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Institutional Ownership and Dividend per Share: Case of Pakistan

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Abstract

The relationship between institutional ownership is divided per share has been a topic of debate among theoretical and empirical researchers. Successful companies earn income that can invest in operating cost minimizing risk and use the retire debt or distributed to share holders. Companies have different ownership structure depend on the firm size. Demographic and other Socio Cultural as well as technological factors. This research makes an attempt to determine institutional ownership and dividend per share. For this purpose 20 most important industries from KSE has been selected that comprise of 42 firms from the year 2001 to 2006. The empirical analysis is based on the partial adjustment model of Lintner (1956) and the cost minimization Model of Rozeff (1982). The model developed by Rozeff (1982) is employed with pooled regression, fixed effects model and random effects model. In the fixed effects model, dummy variables for a number of firms were significant. This rendered the use pooled effects model inappropriate. To choose between fixed effects model and random effects model, the Hausman (1978) test is applied. The results of this test favor the use of random effects model. The results of Lintner Model suggest that firms follow a target dividend policy with adjustment process. A number of ownership variables were also found to be significantly influencing the dividend decisions.

Keywords: Divided Per Share, Institutional Ownership, Socio-Cultural, Ownership Structure

Introduction

The empirical evidence on the link between dividend payout and ownership structure has been well explored in literature by finding the relationship and dependency of dividend payout policy with the ownership structure. Dividends are considered as reward for providing finances to a firm. The income earned by the successful companies can be invested in operating assets' used to retire debt, used to acquire securities, or distributed this income among the shareholders. The portion of income, which is distributed among the shareholders, is called dividend based on the shares they hold. Share would have no any value without any dividend pay out (Kumar, 2003).

Background of the Study

Different companies have different ownership structures i.e. concentrated ownership structure and dispersed ownership structure. Shareholders as well as institutions with large number of shares have strong control in decision making about the dividend payout Policies. In this connection, shareholders with large shares always try to exploit the right of minority shareholder by taking profit on other ways without declaring dividend i.e. they exploit the right of minority shareholder by showing wrong statement of the cost of production (Francis and Ulrich, 2001). While in case of scattered ownership structure, the control about the dividend payout policy is not limited to few hands so no one can exploit the right of any other shareholder. Therefore, the ownership structure that is spread in large number of shareholders has a positive impact on dividend payout policy (Kumar, 2003).

The conflict between manager of the firm and shareholder arises when manager wants to keep large amount of the free cash flow instead of declaring dividend and where as the shareholder want to decrease the free cash flow amount by way of declaring dividends or to invest the surplus earning of the firm in a profitable project.

The signaling theory, given by (Kumar, 2003) has also some of the implications for dividend policy. According to the theory, when outsiders do not have the same level of information about the true earning of the firm as the insiders have, high dividend payouts will generate signals to outsiders that the firm has stable future cash flow. Small firm need to generate signals by paying dividend, as information asymmetry is severe with them; that is why small firm will pay more dividends. Some other theories regarding the dividends are described, for convenience.

Theories of Dividend Payout Policy

Dividend Signaling Theory

According to this theory the dividend has a great effect on its share price. An increase in dividend producing an increasing in the share price and similarly decrease in the dividends producing a decrease in share price. The changing in dividend payout policy generates the signal to shareholders and investors about the firm's future prospected earnings. A rise in dividend payment is viewed as a positive signal and conveys the positive information about a firm's prospected future earning that results an increase in share price, and similarly the decrease in the dividend payment is generating a negative signal about firm's future prospected earnings that would result to decrease in share price (Aharony and Swary, 1980; Kalay and Loewenstein, 1985; Asquith and Mullins, 1986; Kumar, 2003; Kuwari, 2009).

Tax-preference theory

In the Tax-Preference theory the taxes are important considerations for investors. The capital gains are taxed at a lower rate than dividends. So the investors may prefer to capital gains instead of dividends payments. The capital gains are not payable until an investment is actually sold. When the capital gains are realized, the Investors can control but they can't control dividend payments in especially in those cases where over which the related company has a strong control. In addition the capital gains are also not realized in an estate situation. They further argue that the tax preference theory suggests that the dividends are subject to a higher tax cut than the capital gains and the dividends are taxed directly while the capital gains tax is not realized until the stock are sold. So due to the tax-related reasons the investors prefer to the retention of the firm's profit over the distribution of dividends payout and therefore due to the advantage of capital gains may lead investors to favour a low dividend

payout and opposed to a high payout policy (Brennan, 1970; Elton and Gruber, 1970; Litzenberger and Ramaswamy, 1979; Litzenberger and Ramaswamy, 1982; Kalay, 1982; John and Williams, 1985; Poterba and Summers, 1984; Miller and Rock et al, 1985; Ambarish et al., 1987).

Agency cost theory

The managers with too much cash flow may invest in profitable projects having an NPV<0. Dividends Payout may be one way to reduce potential abuses or conflicts of interest. Large dividend payouts reduce the internal cash flow and forcing the managers to seek the external financing which make them liable to capital supplier (Rozeff, 1982; Easterbrook, 1984; Lloyd, 1985; Jensen, 1986; Crutchley and Hansen, 1989; Dempsey and Laber, 1992; Ali et al., 1993; Moh'd et al., 1995; Glen et al., 1995; Holder et al., 1998; Saxena, 1999).

In general, ownership variable is considered one of the most important variable and has great effect on the dividend payout polices. Even though, the relationship is different for different class of owners and different levels, in some cases it reveals that ownership structure will not influence dividend payout. The impact is changing with the change in size of the holdings as well as their identity (Kumar, 2003).

