# The Ownership Structure and Dividend Payout Policy in Pakistan (Evidence from Karachi stock Exchange 100 Index)

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#### ABSTRACT

This paper examines the possible association between firm's ownership structure and dividend payouts. It is also one of the very first example which tries to identify any potential association in ownership structure and corporate governance by using well establish dividend models in context of emerging market (Pakistan). The results consistently support the potential association between ownership structure and dividend payouts of Pakistani listed firms of Karachi Stock Exchange 100 index non financial sector. Though the association differs across different shareholders. Furthermore we suggest a more generalized model to explain the dividend intensity, incorporating firm's financial structure and investment opportunities along with the dividends, earning trend, and ownership structure. We also find the evidence of dividend dependence on past dividends after controlling unobserved firms. We find evidence in support of hypothesis that a negative relationship between exist between dividends and earning trends. Debt equity found negative and insignificant. Financial Institution investor, director's ownership is unrelated. However corporate investor's ownership is positive and highly significant with dividend growth. It is important to mention here that we don't find any evidence in support of foreign ownership, dividend growth, and dividend payouts.

*Keywords:* ownership structure, Corporate governance, dividend payouts, earning growth, dividend growth.

#### **1. INTRODUCTION**

The Corporate Governance in Pakistan is the very important issue now days because Pakistan is among one of the best performing emerging markets. In Pakistan Security Exchange Commission of Pakistan SECP) make mandatory rules for submitting the shareholding pattern for every listed firm each year. In Pakistan shares of the many listed companies hold by the financial Institutions, corporate, foreign and directors as for as individual investors are concerned they hold a little part of the shares. When the shareholdings in hand of block shareholders then they can easily influence dividend payout policy. To cope this problem Securities Exchange Commission of Pakistan takes many measures. Good corporate governance is important because it reduces the agency cost and also reduces conflicts between shareholders and management. According to the State Bank of Pakistan, "The efforts to perk up life in entirety, quality of output, efficiency in delivery of products of an organization, and ensuring the best value for money. To administer means run, rule and dominate with authority in policies and procedures of an organization. It is synonymous to influencing and determining the course of action, while specifying the method of controlling the events and activities so that outputs are optimized in terms of quantity, quality and time lines" (Handbook of corporate governance SBP 2006).

Both the theory and practices are telling us that there is multiplicity of factors shaping supremacy of a business organization. Therefore, businesses need to be governed by a set of rules, which reflect interests of all stakeholders. These "rules of the game" for businesses are an important dimension of reform processes in both sophisticated/developed and developing economies alike. Countries that ignore or lag behind in corporate governance reform will rapidly find themselves at a competitive disadvantage in attracting long-term capital for growth. Corporate governance, on one hand, is about setting up a system of entrusting the directors and managers with responsibilities in relation to running corporate matters and, on the other hand, it is concerned with the accountability of those directors and managers.

According to OCED (2001) corporate governance a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and shareholders and should facilitate effective monitoring, thereby encouraging firms to use resources more efficiently. *"It is a system by which companies are directed and controlled."* (Cadbury Committee)

The corporate governance in Pakistan is different from the developed countries like United States and United Kingdom. In Pakistan the corporate governance is not homogenous. The large shareholders (Financial institutions, directors, foreign and corporate) have sufficient incentives and ability to control. Many researches on the corporate governance, dividend payout policy and the ownership structure have been conducting in the United States and United Kingdome due to well regulated and well administered leave prominent agency problem between the directors and shareholders. The Pakistan comes into the emerging markets and, widely held corporations are in the minorities and most held in few hands (block holders) for example OGDCL and PIA.

The purpose of dividends are giving the incentives to the finance provider of a firm in the fiction as without paying any dividend the shares of the firms would not have any value. According to the explanation of Black (1976) the dividends are the primary puzzle in the economics of finance. Kumar (2003) believes the fictions of the dividends have primarily relied on the hypothesis of signalling and the agency cost. The huge amounts of earnings that are being spread to the shareholders in the form of dividends problem researchers, according to the (Miller and Modigliani) MM theory, their distribution has no effect on the value of the firm, in condition of the perfect capital markets (Miller and Modigliani, 1961).

Another important attribute that comes into the financial decision making process regarding dividend payout policy is the clash of interests between directors and shareholders, due to the allotment of ownership and control that exists in firms now a days (Jensen and Meckling, (1976); Myers and Majluf, (1984); Jensen, (1986); Easterbrook, (1984). According to the agency cost model of dividends, dividend policy can constitute either a means of control of the directors by the shareholders or a vehicle, through which the former can make the most of their own interests. The final outcome depends on the concentration of the clash of interests and the power of each interested festivity.

