

Different opinions exist as some links the dividend policy with stock price while some oppose this linkage. Miller and Modigliani [3] argued that dividend policy has no relevance with stock prices by talking some assumptions. It was the investment policy that could have the effect on stock prices not the policy of dividend. It is of the view that stock price is influenced by dividend policy as risk can be minimized by giving larger share of dividends. Investor is very ardent to avoid risks and give preference to returns that are certain like dividends. Profitability is a key factor to conclude the dividend policy. Firms having larger profitability pay higher dividends in contrast to those firms consist of little profitability. During the last couple of decades, many studies have been conducted not only to analyze the effects of dividends on stock prices theoretically and empirically but also dividends linkage with stock prices has been tested in practical. Yet the problem of relevancy or irrelevancy of dividend policy with stock prices still needs some solution.

Karachi Stock Exchange is considered to be vital and diversified market where investors are seen to chase privileged returns. It has a leading role in capital formation and is considered to be the most liquid stock exchange covering all Pakistan's economy sectors. There are four indices which are calculated by Karachi Stock Exchange and these are KSE-100, KSE All Share, KSE-30 and KMI-30. KSE-100 and KSE All Share are market capitalization based indices. KSE-30 is based on free float weighted standard index for the Pakistan stock market and KMI-30 deals with the index of Sharia compliant companies of Pakistan. Studies has been done with regard to issues of emerging markets like KSE but very little attention has been paid on resolving the problem of dividend policy and stock prices. The aim of this paper is to explore the impact of dividend policy upon the stock prices of by taking dividend per share as focal explanatory variable and to support those arguments in literature which explains the fact that dividend policy really matter for influencing stock prices. For this purpose twelve organizations from KSE-100 index along with six years (2005-10) data have been selected.

The rest of the study is organized as follows: Section 2 deals with theoretical framework; Section 3 incorporates collection of data and variables explanation. After that research methodology, discussion of results and conclusions are enlightened in sections 4, 5 & 6 respectively.



Source: State bank of Pakistan

### Literature Review

Randy [4] labels dividend as that segment of a net profit of a company that is advocated to be given to shareholders. Dividend policy directs management how much of earnings are to be pushed outside the firm in the hands of shareholders as dividends and how much of it should be in a company for supplementary financing. The worth of dividend policy cannot be denied for the reason as it plays a leading role in devising long term strategies of financing.

Beforehand dividend strategy revolved around such decisions like paying dividends in terms of cash and retains some earnings to finance in future. It dealt with the regularity of such payments on yearly or some else period basis and how much the business ought to pay. But in today's rapid changing atmosphere of business, plenty of multifaceted issues drag the attention of managers more towards dividend policy [5]. Some issues in the form of questions are alike to those asked in the 1950's. [6] classified these questions as:

1. Is there a need to change current level of dividend payments or not?
2. Is it suitable to prefer young investors over old ones in case of dividend policy?
3. Do investors want the sustainability in payouts?

Modigliani & Miller [3] are known for giving the assertion that shares value and dividend policy are not connected and they negate the relation between them. Their study signifies that basically earnings or investment policy of a company are the contributors to amend the firm's value not the policy of dividend. The assumptions explained under this theory were the existence of capital markets that are in perfection phase, nonattendance of transaction cost and taxes, lack of information asymmetry or irregularity and nonappearance of floatation cost. Others like [7] presented the same points regarding irrelevancy of dividends. Adesola & Okwong [8] also hold the irrelevancy theory beneath the same assumptions. In 1973 Black and Scholes give supportive arguments for Dividend Irrelevancy and further put in plain words that whether investors carry low or high yield securities, returns would be indistinguishable or same in both cases.

Another viewpoint of researchers that persists to crumple irrelevancy assumptions. De Angelo [9] and [10] are not convinced with the assumptions that unrealistically hold the irrelevancy theory. They emphasized that investors activate in such a scenario where the exclusion of transaction fees, taxes, and ambiguity or uncertain situation would be illogical. So the organization should be analyzed under these dynamics. He was also proposed the relevancy of dividends with the firm's value, implies that investors append less risk to the present in contrast to future gains because investors behave sensitively towards risk so they prefer existing dividend returns more. He further argued that dividends give gesture about the growth and development of the company to shareholders and financial reports are the way to disseminate the important information of such development of the firm.