Different studies like (Chen and Zhu, 1989; Kumar, 2003; Harada and Nguyen, 2006; Mancinelli and Ozkan, 2006; Bradford, Kouki, and Guizani, 2009) have been conducted for determining relationship between ownership structure and dividend payout, and to identify the factors influencing the dividend payout policies. However, no work has been conducted in the specific context of the country (Pakistan). In addition, many studies regarding the subject are not clearly reflecting the effect of time (time interval) on the dividend payout structure. Keeping in view the importance of the dividend payout policies and dividend payout structure over the time, the present study is conducted with the following main objectives.

Objectives of the Study

1. To determine the relationship between institutional Ownership Structure and dividend Par Share.
2. To find the dividend payout structure over time.
3. To determine the dividend payout ratio in different sectors under study.

Hypothesis

The following hypotheses are considered in the present study.

H_0 = Institutional Ownership has no significant effect on dividend par Share.

H_1 = Institutional Ownership has significant effect on dividend par Share.

Similarly, to check the impact of different factors like free cash flow, leverage, size of the firm, ownership of the institutional investor, individual ownership and group ownership etc on the dividend payout, it is hypothesized that a given factor have not affect the on dividend payout under the null hypothesis, whereas, each factor may influence the dividend payout in case of alternative hypothesis.

Literature Review

Cyert et al (1994) studied the “managerial objectives and firm dividend policy”. For the dividend policy of the firm, they build a dynamic model which based on few essential ingredients of the firm’s behavioral theory, especially in, the avoidance of uncertainty and in

sequentially decision-making by self-seeking managers. The policy regarding optimal dividend is characterized by them and on this policy the comparative static is shown respectively generated some restrictions for changes in the future dividend in respect to current real and the financial variables i.e. dividends, investments opportunities, and technological parameters that govern the evolution of economic earnings of the firm, like the variances and persistency of the systematic shocks on capital productivity. Specially, dividend payouts, current investment, and the expected return on capital which have a significant impact on the variation of the likelihood of future dividend, the variances and persistency of the capital productivity shocks. Particularly, the characteristic of a negative relation has been found of the firm risk to the changes of the dividend.

Barclay et al (1995) specifies that the tax penalty which are associated with dividend payout depends upon the rate of the tax of the firm's investors, but all firms have accesses to the same pool of investors and so face the same penalty of potential tax. In this regard, they argued to expect about the differences in dividend policy which are driven by factors other than taxes.

Suresh and Sethi (1995) examined an extension of dividend policy, growth, and the valuation of shares by considering the valuation of firm's infinite horizon, and that may not engage in buying their own shares. While the approach of their fundamental valuation applies also to the firms that the buying of their own shares, and does not the approach of their stream of dividends. The subsequent approach is modified for the purpose to use this for the valuation of infinite horizon firms including all those which may buy their own shares.

Chen and Steiner (1999) argued that leverage and dividends serve as substitutable monitoring forces for managerial ownership, leading to a negative effect on both leverage and dividends to stock ownership. Thus, dividend payout is expected to have a negative effect on stock ownership if the convergence of interest's theory is applicable, and to have a positive impact on stock ownership if the entrenchment theory holds. Firms with more internal funds have less incentive to finance externally.

Short et al (2001) conducted a research on the link between dividend policy and institutional ownership. They examine the association between the dividend policy and ownership structures and the neglected link between institutional ownership and dividend policy. Furthermore, they reported that the results of one country are different from other country in regard to the institutional framework and ownership structures. Moreover, the results for an earnings trend model also suggesting a positive earnings trend component to the association between the dividend payout ratio and institutional ownership.

Elston et al (2002) used the propensity score matching (PSM) method to compare different means, finding the evidence that neither bank control nor institutional ownership is statistically significant in determining the dividend payouts. They further argued that the findings are consistent on facts, which are about the nature of the institutional environment, and about the management's rights to retain a significant percentage of the firm's net earning and lack of tax incentives, unwittingly decreases the agency costs which are associated with the conflicts between shareholder interests and management in respect of to use the free cash flow of the firm.

Kumar (2003) investigated a relationship between the ownership structure and dividend payout Policy. He examined an association between corporate governance, ownership structure and the dividend payout policy of the firm. He assumes that the relationship is relatively different in respect to different groups of owners and at level of different shareholding. Moreover, he also suggested about the generalized model to explain

the intensity of the payment of dividend, to incorporate the financial structure of the firm, and the investments opportunities along with the earnings trend and dividends and the ownership structure. In the support of these hypotheses he fined evidence that a positive association is exist between the earnings trend and dividends. The past investment opportunities are found to have positive association with the dividends, whereas in some cases the debt equity is found to be negative and associated with dividends. The ownership of the institutions has a negative effect on the dividends payout in comparison to corporate ownership.

Travlos et al (2003) examined the reaction of stock market in connection to the announcements about the increases of cash dividend and bonus issues “stock dividends” in the emerging stock market. Both events exhibit significantly positive and abnormal returns with evidence from developed stock markets.

Aivazian et al. (2003) argues that the firms like emerging market firms also elicit the similar behavior of dividend to the firm of U.S. Similarly the dividends are explained by profitability, market to book ratio (Tobn’s Q) and debt. Moreover, the empirical equation for dividends is purely different in structure that indicates the differences of sensitivities for these variables. In addition, the emerging market firms relatively seem more affected by the asset mix, due to their high dependencies on the debts of bank.

Baker and Wurgler (2003) documented a closer link between the fluctuations in catering incentives and in the tendency of the dividends payment. The tendency of payment decreases when a proxy for the stock market dividend premium is negative and increases when it is positive.

Farinha (2005) evaluated the relationship between insider ownership and dividend policy by analyzing the samples of firms selected from the countries characterized by the “Anglo-Saxon tradition” and match the sample of these selected companies with the “Civil Law legal systems”. He hypothesized that due to characteristics differences in both the nature of agency conflicts in firms and in the legal system from those countries, the relation between the dividend policies and ownership by insiders of the two sets of companies will be considerably distinct. He also found the relation between the insider ownership and dividends which follows the pattern of negative-positive-negative, and in the Civil Law countries these relation is inverse that is positive-negative-positive.