As regards the responsibility of director ownership, the pragmatic studies that have been carried out so far show that there is inter relationship between directors ownership and the alliance of interests of the directors with those of the shareholders is not linear and the conclusion is the negative ownership have positive effect on the incentives highly shareholding (Morck et al, 1988). The very important contribution is in accumulation, there has been reported not only the impact of directors ownership on the decisions regarding dividend payout policy, (Lambert, Lanen and Larcker, 1989; Fenn and Liang, 2001), but also the biased in the responsibility run by dividend payout policy depending on the intensity of directors ownership (Schooley and Barney, 1994).

In this study we examine whether differences in the ownership structure and the identity of the owner, across firms explain their dividends payout differences in a context of an emerging economy, Pakistan. By using the dividend payout and the ownership structure of 50 Pakistani listed firms in Karachi Stock Exchange for the period of 2001 to 2006, we try to unearth some of the questions raised herewith. How much the shareholder identity matter? Which ownership is more important Foreign, corporate, directors and Financial Institutions? What is relationship between ownership structure and dividend payout of listed firms of non financial sector of Pakistan?

The study is organized as follows. In section 2 the previous empirical literature is reviewed briefly. Section 3 discuses the methodological framework and data. The empirical findings are presented in section 4 and last section concludes the study.

#### 2. Literature Review

Many studies have examined the association between the ownership structure and dividend payout polices for the developed markets. In the first study, in which the association between the percentage ownership by financial institutional holders and value of share is examined, the evidence is in accordance with the theory of the short-sighted financial institutional holders. While in the study of Karathanassis and Drakos (2003), the evidence shows there is a positive impact of holding of financial institutional investors on divided policy.

The studies by Ang, Blackwell, and Megginson (1991); Lasfer (1997); Bell and Jenkinson (2002); Bank, Cheffins, and Goergen (2004); and Renneboog and Trojanowski (2006), while Goergen, Renneboog, and Da Silva (2005) after examined the dividend policy in United Kingdome conclude that there is positive impact of the ownership structure on dividend policy. Renne Boogand (2006).examines German companies change dividend payouts because there is a large block of shareholding and the voting power and the control in the hand of block holder and their coalitions that have highly negative impact on the dividend payout ratios According to the Short, Zhang, and Keasery (2002) there is a empirical evidences that the relationship between the ownership structure and the dividend policy in UK is limited to some extent and also conclude there is negative relationship between the inside ownership and the dividend payout policy.

Rozeff (1982) gives the explanation regarding the dividends offer indirect control incentives in the absence of efficient monitoring of a firm's administration by its shareholders. Shleifer and Vishny(1997) conclude that higher cash flows of the firms are related with higher valuation. In distinguish the

concentration of the right of the control and separate from the voting power of the cash flow has negative effect on the performance of the firm's value. According to the La Porta *et al* (1998-1999), Morck *et al*. (1988) there is conflict of interest between the individual share holder and the corporate shareholder. Corporate investor controls the corporation, their policies are different for the individual shareholders and those firms are unattractive to individual shareholders and their shares always have low valuation unless dividend is paid.

Kang (1999) finds that firms with early generation family share holders had higher level of dividend payout and the firms with later generation family share holders had lower dividend payouts. However the family firms of later generation with the too large ownership shareholding experienced high level of dividend payout. He also suggests that early generation family ownership are effective in corporate governance and the other generation of the family ownership is ineffective in shaping dividend payout policy and the powerful later generation use the power to get the financial benefits.

Harada Nguyen; (2006) investigate that dividend payout policy in Japanese firms have negative relationship with the ownership concentration and ownership structure. On the other side, they are more likely to increase dividend when debt is high and less likely to omit dividends when debt increases, which is equivalent to a wealth transfer from debt holders. Overall, ownership concentration appears to play a critical role in corporate decisions of dividend payout policy, mainly due to the way it intensifies the agency conflicts between widely held and marginal shareholders.