Dividend policy put forward an affirmative attitude for, it is a purposeful policy to maintain or move up dividend with the definitive aspire of sustaining the share prices. So the occurrence of dividends at a constant or progressive pace affects the value of shares increasingly by showing positive and optimistic indication about the corporation future and vice versa. Share prices & policy of dividends are in positive relation. Anand [11] exposed the impact of dividend policy upon share price.

Consequences of study done by [12] indicated that there subsist a direct relation between prices of shares & dividend by analyzing signaling basis of dividend declaration. He also evidenced the growing movement of share prices by talking stock into examination the signaling effect amid dividend declaration and repurchases of shares at Bombay Stock Exchange. Maditinos et al., [13] also stated in supporting this thought. On the other hand, some authors have found that dividend policy has nothing to do with regard to firm prospects but it signifies the precedent performance of the firm [14].

Lintner [6] contributed as the first to explain the dividend policy determinants and its impact on share price. For this rationale, he interviewed twenty eight US firms and identified that upon dividend payout, market value has dependence. Relevancy theory is given which demonstrates that stock prices vary positively because of dividend policy. Additionally, he shows that high dividends lessen risk in volatility or instability of share price. Opposite relation is observed between policy of dividend and share price in the study by [15]. Other factors like earnings of firm, level of debt and growth and payout ratio also influence stock price in a significant way [15]. Contrary, Allen & Rachim [16] investigated no association between share prices & dividend yield set up.

He examined on five hundred firms of Bombay Stock Exchange, India and explained that stock returns take the influence of retention ratio. On the other hand, in Bangladesh [10] presented the insignificant positive association of stock price with dividend yield. He also showed that stock prices are positively affected by the policy of dividend. So majority of above mentioned studies articulate in favor of the argument that dividend policy actually matter for fluctuating stock prices practically.

### **Collection of Data & Variables Explanation**

12 listed companies of the non-financial sector have been chosen from KSE-100 Index covering the duration of 6 years (2005-2010). The data is accessed by analyzing annual reports

(audited) of the companies, basic financial statement analysis report published by SBP for 6 years from 2005 to 2010. The main intention at the back of this paper is to analyze how stock prices vary by firm policy of dividend.

### **Dependent variable**

#### **Market Price (MP)**

Dependent variable is the Market Price (MP) which has been calculated by averaging the minimum and maximum values of stocks. In 2009 [10], in 2010 [5] have taken price volatility instead of market price to see the link between the dividend policy and share prices.

### **Independent variables**

#### **Dividend per share (DPS)**

Dividend per share (DPS) is computed by dividing total amount of dividends by common (ordinary) shares. Allen & Rachim [16], Nishat & Irfan [17] have used dividend yield as explanatory variable to see effect of dividend policy upon share price.

Rashid & Rahman [10] has employed the similar variable (DY) and positive relation is originated between DY and share price. But little evidence is found for stating dividend per share as independent variable so DPS is taken and positive relation is witnessed with share price.

#### **Earnings per Share (EPS)**

To arrive at Earning per Share (EPS), earnings to common stockholders are divided by ordinary shares. It is a fundamental profitability evaluating indicator of the organizations. In the research of [15] and Allen & Rachim [16] EPS is treated as control variable which is associated positively and significantly with market price. In 2009, Christopher has also observed the positive strong impact on share price. Al-Tamimi et. al. [18] have also portrayed the identical results.

#### **Return on Equity (ROE)**

Return on equity is a vital company's profitability sign that enlightens how much profit a corporation creates with the funds that have been invested by shareholders. Return on Equity is figured by dividing net profit before taxes with average stockholders' equity. Raballe and Hedensted [19] determined positive relationship involving Return on Equity and Stock Prices.

### **Methodology**

Pooled data analysis bonds 'time series' with diverse 'cross sections'. As the data consists of twelve firms along with six years of financial figures (MP, DPS, EPS, ROE) of each firm so pooled OLS regression approach is applied to judge the Dividend policy and share price relationship. We may also have the option of fixed effect and random effect models but in this scenario panel data model is not suitable to apply. For instance, by using random effect GLS regression with ID as the panel variable then EPS and ROE behave insignificantly though the DPS show significant positive relation with market price. Under the pooled regression here is the regression equation:

$$MP = b_0 + b_1 \text{DPS} + b_2 \text{EPS} + b_3 \text{ROE} + e$$

To analyze the effect of dividend policy on stock prices, Pooled OLS regression model is used. It is anticipated that independent variable which is dividend per share and other control variables as earnings per share and return on equity effect the market price in a positive direction. So by controlling EPS and ROE, the effect of DPS is evaluated upon MP.