Mancinelli and Ozkan (2006) investigated empirically the relationship between ownership structure and dividend policy. They realized that the structure of ownership in Italy that is highly concentrated in nature and in this regard the agency problem seems to be arises from the conflict of the interests of large shareholders and the shareholders in minority. This test measures the degree of concentration in regard to the voting rights shareholders having shared in large. The results of his empirical analysis also exhibited that usually those firms make low payout of dividend where the voting rights of the shareholder increases, having the shares in large.

Mohammed and Joshua (2006) conducted a research that shows positive relationships between the profitability, cash flow, dividend payout ratios and tax. The results also reveal negative associations between institutional holding, risk, growth and market-to-book value and dividend payout. Furthermore, the profitability, cash flow, growth of sale and market-to-book value are observed significant variables.

Street and Malden (2006) found that the controlling for unobserved firm-specific effects between the ownership concentration and dividends indicates negative relationship, while taking the company dividends and ownership structure. The composition of ownership also

matters, with a negative relationship which was observed for shareholding by individuals and a positive for the insurance companies. The findings are also consistent with agency models in that the dividends are taken as a substitute for loose monitoring with the shareholders of the firm but this can also be explained with the presence of powerful principals and those who are able in imposing their preferred payout policy upon the firms.

Kouki and Guizani (2009) analyzed the influences of the identity of the ownership of shareholder on dividend payout policy. They found that companies distribute more dividends when share holder having a highly concentrated ownership; and also found that there is a negative significant correlation between the distributed dividend payout level and institutional ownership. Whereas, a positive relationship was observed between the state ownership and dividend policy.

Duha Al-Kuwari (2009) argues that dividend payment is strongly and directly related to the size and profitability of the firm but indirect related to the leverage ratio. Firm pays the dividend with the intention to maintain the firm's reputation and to reduce the agency problem. Furthermore the listed firms usually alter their dividend payout policy frequently and do not follow the long-run target dividend payout policy.

Methodology of Research

This chapter contains materials and methods that will be adopted to conduct the study. It contains universe of the study, sampling design and sampling procedure for selection of the sample, sources of data, variables used in the study, data collection regarding different variables/factors of the study and data analysis tools.

Universe of the Study

This study is planned to determine the relationship between ownership structure and payout policy; to identify the significant factors of the dividend payout policy; payout structure over time and payout ratios in different sectors. To achieve the required objectives, the study was taken in to account the data from different firms with in the industrial sectors. In this connection, the data available on the web of the Karachi State Bank of Pakistan for different industries (35 top industries were considered) constituted the universe of the study. These 35 industries contain 650 firms and the study utilized the data of these firms for obtaining the required objectives. Thirty five top most industries having 650 firms were considered as universe of the study.

Sampling Design

Sampling design is useful to obtain information regarding the sampling procedure adopted for selecting the sample units from a population, and the sample size. Since this research have many firms and various variables/factors under study as the universe of study is too large, therefore, for determining the sample size (number of observations per each variable) purposive sampling techniques was adopted. To select the number of industries from a population of 35 top most industries, only 14 industries were randomly selected based on the availability of appropriate data. After selecting the sampled industries, while enquiring the data available on website (www.sbp.org.pk) regarding the dividend payout policy indicate no information on semi-annual and/monthly basis. Therefore, the data that were utilized in the present study based on annual measurements, and only six years data i.e. from 2001 to 2006 was considered to obtain the required objectives of the study. It is pertinent to mention that, subject to the above mentioned facts, the 14 fourteen industries containing 42 firms

have been selected and their data was considered for further analysis. Since, the study uses the financial ownership data of six years of the selected firms within the industries, so it constitutes a sample size of 252 observations in total. The type of industry and the number of firms whose data was utilized are displayed in Table 1.

The present study uses secondary data and it was collected from the annual reports of the firms. In the six years, different firm pay dividend on different payout policy bases. In order to remove outliers from the analysis, the study does not use all those firms having negative equity. Similarly, firms with missing data, and firms in financial sector were also excluded. The capital structure of financial firms can distort analysis because debt-to-equity ratio in these firms is usually very high. Since this study uses leverage ratio as one of the explanatory variable in the model, this is why capital structures were considered in the analysis.

Table 1. Type of industry, number of firms and the samples number of observations during the six years (2001-2006)

| Types of Industry | No. of Companies (firms) | Sample size for (Each Company) *a × X × Y |
|---|--------------------------|---|
| Textile | 04 | *1 × 4 × 6 = 24 |
| Cement | 05 | *1 × 5 × 6 = 30 |
| Other Manufacturing | 04 | *1 × 4 × 6 = 24 |
| Fuel & Energy | 05 | *1 × 5 × 6 = 30 |
| Chemical & Pharmaceutical | 08 | *1 × 8 × 6 = 48 |
| Motor Vehicles, Trailer & Semi-Trailers | 04 | *1 × 4 × 6 = 24 |
| Information & Communication | 02 | *1 × 2 × 6 = 12 |
| Coke & Refined Petroleum | 04 | *1 × 4 × 6 = 24 |
| Electrical & Machinery Apparatus | 01 | *1 × 1 × 6 = 6 |
| Mineral Product | 01 | *1 × 1 × 6 = 6 |
| Other Services Activities | 01 | *1 × 1 × 6 = 6 |
| Other Food Product | 01 | *1 × 1 × 6 = 6 |
| Paper, Paperboard & Products | 01 | *1 × 1 × 6 = 6 |
| Sugar | 01 | *1 × 1 × 6 = 6 |
| Total | 42 | *252 |

* a is for dividend reading X is for numbers of companies and Y is for number of years.