This is the one of the first study that explores relationship between dividend policy and ownership structure in Pakistan. In Pakistan corporate governance is weak as compare to developed countries however; Pakistan is one of the best performing emerging market in year 2002 and 2004 according to International financial Corporation (IFC). The ownership structure of the Pakistani firms characterized by large shareholders like other emerging markets. The institutional investor, corporate investor and the foreign investor have larger share of incentives or reward and control of market. These large shareholders affect the reward or dividend of individual shareholders in many ways. In context of Pakistan the signalling point of view propose that dividends are used as signal or sign of firm's future earnings or cash flows by the insider (Directors, joint stock companies). Many of the signalling and agency cost models assume that there is a division of ownership and control and finance is raised through capital markets i.e. Karachi Stock Exchange, Lahore Stock Exchange and Islamabad Stock Exchange. But in Pakistan the finance sources are different as compare to the develop countries. In Pakistan the major part of financing coming from Financial Institutions, Corporate investors, Directors and the foreign investors and these lenders are also have the main equity holdings and they can get the firms inside information easily. So this highlights the importance of incentives or dividends as a sign or signal of firm's financial performance.

#### 3. METHODOLOGY AND DATA

We have adopted the modified versions of Linter (1956) model to investigate the relationship between dividend policy and ownership structure in context of Pakistani Market. Lintner (1956) Full Adjustment Model, Partial Adjustment Model by Lintner (1956) is also empirically tested. In addition, we also empirically test the earning trend model of Fama and Babiak (1968) and modified model of firms level characteristics proposed by Aivazian (2003).to examine the relationship between the ownership structure and the dividend payout policy in Pakistani listed non financial firms of Karachi Stock Exchange. First we discuss the variables that we use in our study.

#### 3.1 DATA

For our study the relationship between the ownership structure and dividend payout policy in Pakistan, we have randomly selected a sample of 50 listed firms of Karachi Stock Exchange from non financial sector. We used the audited annual reports of the 50 non financial firms of six years for the period of 2001 to 2006. The audited annual report has been collected from the Karachi Stock Exchange and Securities Exchange Commission of Pakistan.

The variable of the interest in this study are change in dividend  $(div_{it}-div_{i(t-1)})$ , change in earnings  $(ear_{it}-ear_{i(t-1)})$ , corporate holding (corp), Financial Institution holding (fii), director's holding (dir) and foreign holding (fore) as percentage share holdings by each category. We also take the squares of above variables  $(corp)^2$ ,  $(fii)^2$ ,  $(dir)^2$ ,  $(fore)^2$  for explaining the ownership effect in present situation after a certain doorstep. The control variables in this study are earning growth, debt to equity ratio, growth in sales. In order to explaining the dividend models dividends are calculated as the total amount of dividend as given in the balance sheet analysis relating to the accounting years. The earning variable is also taken from the balance sheet analysis as earning before interest and taxes and the dividend to assets ratio.

#### 3.2 METHODOLOGICAL FRAMEWORK

#### 3.2.1 Full Adjustment Model

We examine the possible relationship between changes in earnings (ear) and change in dividends (div) for the firms i at time t is given by equation (1):

$$div_{it} - div_{i(t-1)} = \alpha + \beta(ear_{it} - ear_{i(t-1)} + \varepsilon_{it})$$
(1)

We assume the firms significantly having the block holding may have different  $\beta$ , then our models comes in this shape

$$div_{it} - div_{i(t-1)} = \alpha + \beta(ear_{it} - ear_{i(t-1)} + \beta_f(ear_{it} - ear_{i(t-1)}) * fore + \beta_i(ear_{it} - ear_{i(t-1)}) fii + \beta_d(ear_{it} - ear_{i(t-1)}) * dir + \beta_c(ear_{it} - ear_{i(t-1)}) * corp + \varepsilon_{it}$$
(2)

The coefficients  $\beta_f$ ,  $\beta_i$ ,  $\beta_d$  and  $\beta_c$  denote the respective effect of foreign ownership or holding, financial Institution holding, directors holding and corporate holding in relationship between dividend payout ratios of the firms.

#### 3.2.2 Partial Adjustment Model

This model explains the positions of dividends are result of a partial adjustment towards the target ratio. The changes in dividends are determined by the difference of last year dividend and current year target payout ratio which is assumed to be fixed percentage of the earnings. In any given year firms adjust partially to the target dividend level. After that model becomes:

$$div_{it} - div_{i(t-1)} = \alpha + c(div_{it}^* - div_{i(t-1)} + \varepsilon_{it})$$

In the model (3) c is the adjustment rate to target dividend payout ratio and after including the variable of ownership model becomes for a firm I at time t is as follows:

$$div_{it} - div_{i(t-1)} = \alpha + c\beta(ear_{it} - ear_{i(t-1)} + c\beta_f(ear_{it} - ear_{i(t-1)}) * fore + c\beta_i(ear_{it} - ear_{i(t-1)}) fii + c\beta_d(ear_{it} - ear_{i(t-1)}) * dir + c\beta_c(ear_{it} - ear_{i(t-1)}) * corp + \varepsilon_{it}$$
(4)