### **Results**

Table 1: Summary statistics

<b>Variables</b>	<b>Observations</b>	<b>Mean</b>	<b>Std. deviation</b>	<b>Minimum</b>	<b>Maximum</b>
<b>MP</b>	72	145.1489	145.1489	9.44	505
<b>DPS</b>	72	0.7272361	0.7272361	0	3.4
<b>EPS</b>	72	15.48083	15.48083	-67.39	92.36
<b>ROE</b>	72	41.30958	41.30958	-43.82	112.79

Table 2:  $MP = 75.78509 + 96.67867 \text{ DPS} + 1.449231 \text{ EPS} - 0.5659639 \text{ ROE}$ 

Variables	Coefficients	Standard error	t- value	p-value
Constant	75.78509	16.00011	4.74	0.000
DPS	96.67867	15.24073	6.34	0.000***
EPS	1.449231	0.5934874	2.44	0.017**
ROE	-0.5659639	0.3691439	-1.53	0.130

\*\*\* Significant at 1 % level of significance    \*\* significant at 5 % level of significance

R-squared	0.5294
Adjusted R-squared	0.5087
SS(sum of squares residual)	408817.256
F-Statistic	25.50
P-value	0.0000

### Discussion of Results

Table 1 is depicting the different statistical parameters of the dependent (MP) and independent variables (DPS, EPS, ROE) for six years period (2005-2010). Standard deviation of dependent variable which is the market price is 145.1489 and the minimum value of market price is 9.44 up to maximum value of 505 with a mean of 145.1489. DPS is the first independent variable in this model having range from 0 to 3.4 with a value of standard deviation of 0.7272361. Its mean value is 0.7272631. EPS is the second explanatory variable contain mean of 15.48083 ranges from -67.39 to 92.36 with standard deviation of 15.48083. The third and last independent variable in the model is ROE which have the range from -43.82 to 112.79 and its standard deviation is 41.30958.

Dividend per share is the amount of dividend which is disbursed against each ordinary share of stock. Previously dividend yield is used to see the effect of stock price in stock market. Positive association is observed between Dividend Yield & Stock Prices. Here DPS (independent variable) is seen to impact stock price positively.

The variables that are controlled in the model are EPS and ROE. EPS is related positively with the market price of share and variant the market price in significant manner in pooled OLS. In 2009 [8] has also illustrated the same significant positive associativity of EPS and MP. Table 2 manifest that DPS shows significance at 1 % significance level.

ROE shows how much amount is earned by shareholders on their investment in an organization. It is the indication of utilization of firm's capital in effective and efficient way. If the organizational resources are used optimally then the different investors earn the favorable returns and ROE would be good and positively affect the stock price ultimately. Raballe & Hedensted [19] set up the same positive relation involving Return on Equity and Stock Prices. In the current situation ROE showing the mild insignificance and negative relation with market price which if due to inefficiency of the companies of capital usage. In the article of [20] the same insignificant negative relation between MP and ROE is observed under Fixed Effect Model.

### Conclusion

In this simple paper it has been endeavored to attest that whether dividend policy really matter in influencing the stock prices by making an analysis of 12 organizations listed at KSE 100 index from 2005 to 2010. Pooled OLS Regression approach is pursued to substantiate the impact of policy of dividend upon stock or share price. Findings assist us that DPS (dividend per share) influences the stock market price in a positive direction along with controlling of variables like EPS and ROE. EPS is positively significant whereas ROE demonstrate negative insignificant association with MP (market price). Previously many authors take Dividend yield as main independent variable whose impact is seen upon market price but here DPS is placed as main independent variable and observe same relation as in case of dividend yield. It also makes clear about prospect tendency of an organization. Some theories of dividends are also talked about. This

is not the eventual conclusion in Pakistan perspective and a lot of scope is vacant for further journeying of this topic. So the policy of dividend shoves the firm to analyze the firm value.

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