Variables of the study

Table 2 indicates the variables (explained and explanatory variables) and their computational formulae that were used in the present study. All these variables are explained in Table 2 and the subsequent sections.

Table 2. Description of the variables to be used in the study

| | | |
|------|--|--|
| INST | Ownership of Institutional Investor | % of equity hold by institutional investors (Bank, Insurance firms) |
| MAJ | Ownership of the five large shareholders | Dummy variable which equal 1 if the ownership is concentrated, 0 otherwise |
| IND | Individual Ownership | % of equity hold by the (Individual/Individual investors) |
| GRP | Group Ownership | % of equity hold by the (Group investors) |

Ownership of the five large shareholders

For determining the effect on dividend payout policy of the few large shares holders, a dummy variable approach was adopted. The dummy variable take the value equal to 1 if the ownership is concentrated and 0 otherwise. The variable is denoted by MAJ.

Individual ownership (IND-OWN)

The individual ownership variable is denoted by IND. The owners with large shares exploited the right of others by different ways. While in case of scattered ownership structure, the control about the dividend payout policy is not limited to few hands so no one can exploit the right of any other share holder (as mentioned above). Therefore, the ownership structure that is spread in large number of share holders has a positive impact on dividend payout policy.

Group ownership (GRP-OWN)

Kumar (2003) conducted a research on ownership structure and dividend payout policy. He has examined possible association between dividend payout policy, ownership structure and corporate governance of the firm. He examined the behavior of dividend payout and the associated structure of ownership for the purpose of corporate firms over the period from 1994 to 2000. He assumes that the relationship is different across different group of owners and at different level of shareholding. Moreover, he also suggested a model to explain the intensity of dividend payout, incorporating the financial structure of the firm, investments opportunities along with the ownership structure, dividends and earnings trend. He fined the evidence in support of hypothesis that there is a positive association exists between earnings trend and dividends. The opportunities of past investment are positive and associated, whereas the debt equity is found to be negative and associated with dividends in some cases. The Institutional ownership has an inverse effect relatively on the dividends in comparison to corporate ownership. He fined that there is no relevant evidence in the favor of association between the foreign ownership and dividend payout growth.

Theoretical Frame Work

This study employed a number of tests that have been suggested and used in empirical studies of factors determining dividends. The most widely used empirical model is the partial adjustment model developed by Lintner (1956). First of all, the Lintner (1956) modeling framework was used to quantify the impact of ownership variables on the expected dividend payout. After that, in order to test the prediction of agency costs model, information and signaling model, and dividends preference hypothesis, an empirical models (Lintner 1956; Kouki and Guizani 2009) were estimated.

Target Dividend Payout Ratio

Lintner argues that firms maintain a target payout ratio in light of the firm's profitability. According to Lintner (1956), managers try to adjust the payout ratio in a way that the changes in dividends are not abrupt; rather the dividend payout is smoothed such that the current dividend change reflects the previous dividend payout and current profitability. The target dividend in the partial adjustment model is given by:

$$D_t^* = rE_t \quad 0 < r \leq 1 \quad (1)$$

Where D_t^* is the target dividend payout ratio. However, the target dividend payout ratio depends upon the current level of earning. When the firm moves away from previous level of dividends to current level of dividends, the change necessarily reflects the change toward the target dividend payout. According to Lintner (1956), this change in dividend is given by

$$D_t - D_{t-1} = c(D_t^* - D_{t-1}) + \xi_t \quad 0 < c \leq 1; \quad (2)$$

The term $(D_t - D_{t-1})$ reflects the change in dividends from previous period to current period and C shows the speed of adjustment.

Substituting equation (3.1) from equation (3.2), the following testable model is obtained.

$$D_t = a + (cr)E_t + (1-c)D_{t-1} + \xi_t \quad (3)$$

In light of the model (3.3), ownership variables can be included. For example, the earning sensitivity of dividends can be moderated by the presence of institutional shareholders, management ownership, individual ownership and group ownership. In the same way, interaction term is introduced between E and the proxies of the ownership variable. In the given study, model (3.4) was used which is expressed as:

$$D_t = a + b_1E_{it} + b_2D_{it-1} + b_3OWN_{it} + b_4(OWN_{it} \times E_{it}) + U_{it} \quad (4.)$$

Where,

$b_{1i} = c_i r_i$ (i.e. *speed of adjustment coefficient x target ratio of dividends to profits*); $b_{2i} = (1-c_i)$ without affecting the error term u . All other terms are defined as above. All other variables present in model (3.4) are explained above. In addition, the interaction between earnings (E_{it}) and the ownership variable (Own) highlight the importance of ownership variable in moderating the relationship between earnings and dividend payout.

Fixed Effect Model

If there are fixed-effects in the data which are not directly observable, then using a pooled regression will give inconsistent results. The appropriate model in that case is to use fixed-effects models. The fixed effects can be checked at several levels. The first assumption may be that only firm-specific effects are present while there are no industry or time specific results. To capture such effects, a full set of dummy variables can be included in the regression

equation for all firms. It is also possible that with firm-specific effects, industry specific effects and time specific effects are also present. Under such an assumption, dummy variables for industries and time periods can also be included.

Random Effect Model

If you have reason to believe that some omitted variables may be constant over time but vary between cases, and others may be fixed between cases but vary over time, then you can include both types by using random effects.

Choosing between Fixed and Random Effects

The formal method for choosing the best one between fixed and random effects is the Hausman test. Statistically, fixed effects are always a reasonable thing to do with panel data (they always give consistent results) but they may not be the most efficient model to run. Random effects will give you better P-values as they are a more efficient estimator, so you should run random effects if it is statistically justifiable to do so. The Hausman test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results.