#### 3.2.3 Earning Trend Model

This model is purposed by the Fama and Babiake (1968) modified the partial adjustment model for dividend analysis also known as dividend model after adding the ownership variable into the model equation comes as follows:

$$div_{it} - div_{i(t-1)} = \alpha + \beta(ear_{it} - ear_{i(t-1)} + \beta_f(ear_{it} - ear_{i(t-1)}) * fore + \beta_i(ear_{it} - ear_{i(t-1)}) fii + \beta_d(ear_{it} - ear_{i(t-1)}) * dir + \beta_c(ear_{it} - ear_{i(t-1)}) * corp - div_{t-2} + \varepsilon_{it}$$
(5)

#### 3.2.4 The Modified Fama and Babiak Model

According to Porta *et al* (2000) dividends play a basic role in limiting insider information by removing corporate wealth from control of insiders. By assuming the directors are not perfect agents of owner. Easterbrook (1984) explains that there are two forms of agency costs, the cost of monitoring other one is cost of risk aversion on the part of directors. According to the Bhat and Pandey (1994) conducted the survey on managers perspective about the payment of dividend and retention, claims that dividend depends on the current earning and future or expected earning and also pattern of past dividends because dividends help in signaling the future prospects of firms and dividend should be paid if firms having profitable investment opportunity this analysis has been done in Indian context by Kumar (2003). To measure the opportunity investment across the firm over time, we used the past growth in change in sales intensity (sales /total asset ratio) this measure also used by Kumar 2003 and Porta *et al* (2000), but having the disadvantage of relying on the past measure for future investment opportunity. Aivzian et al (2003) explain the influence of the firms level characteristics and there effect on dividend decisions. Their empirical model is expressed as:

$$\frac{div_{it}}{A_{it}} = \alpha_i + \sum_{j=1}^n \beta_j X_{ijt} + \varepsilon_{it}$$
(5)

In the model  $X_{ijt}$  is the explanatory variable j for firm *i* at the time t and divi<sub>t</sub>/A<sub>it</sub> is the dividend to asset ratio subscripted for firm *i* at time t,  $\mathcal{E}_{it}$  is error term a<sub>i</sub> is the intercept.

We test a modified version of dividend model suggested by Fama and Babiak (1968), Lintner (1956) and latter use by other studied Short et al (2002) and Aivazian et al (2003) and Kumar (2003). Following these studies, we assume that the dividend policy is influenced by the dividends payment of previous years and the directors of a firm are reluctant to change the current dividend payout policy from past years dividend payment, unless unable to maintain it. Once they change dividend payout they try to remain at new level. Dividends payment is not only determined by the past dividends, but also current and past year earnings (net sales), investment opportunities, firms' capital structure (measured by debt to equity ratio) and the ownership structure of the firm. We examine the influence of firm's level characteristics (debt to equity ratio) past dividend and earning trend and ownership structure on the dividend payout decision of a firm. Their empirical model for a firm *i* at time t is given by:

$$div - int_{it} = \alpha_1 + \beta_0 + (ear - int)_{it} + \beta_1(ear - int)_{i(t-1)} + \beta_2(div - int)_{i(t-1)} + \beta_3(debt - equity)_{it} + \beta_4(sale - int - gr)_{it} + \beta_{i1}(fii) + \beta_{i2}(fii)^2 + \beta_{f1}(fore) + \beta_{f2}(fore)^2 + \beta_{c1}corp + \beta_{c2}(corp)^2$$
(6)

$$+ \beta_{4}(sate - int - gr)_{it} + \beta_{i1}(ju) + \beta_{i2}(ju) + \beta_{f1}(jore) + \beta_{f2}(jore) + \beta_{c1}corp + \beta_{c2}(corp) + \beta_{d1}(dir) + \beta_{d2}(dir)^{2} + \varepsilon_{it}$$

In the model div\_int<sub>it</sub> is the dividend to assets ratio subscripted for firm *i* at time t,  $\varepsilon_{it}$  is the error term and a is intercept. We use specification of this function in terms of ownership structure and firm characteristics.

#### 4. EMPIRICAL RESULTS 4.1 DESCRIPTIVE STATISTICS

First we find the summary statistics of dependent variable and explanatory variables from the period of 2002 to 2006 separately and as well as combined. The results show that mean level of corporate ownership is 17.20 in 2002, 18.41 in 2003, 19.20 in 2004, 18.98 in 2005 and 1392.92 in 2006 which suggest that the corporate ownership is increasing year by year. The minimum and the maximum values of corporate ownership are 0 to 67.6%, 0 to 68%, 0 to 75.11% 0 to 75.27% and in 2006 0 to 38708 and combined 0 to 59.02 % with the standard deviation of 13.018% and positively skewed. Its shows trend of the corporate investor to get the more and more ownership of the listed firms of non financial sector of Pakistan which intends to easily influence the dividend payout policy.