Bivariate Correlation Analysis

Bivariate correlation coefficients of the variables included in the Lintner model are given in Table 3. Bivariate correlation analysis is performed to check the problem of multicollinearity of the selected variables. It is evident that almost for all pair of explanatory variables included in the model, the coefficient of correlation are not very high indicating the there is no multicollinearity problem and it is expected that the model will provide better estimated results and might be helpful in explaining the dividend pay out policy. Similarly, the coefficients of correlation (pair wise) of the variables included in the alternate model are presented in Table 4. It shows almost the same picture as observed for the variables included in the Lintner model.

Table 3. Bivariate coefficients of correlation of the variables in the Lintner model

| Variable | E | E*INST-OWN | E*GRP-OWN | E*IND-OWN | GRP-OWN | INST-OWN |
|------------|--------|------------|-----------|-----------|---------|----------|
| E | 1.000 | | | | | |
| E*INST-OWN | 0.688 | 1.000 | | | | |
| E*GRP-OWN | 0.609 | 0.140 | 1.000 | | | |
| E*IND-OWN | 0.511 | 0.195 | 0.105 | 1.000 | | |
| GRP-OWN | 0.139 | -0.140 | 0.675 | -0.101 | 1.000 | |
| INST-OWN | 0.048 | 0.570 | -0.213 | -0.176 | -0.395 | 1.000 |
| IND-OWN | -0.121 | -0.229 | -0.241 | 0.655 | -0.274 | -0.242 |

E = Earning; E*INS-OWN = (Earning x institutional ownership); E*GRP-OWN = (Earning x group ownership); and E*IND-OWN = (Earning x individual ownership)

Table 4. Bivariate coefficients of correlation of the variables in the alternate model

| Variables | D | E | FCF | SIZE | Lev | Tobin's Q | IND_OWN | INS_OWN |
|-----------|------|------|------|-------|-------|-----------|---------|---------|
| D | 1.00 | | | | | | | |
| E | 0.40 | 1.00 | | | | | | |
| FCF | 0.14 | 0.36 | 1.00 | | | | | |
| SIZE | 0.15 | 0.03 | 0.04 | 1.00 | | | | |
| LEV | - | - | | | | | | |
| | 0.21 | 0.46 | 0.00 | -0.08 | 1.00 | | | |
| Q | - | | | | | | | |
| | 0.25 | 0.47 | 0.23 | 0.05 | -0.04 | 1.00 | | |
| IND_OWN | | | | | | | | |
| | 0.32 | 0.05 | 0.09 | -0.27 | -0.12 | -0.19 | 1.00 | |
| INS_OWN | | | | | | | | |
| | 0.13 | 0.00 | 0.02 | 0.51 | -0.05 | -0.03 | -0.24 | 1.00 |
| GRP_OWN | | | | | | | | |
| | 0.06 | 0.08 | 0.08 | 0.16 | 0.01 | 0.25 | -0.22 | -0.46 |

IND-OWN = Individual ownership; INS-OWN = Institutional ownership; GRP-OWN = Group ownership

Keeping in to account the results (Table 3 & 4), regression analysis is performed to obtain the required objectives.

Regression Analyses

Results of the Lintner Model

In order to fit the Lintner model, first of the entire basic model is fitted containing D_{it-1} and E_{it} as independent variables. The results of this model (partial adjustment model of Lintner) are given in Table 5. It depicts that the coefficients of $D_{i,t-1}$ and E_{it} are 0.475 and 0.387, respectively. Both of these coefficients are highly significant as indicated by their larger t-values ($P < 0.05$). In addition, the F-ratio ($P < 0.05$) indicates that overall the model is significant and the value of R^2 shows that E_t and D_{t-1} has explained about 34% variation in the dividend payout ratio, while the remaining variation may be because of other unknown factors which are not included in the model.

Table 5. Regression results of the Lintner partial adjustment model

| Variables | Coefficients | SE ⁺ | t-ratio |
|-----------------------------------|--------------|-----------------|---------|
| $D_{i,t-1}$ | 0.475 | 0.0563 | 8.43*** |
| E_{it} | 0.387 | 0.1005 | 3.85*** |
| Intercept | 0.0375 | 0.0204 | 1.84* |
| Goodness of Fit Statistics | | | |
| R^2 | 0.336 | | |
| Adjusted R^2 | 0.330 | | |
| F-ratio | 58.260 | | |
| Probability of F-ratio | 0.000 | | |
| Number of Observations | 233 | | |

Note: ***, **, and * show significance at 1%, 5% and 10% respectively; D_{it} is the dividend payout ratio and E_{it} is the measure of profitability; + SE indicate standard error

Results of Partial Adjustment Model and Ownership Variables

To highlight the impact of ownership variables on the dividend and earning relationship, results of separate regression models are presented in Table 6, where the INST_OWN variable is interacted with the earnings. While performing regression analysis, the dummy variable for institutional shareholders is multiplied with the earnings (E). The reason for using dummy variable for institutional shareholders and other ownership variable is that the interaction terms become highly correlated with earnings (E) if the ownership variables are multiplied with E in simple percentage form. In addition, the dummy for institutional variable take the value of 1 if the percentage of institutional shareholder is greater than 50th percentile and 0 otherwise.

Results in Table 6 can be interpreted as explained in the preceding paragraph. The interesting observation in Table 4.6 is that the presence of institutional shareholders reducing the dividends sensitivity with current earnings as indicated by the negative and statistically significant ($P < 0.05$) coefficient of the interaction term INST_OWN*E while the effect of INST_OWN alone is positive but insignificant ($P > 0.05$). The intercept, representing the missing category of institutional dummy where the institutional percentage is below 50th percentile is positive and significant. These results suggest that the presence of shareholders reduce the changes in payout ratio as well as it weakens the sensitivity of payout ratio with earning ratio. These results are more in line with the hypothesis of transaction costs of external financing Easterbrook (1984). Since, dividend payments can increase the need for external financing; therefore, institutional shareholders may not accept this to happen Twu and Shen (2006). Generally, shareholders may demand fewer dividends so that the firm's reliance for reducing the costly external financing is reduced Easterbrook (1984).

Table 6. Regression results of the partial adjustment model of Lintner involving interaction terms between earnings and institutional shareholders

| Variables | Coefficients | SE ⁺ | t-ratio |
|-----------------------------------|--------------|-----------------|---------|
| $D_{i,t-1}$ | 0.466 | 0.056 | 8.28*** |
| E_{it} | 0.387 | 0.091 | 4.25*** |
| INST_OWN | 0.043 | 0.039 | 1.1 |
| INST_OWN*E | -0.382 | 0.199 | -1.92** |
| Intercept | 0.020 | 0.011 | 1.84* |
| Goodness of Fit Statistics | | | |
| R^2 | 0.347 | | |
| Adjusted R^2 | 0.336 | | |
| F-ratio | 30.37 | | |
| Probability of F-ratio | 0.000 | | |
| Number of Observations | 233 | | |

Note: ***, **, and * show significance at 1%, 5% and 10% respectively; D_{it} is the dividend payout ratio and E_{it} is the measure of profitability; + SE indicate standard error

The individual's ownership

Table 7 present results from a regression where the dummy variable for percentage of ownership by general public is multiplied with the earnings (E). The results indicate that the dummy variable for general public (IND_OWN) is statistically significant, nor its interaction

term ($P > 0.05$). This shows that general public has no impact on the dividend payout ratio. These findings support the argument of Berle and Means (1932) who argue that individual shareholders suffer from free-riders problems. This might be because of the presence of family control and block holders in the country (Pakistan).

Table 7. Regression results of the partial adjustment model of Lintner involving interaction terms between earning and share ownership by general public

| Variables | Coefficients | SE ⁺ | t-ratio |
|-----------------------------------|--------------|-----------------|---------|
| $D_{i,t-1}$ | 0.457 | 0.057 | 7.97*** |
| E_{it} | 0.375 | 0.139 | 2.7*** |
| IND-OWN | -0.042 | 0.035 | -1.21 |
| IND-OWN *E | -0.047 | 0.196 | -0.24 |
| Intercept | 0.070 | 0.030 | 2.31** |
| Goodness of Fit Statistics | | | |
| R ² | 0.3470 | | |
| Adjusted R ² | 0.3392 | | |
| F-ratio | 34.640 | | |
| Probability of F-ratio | 0.000 | | |
| Number of Observations | 233 | | |

Note: ***, **, and * show significance at 1%, 5% and 10% respectively; $D_{i,t-1}$ is the dividend payout ratio and E_{it} is the measure of profitability; + SE indicate standard error.

Group Ownership

Table 8 reveals the results from regression where the dummy for group ownership is interacted with E while using the framework of Lintner (1956). The results show that group ownership is negatively related with changes in dividend payout but insignificant ($P < 0.05$). Group ownership seems to increase the payout sensitivity with earnings. The group ownership represents ownership of associated companies in a given firm. The conflict of interest between majority and minority shareholders may be reflected in dividend policy. Majority shareholders might engage in expropriation of minority shareholders by not paying dividends and squandering retained earnings on personal benefits and channeling the funds. The results of this study also indicate the possibility of such expropriation. These findings are in line with the argument of Shliefer and Vishney (1997). Group companies are an alternative form of control and majority shareholdings.

Table 8. Regression results of the partial adjustment model of Lintner involving interaction terms between earnings and share group ownership

| Variables | Coefficients | SE ⁺ | t-ratio |
|-----------------------------------|--------------|-----------------|---------|
| $D_{i,t-1}$ | 0.446 | 0.056 | 7.94*** |
| E_{it} | 0.131 | 0.131 | 1 |
| GRP_OWN | -0.048 | 0.039 | -1.23 |
| GRP_OWN*E | 0.543 | 0.195 | 2.79** |
| Intercept | 0.058 | 0.025 | 2.31** |
| Goodness of Fit Statistics | | | |
| R ² | 0.364 | | |
| Adjusted R ² | 0.353 | | |
| F-ratio | 32.630 | | |
| Probability of F-ratio | 0.000 | | |
| Number of observations | 233.00 | | |

Note: ***, **, and * show significance at 1%, 5% and 10% respectively; D_{it} is the dividend payout ratio and E_{it} is the measure of profitability; + SE indicate standard error

Table 9. Results of the random effects model

| Variables | Coefficient | SE ⁺ | t-ratio |
|-----------------------------------|-------------|-----------------|----------|
| FCF | 0.017 | 0.004 | 4.32*** |
| Lev | -0.244 | 0.085 | -2.87*** |
| Q | -0.002 | 0.001 | -2.74*** |
| Size | -0.031 | 0.024 | -1.29 |
| INST_OWN | 0.001 | 0.001 | 1.98** |
| IND_OWN | -0.003 | 0.002 | -1.43 |
| GRP_OWN | -0.002 | 0.002 | -0.93 |
| Constant | 0.504 | 0.209 | 2.41** |
| Goodness of fit statistics | | | |
| R ² | 0.332 | | |
| Wald-Chi ² | 33.12 | | |

In addition, the financial leverage is negatively related to dividend payout ratio. This is in line with the hypothesis that debt holders impose restrictions on dividend payments Ozkan and Ozkan (2003). However, the results do not support the wealth transfer hypothesis of Kalay (1982) who argues that shareholders transfer wealth from bondholders. The results of Chen and Steiner (1999) support the results of the present study stating that the leverage and dividends serve as substitutable monitoring forces for managerial ownership, leading to a negative effect on both leverage and dividends to stock ownership. The results of the present study are also in line with the findings of Kumar (2003) who argue that the debt equity have significantly negative impact on the dividends.