The mean value of directors ownership in sample of listed non financial firms in 2002 is 17.2%, 2003 18.06, in 2004 is 19.19%, in 2005 is 18.97 and in 2006 is 18.94% and in full from 2002 to 2006 the mean value is 14.63% with the minimum value of 0 and the maximum value is 95% with the standard deviation of 26.886% and also positively skewed. The results show that percentage of director's ownership increases year by year and it can create the conflict between shareholders and management and it can also cause of increases the agency cost.

The mean value of dividend paid in 2002 is Rs (million) 153, in 2003 is 83.9, in 2004 is 104.66 in 2005 is 85.29 and in 2006 is 21.96 with the minimum and maximum value of -746.42 to 1998.90 in 2002, in 2003 is -2200 to 1276.70, in 2004 is -902 to 873.40, in 2005 is -1636.28% to 873.51% and in 2006 is -90 to 95.5 as well as combined from 2002 to 2006. The mean value of the dividend is 306.34 and minimum and maximum value in combined is -28791.30 to 64767.56 with the standard deviation of 5722.197 and positively skewed. We have seen that the mean level of dividend payment decline in 2003 from 153% to 83.95% but again increase in the financial year 2004 and 2005 and again decline in 2006 but positively skewed and from the period of 2002 to 2006 it increase from 153 to 306.34

Dividend growth or change in dividend is the dependent variable in this study and descriptive statistics is as follows. The mean value of dividend growth is in 2002 is 0.0322, in 2003 is 0.0299, in 2004 is 0.0286, in 2005 is 0.0286 and in 2006 is 83.585 and the minimum and maximum value in 2002 is 0 to 0.220%, in 2003 is 0 to 0.169%, in 2004 is 0 to 0.179, in 2005 is 0 to 0.225 and in 2006 is -194.11% to 2287.5% and as combined from 2002 to 2006 mean value of the dividend growth is 1332.48% with the standard deviation of 11156.03 and positively skewed with 7.46% and the net earnings increase by the mean value of 426.50 to 1036. The result shows the positive relationship between the earning and dividend payments in Pakistan.

The mean value of dividend to assets ratio in 2002 is 0.032% in 2003 is 15.055%, in 2004 is 14.953%, in 2005 is 14.430% and in 2006 is 50.204% the minimum and maximum values are in 2002 is 0 to 94.7%

, in 2003 is 0 to 94.7% , in 2004 is 0 to 94.7 , in 2005 is 0 to 95% and in 2006 is -100 to 2042.685 and as combined from the period of 2002 to 2006 the mean value is 730.918 with the standard deviation of 4256.78 and positively skewed as 8.01%. The mean value of earning growth in 2002 is 3.564% , in 2003 is -1.716%, in 2004 is -6.61% , in 2005 is 3.843% and in 2006 is 0.077% and as combined the mean value of earning growth is 9.13% with the 140.41% and positively skewed.

Financial institutions (fii) ownership the mean value is 11.37% in 2002, in 2003 is 10.113%, in 2004 is 10.786% in 2005 is 10.007% and in 2006 is 13.595% and as combine from the period of 2002 to 2006 mean value is 1430.2 with the standard deviation of 6363 and positively skewed. The mean value of foreign ownership (fore) in 2002 is 37.88%, in 2003 is 37.68%, in 2004 is 37.11% in 2005 is 36.96% and in 2006 is 38.03% and as combine from the period of 2002 to 2006 is 37.13% with the standard deviation of 30.53% and positively skewed. The mean value of foreign ownership is constant from the period of 2002 to 2006. The mean value of net earnings in 2002 is 426.50, in 2003 are 525.30, in 2004 is 1036.49, in 2005 is 823.226 and in 2006 is 9.0566 and in combine from the period of 2002 to 2006 is 663.854 with the standard deviation of 14817 and also positively skewed. It means when net earnings of the listed non financial firms of Pakistan increases then there is increase in dividend payments.

The mean value of sales growth is in 2002 is -25.84%, in 2003 is 70.60%, in 2004 is 57.22%, in 2005 is 22.42% and in 2006 is 18.95% and as combine sales growth from the period of 2002 to 2006 is 654.72 with the standard deviation of 14814 and also positively skewed (0.92). We also use the debt equity ratio as control variable mean value of debt equity in 2002 is 27.33%, in 2003 is 52.19%, in 2004 is 52.27 in 2005 is 11.69% and in 2006 is 154.57 and as combine for the period 2002 to 2006 is 742.90 with the standard deviation of 402.63% and positively skewed. The result shows that debt equity ratio of the sampled listed firms of non financial sector increases year by year and in improving position met their debt targets with equity that they have.

The results of correlation coefficient between the dependent and explanatory variables show that the association between the corporate ownership and debt-to-equity ratio is negatively significant which shows if the corporate share holding increase then the debt-to-equity ratio of the firms decrease. The relationship between the debt-to-equity ratio and Directors Ownership is positive, which favour that if directors ownership increase the firms debt ratio also increase. If the managers of the firm hold large shares of their firm, then, firms external sources of financing. The correlation matrix shows that there is positive but insignificant relationship linking the director ownership and dividend (0.00115). The relationship between the dividend and corporate (0.020) is positive significant. In the same way dividend is negative significant with the financial institution (-0.0613) and foreign ownership (-0.0047). Which determine the dividend cannot effect by the financial and foreign ownership. The dividend is positive significant association with the earning growth. Which support if earning growth increases the dividend also increases. In same way dividend is positive significant with sale growth (0.489), which shows if the sales increase the dividend also increases.

#### **4.2 REGREASSION ANALYSIS**

#### Full Adjustment Model

In analysis of this study we use the dividend growth  $(div_{it})$  as dependent variable. The results we get from the Lintner (1956) modified model are reported in Table 3 for the sample 50 non-financial firms. The corporate ownership (corp.) or holding has positive and highly significant effect on dividend growth. While association between the director's ownership and dividend growth is insignificant. The dividend growth is negative and significant association with earning growth. The coefficient of financial institute investor is negatively insignificant with the dividend growth. These results show that the corporate ownership has positively impact on the dividend payout policy in Pakistan and the directors ownership, foreign ownership and financial institution investor have negatively effect on the dividend payout in Pakistan. This evidence is consistent with the findings of Sharp et al (2002), however contrary to the findings of Kumar (2003).

#### Partial Adjustment Model

The results of Partial Adjustment model presented in Table 3. The results of sampled 50 non-financial firms dividend growth is dependent variable with other explanatory variables. The coefficient of earning growth is negative and significant. The interaction terms of earning growth with financial institute investor (fii), foreign (fore) and directors ownership is insignificant however; interaction between the earning growth and corporate shareholding is positive and significant. Further more the dealing between the earning growth and corporate dividend (earcorpdiv) is positive and significant. The results are contrast with Kumar (2003) but this evidence is supported by Sharpe et al (2002).

The over all regression model explain approximately 28% variation in the dependent variables. The analysis also show that our model is 20% significance (*F*-statistics = 19.05%).

#### EARNING TREND MODEL

The results of the earning trend model (ETM) are reported in Table 3 for the sample of 50 non financial firms of Karachi Stock Exchange. The coefficient of earning is negative and significant and interaction with financial institution investor (fii), foreign ownership holding *(fore)* and director's ownership holing *(dir)* is insignificant. However, the coefficient of earning is positive and significantly associated with corporate ownership and past dividend paid to corporate ownership. This result suggests that the past dividends have highly positive and significant impact on dividend pay out. The results indicate that increase in corporate ownership also increase the dividends in Pakistan. This result is in contrast with Kumar (2003) and Sharpe *et al* (2002).

The overall model presents 32.12 % variation in the dependent variables, the model significance is 20.99 % (F-statistics = 20.99).

#### Modified Fama and Babiak Model

This model is used to analyze the firms' characteristics and results presented in Table 3. We use the dividend to total assets as dependent variable and explanatory variables are debt to equity ratio, dividend growth, and sales growth. The coefficient of the dividend growth shows positive and highly significant association with dividend pay out... The coefficient of debt equity ratio is negative and significant impact, while the coefficient of earning growth is positive and significant. The coefficient of ownership of director's, foreign, and financial institution investor's are insignificant but the ownership of corporate investor is positive and significant relation with the dividend to total assets ratio. The square of the corporate ownership is also positive and significant showing that this relationship increases at decreasing rate. Furthermore the remaining explanatory variable sales growth is negative insignificant. This clearly shows that corporate ownership positively affects the dividend to total assets in Pakistani non financial firms. The results support the findings of Kumar (2003) but are opposite of the findings of Sharpe *et al* (2002). The pooled regression of the purposed model show 92% (R<sup>2</sup> = 92%) variation in the dependent variables, while the model significance is 26.82% as shown by F-statistics.