The variable Q has negative and significant ($P < 0.01$) coefficient in all the regression models (table 9). These findings affirm the hypothesis that growing firms do not pay dividends and rely more on internally generated funds. The size of the firm also exerts negative but insignificant ($P > 0.05$) effect on the dividend payout. This shows that the size of the firm has no effect on the dividend payout policy. It might be the fact that most of the companies are small in size but they distribute a heavy dividend among the shareholders. On the other hand, the firms having large size cannot pay dividend due to financial crisis or debt financing.

However, this finding is in contrast of (Fama and French, 2001; DeAngelo, DeAngelo, and Stulz, 2006; Denis and Osobov, 2008; Gaver and Gaver, 1993) they argue that the larger size of the firm increases the chances to pay more dividends. Furthermore they also found positive association between dividends and firm size.

The percentage of ownership owned (IND_OWN) by individuals is not significantly ($P > 0.05$) related to dividend payout ratio. It suggests that the individual investment is not enough to force the manager to pay dividend payout among the shareholders. Furthermore, the institutional ownership (INST_OWN) positively and significantly affects that dividend payout. It provides a support regarding the hypothesis that institutional shareholders have preferences for dividend due to their assets and liabilities structure. According to Short et al. (2001), the earnings trend model suggests a positive relationship of the earning components between the dividend payout ratio and institutional ownership. Kumar (2003) argues that the ownership of the institutions have a negative effect on the dividends payout in comparison to corporate ownership. The results of the present study also support the finding of Mohammed and Joshua (2006) stating negative and significant ($P < 0.05$) correlation between institutional holding and dividend payout. The results of Kouki and Guizani (2009) are also in agreement with the results of present study. They reported that the distribution of more dividends depends on the shareholders having a highly concentrated ownership. In addition, they found a negative significant correlation between the distributed dividend payout level and institutional ownership.

The group ownership (GRP_OWN) has a negative coefficient but not significantly ($P > 0.05$) affect the dividend payout. Harada and Nguyen (1982) investigated the effect on the dividend policy of the ownership structure in Japanese firms and found that there is an inverse relationship between the dividend payout rates and concentrated ownership structure which support the finding of this study.

Conclusions and Recommendations

The present study is conducted to find out the dependency of dividends on ownership structure from various angles. The data were collected from the annual reports of different companies, which were selected from different industries.

In view of the results of the study and the over all situation of the fourteen Industries and 42 Firms it has been concluded that the share holder withholding large shares usually exploit the rights of the share holder with holding in minority. The shareholders are struggling to minimize the agency cost and free cash flow. The signaling theory also has a great effect in dividend pay out policy. The outsiders' shareholders have not the same information as the internals have. In view of the results of the study, it is recommended that a stable policy should be decided to declare the dividend constantly. The total income of the current year should not be distributed among the shareholders as a dividend nor to retain total income as a free cash flow. This eventually discourages the investor. So recommendation of facilitating the features of the dividend payout policy that should be transparent, more trustable and friendlier which help to motivate the investors.

References

- Aivazian, V., Booth, L., and Cleary, S. (2003). Do emerging market firm follow different dividend policies from the U.S. firms? *Journal of Financial Research* 26:371-387.
- Alli, K. M., Khan, A., and Ramirez, G. (1993). Determinant of Corporate Dividend Policy: A Factorial Analysis, *The Financial Review*. 25: 523-547.

- Ambarish, R., John, K., and William, J. (1987). Efficient Signaling with Dividends and Investments, *Journal of Finance*. 42: 321-343.
- Asquith, P., and Mullins, D. (1986). Signaling with Dividends, Stock Repurchases and Equity Issues, *Financial Management*. 15: 27-44.
- Aharony, J., and Swary, L. (1980). Quarterly Dividend and Earnings Announcements and Stockholders. Returns: An Empirical Analysis, *Journal of Finance*. 35: 1-12.
- Baker, M., and Wurgler, J. (2003). Appearing and disappearing dividends. *Journal of Financial Economics*. 73 (2): 271-288.
- Bradford, W., Chen, C., and Zhu, S. (1989). Ownership Structure, Control Chains, and Cash Dividend Policy: Evidence from China, *Working Papers Series PP*. 31-35.
- Barclay, M. J., Smith, C. W., and Watts, R. L. (1995). The determinants of corporate leverage and dividend policies. *Journal of applied corporate Finance*. 7(4): 4-19.
- Bhattachary, S. (1979). Imperfect information, dividend policy, and the bird in the hand fallacy. *The Bell Journal of Economics*. 10: 259-270.
- Nremmam, M. (1970). Taxes, Market value and Corporate Financial Policy, *National Tax Journal*. 23: 417-427.
- Brigham, F., and Gordon, J. (1968). Leverage, Dividend Policy, and the Cost of Capital, *Journal of Finance*. 23: 85-103.
- Cyert, R., Kang, S. H., and Mumar, P. (1994). Managerial objectives and firm dividend policy. *Journal of economics of behavior and organization*. 31: 157-174.
- Chen, C. R., and Steiner, T. I. (1999). Managerial ownership and agency conflicts: a nonlinear simultaneous equation analysis of managerial ownership, risk taking, debt policy and dividend policy. 34 (1) 119-36.
- Crutchley, C., and Hansen, R. (1989). A test of the agency theory of Managerial ownership, Corporate Leverage and Corporate Dividends, *Financial Management*. 18 36-46.
- Dempsey, S., and Laber, G. (1992). Effects of Agency and Transaction Cost and Dividend Payout Ratios: Further Evidence of the Agency Transaction Cost Hypothesis, *Journal of Financial Research*. 15: 317-321.
- Denis, D. J., and Osobov, I. (2008). Why do Firms Pay Dividends? International Evidence on the Determinants of Dividend Policy." *Journal of Financial Economics*. 89 (1): 62-82.
- Eckbo, B. E., and Verma, S. (1993). Managerial Share-ownership, voting power, and cash dividend policy. *Journal of Corporate Finance*. 1: 33-62.
- Elston, J., Hofler, R., and Lee, J. (2002). Institutional Ownership, Agency Costs and Dividend Policy, *Journal of Risk Finance*. 52 (1): 397-408.
- Easterbrook, F. H. (1984). Two Agency-cost Explanations of Dividends. *American Economic Review*. 74 (4): 650-659.
- Fama, Eugene, and French, K. R. (2001). Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay? *Journal of Financial Economics*. 60 (1): 3-43.
- Farinha, J. (2005). The relation between dividends and insider ownership in different legal systems, *Journal of Business Finance and Accounting*. 30 (9-10): 1173-1209.
- Fisher, G. (1961). Some Factors Influencing Share Prices, *Economics Journal* LXXI, 121-147.
- Gaver, J., and Gaver, K. (1993). Additional Evidence on the Association between the Investment Opportunity Set and Corporate Financing, Dividend and Compensation Policies, *Journal of Accounting and Economics*. 16: 125-160.
- Glen, J., Karmokolias, Y., Miller, R., and Shah, S. (1995). Dividend Policy and Behavior in Emerging Markets, IFC Discussion Paper No. 26, www.ifc.org.