#### 5. Conclusion

This study uses the sample of listed non-financial firms from Pakistani capital market (Karachi Stock Exchange) to shed the light on association between ownership structure and dividend payout policy in Pakistan in context of emerging capital market. This study examines that the models are tested for developed markets are applicable in case of Pakistani market. This study has empirically examined the relationship between the ownership structure and dividend payout policy by using the panel data from 2001 to 2006. The broad consistency of the results by using the equations form and variable choice is quite consistent with many widely accepted principles in the field of advance corporate finance. We document that there is a positive relationship between the corporate investor ownership and dividend payout policy in Pakistan. When corporate ownership increases, the dividend also increases. Furthermore, it is important to mention that this is the first attempt of using the well established models of dividend payout policies i.e. Full Adjustment Model (FAM), Partial Adjustment Model (PAM), Earning Trend Model (ETM) and Modified Fama and Babiak Model (PM) in context of Pakistani market.

Due to the high and positive ownership concentration, the conflict between the large (corporate investor), the controlling owners and small outsider shareholders (individuals) is one of the very important focal point in the corporate governance literature. We also empirically find that ownership is one of the very important variables which can influence the dividend payout policy. However, the relationship is different for different classes of shareholder i.e. director's, foreign, financial institution investors and corporate investors ownership. We also conclude that the ownership structure in Pakistan influence the dividend payout policy informally and the identities of shareholders also play important role. The results support the alternate hypothesis that there is a relationship between the ownership structure and dividend payout policy in Pakistan.

The implication that comes out from our study is that ownership structure has significant impact on dividend payout policy in Pakistan. The ownership identity also matters in this policy and corporate ownership is positively associated with the growth of dividends. When legal environment does not provide sufficient protection for outside investors, entrepreneurs and original owners are forced to maintain large positions in their companies which resulted in concentration of firm ownership. The countries like Pakistan with poor investor protection, corporate ownership has significant impact on dividend policy. Ownership concentration appeared to be more important tool to resolve agency conflict between controlling and minority shareholders when investor protection is weak.

	CORR	DEBTE TO	DIP		DIVIDEND	DIVIDEND	EARNING	81	EORE	NET	SALES
	CORF	EQUITY	DIK	DIVIDEND	GROWTH	TOASSET	GROWTH	~~	TORE	EARNINGS	GROWTH
Mean	17.19964	27.325	426.5021	153.481	0.032236	14.17984	3.564857	11.37049	37.88008	426.5021	-25.83572
Median	9.205	8	7.5	95.65	0.006195	0.001	0	8.12	29.01	7.5	-3.315655
Maximum	67.6	294.3	14025	1998.901	0.220399	94.7	200.2037	59.02	98.8	14025	679.6552
Minimum	0	-28.1	0	-746.4286	0	0	-100	0	0	0	-1312.479
Std. Dev.	19.84544	68.12099	2041.505	404.4683	0.048366	26.68375	48.82822	13.32975	30.97203	2041.505	257.9813
Skewness	0.917594	2.608968	6.36658	2.65145	1.797995	1.752143	1.078916	1.781901	0.433622	6.36658	-2.112968
Kurtosis	2.589555	9.11508	42.7946	13.52549	6.210763	4.533279	8.329632	5.905408	1.807204	42.7946	15.25016
Jarque-Bera	7.367452	118.4719	3491.488	289.3888	48.41695	29.87157	68.87753	43.16508	4.440369	3491.488	349.8436
Probability	0.025129	0	0	0	0	0	0	0	0.108589	0	0
Observations	50	44	48	50	50	49	50	49	49	48	50