- Hausman, J. A. (1978). Specification tests in econometrics, *econometric*, 46, issue 6: 1251-71.
- Harada, K., and Nguyen, P. (2006). Ownership Concentration, agency conflicts, and dividend policy, in Japan, working paper series.
- Higgins, R. (1972). The Corporate Dividend Saving Decision, *Journal of Financial and Quantitative Analysis*. 6": 1527-1541.
- Holder, M., Langreh, F., and Hexter, J. (1998). Dividend Policy Determinants: An Investigation of the Influence of Stakeholder Theory, *Financial Management* 27: 73-82.
- Jensen, M. C. (1986). The agency costs of free cash flow: Corporate finance and takeovers. *Journal of American Economic Review*. 76:232-329.
- John, K., and Walliams, J. (1985). Dividends, Dilution, and Taxes: A signaling Equilibrium., *Journal of Finance*, 40: 1053-1070.
- Kalay, A. (1982). Stockholder-bondholder conflict and dividend constraints. *Journal of financial economics*. 10: 211-233.
- Kalay, A., and Loewenstein, U. (1985). Predictable Events and Excess Returns: The Case of Dividend Announcements, *Journal of Financial Economics*. 14: 423-449.
- Kouki, M., and Guizain, M. (2009). Ownership structure and dividend policy" *Journal of Scientific research*. 25 (1): 42-53.
- Kumar, J. (2003). Ownership structure and dividend payout policy in India. *Indira Gandhi Inst: of Development Research*, 11: 1-41.
- Kuwari, D. (2009). Determinants of the Dividend policy in Emerging Stock Exchanges: *Global Economy & Finance Jouran*. 2: 38-63.
- Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes, *American Economic Review*. 46: 97-113.
- Litzenberger, R., and Ramaswamy, K. (1979). The Effect of Personal Taxes and Dividends on Capital Asset Prices: Theory and Empirical Evidence, *Journal of Financial Econometrics*. 7: 163-195.
- Litzenberger, R., and Ramaswamy, K. (1982). The Effects of Dividends Common Stock Prices: Tax Effects or Information Effect?. *Journal of Finance*. 37: 429-443.
- Mohammad, A., and Joshua, A. (2006). Determinants of dividend payout ratios" in Ghana, *Journal of Risk Finance* . 7 (2): 136-145.
- Mohd, M., Perry, L., and Rimbey, J. (1995). An Investigation of Dynamic Relationship Between Agency Theory and Dividend Policy., *The Financial Review*. 30: 367-385.
- Mancinelli, L., and Ozkan, A. (2006). Ownership structure and dividend policy: Evidence from Italian firms. *European Journal of Finance*. 12 (3) 265-282.
- Miller, M. H., and Rock, K. (1985). Dividend Policy under asymmetric information. *The journal of Finance*. 25 (4): 1031-1070.
- Miller, M., and Modigliani, D. (1961). Dividend Policy, Growth, and the valuation of share, *Journal of Business*, 34: 411-433.
- Mollah, A. S., and Short, H. (2000). The Influence of agency costs on dividend policy in an emerging market: Evidence from the Dhaka stock exchange working paper, *Leed University Business School*.
- Mueller, D. (1967). The Firm Decision Process: An Econometric Investigation, *Quarterly Journal of Economics*. 81L 58-87.
- Poterba, J., and Summers, L. (1984). New Evidence that Taxes Affect the Valuation of Dividends, *Journal of Finance*. 39: 1397-1415.
- Rozeff, M. (1982). Growth, Beta and agency cost as determinants of dividend payout ratios, *Journal of Financial Research*. 5 (2): 249-259.

- Shleifer, A., and Vishny, R. W. (1997). A Survey of Corporate Governance. *The Journal of Finance*. Vol, 52, No. 2. pp. 737-783.
- Suresh, B., and Sethi, S. P. (1995). An extension of dividend policy, growth, and the valuation share. *Faculty of Management*. 1 (4): 57-67.
- Saxena, A. (1999). Determinants of Dividend Policy: Regulated Versus Unregulated Firms, Financial Management Association Conference.
- Street, M., and Malden. (2006). Company dividends the ownership structure. *The economics journal*. 116 (3): 172-189.
- Travlos, N. L. T., and Vafeas, N. (2003). Shareholder wealth effects of dividends policy changes in an emerging stock market. *University Cyprus*. 12: 235-237.