#### Table 2 DESCRIPTIVE STATISTICS FOR 2003

	DEBTE CORP TO EQUITY	DEBTE TO	DIP		DIVIDEND	DIVIDEND	EARNING	=	EOPE	NET	SALES
		EQUITY	DIK	DIVIDEND	GROWTH	TOASSET	GROWTH		TORE	EARNINGS	GROWTH
Mean	18.43055	52.19783	525.302	83.95153	0.029976	15.05555	-1.716781	10.1126	37.6837	525.3021	70.60447
Median	9.4	9.05	13.25	122.55	0.007202	0	0	7.78	30.33	13.25	1.773313
Maximum	68	1913.3	17850	1276.7	0.163903	94.7	98.6234	58.62	99.99	17850	1915.254
Minimum	0	-55.2	0	-2200	0	0	-100	0	0	0	-404
Std. Dev.	20.77017	281.9477	2592.67	429.1929	0.043561	28.03556	40.07201	11.954	31.6928	2592.666	342.8654
Skewness	0.8415	6.45511	6.42	-2.9984	1.490826	1.627152	-0.390255	1.91728	0.40272	6.420986	4.026182
Kurtosis	2.3778	43.12788	43.3334	19.06402	4.164761	3.984236	5.118663	7.19409	1.75949	43.33336	20.59925
Jarque-Bera	6.574171	3405.764	3583.39	612.5302	21.34775	23.60006	10.62069	65.9339	4.46633	3583.392	780.3627
Probability	0.037363	0	0	0	0.000023	800000.0	0.00494	0	0.10719	0	0
Obser∨ations	49	46	48	50	50	49	50	49	49	48	50

### Table 3 DESCRIPTIVE STATISTICS FOR 2004

	COPP	DEBT	DIP		DIVIDEND	DIVIDEND	EARNING	=	FORF	NET	SALES
	CORP	EQUITY	DIK	DIVIDEND	GROWTH	TOASSET	GROWTH		TORE	EARNINGS	GROWTH
Mean	19.19943	52.27234	1036.49	104.6664	0.028695	14.95308	-6.606251	10.786	37.1096	1036.492	57.21978
Median	9.3	23	0	116.65	0	0	0	5.15	36.49	0	2.964857
Maximum	75.11	1232	25500	873.5064	0.179343	94.7	220	58.56	97.57	25500	2167.589
Minimum	0	-60.3	0	-902.1638	0	0	-100	0	0	0	-909.042
Std. Dev.	22.54576	179.2799	4350.7	243.9684	0.045675	26.8916	51.8157	13.8727	29.6214	4350.696	413.6834
Skewness	0.946347	6.250693	4.81383	-1.351632	1.831794	1.656607	1.165608	1.63663	0.32929	4.813825	3.433318
Kurtosis	2.651139	41.65549	25.3188	10.33191	5.675051	4.252921	9.38677	4.94099	1.85384	25.31877	18.34443
Jarque-Bera	7.562321	3232.291	1206.26	127.2179	42.87037	25.61719	96.30291	29.5668	3.56765	1206.256	588.7549
Probability	0.022796	0	0	0	0	0.000003	0	0	0.16799	0	0
Observations	49	47	49	50	50	49	50	49	49	49	50

### Table 4 DESCRIPTIVE STATISTICS FOR 2005

	COPP	DEBTE	DIR		DIVIDEND	DIVIDEND	EARNING	=	FORF	NET	SALES
	CORP	QUITY	DIK	R DIVIDEND	GROWTH	TOASSET	GROWTH		TORE	EARNINGS	GROWTH
Mean	18.97177	11.69149	823.226	85.29306	0.028613	14.43082	3.842535	10.0065	36.9615	823.226	22.419
Median	8.8	14.1	0	101.75	0	0.015	0	5.42	31.835	0	18.01034
Maximum	75.27	88.1	25805.6	897.7612	0.225221	95	149.9804	57.68	96.26	25805.6	1015.686
Minimum	0	-74.1	0	-1636.282	0	0	-100	0.005	0.93	0	-956.522
Std. Dev.	23.41977	36.32471	3715.31	335.5087	0.051042	26.73773	51.99111	12.4153	30.879	3715.309	249.5171
Skewness	0.95414	-0.15762	6.29472	-2.739349	2.123488	1.700048	0.456797	1.91575	0.41125	6.294723	-0.31565
Kurtosis	2.487568	2.94382	42.6093	15.97725	7.202311	4.384735	4.86339	6.4854	1.75594	42.60925	11.52711
Jarque-Bera	8.133589	0.200792	3598.72	413.3857	74.36712	28.07946	8.972661	55.8926	4.63372	3598.722	152.3129
Probability	0.017132	0.904479	0	0	0	0.000001	0.011262	0	0.09858	0	0
Observations	50	47	50	50	50	50	50	50	50	50	50

	COPP	DEBT	DIP		DIVIDEND	DIVIDEND	EARNING	=	FORE	NET	SALES
	CORP	EQUITY	DIK	DIVIDEND	GROWTH	TOASSET	GROWTH	п	TORE	EARNINGS	GROWTH
Mean	1392.9	154.573	1392.9	21.96809	83.58558	50.20446	0.077537	13.59	38.0395	9.056667	18.94823
Median	0	104.2	0	19.3	5.394525	0	0	0.005	35.61	3.78	7.38
Maximum	38708	2668.8	38708	95.5	2287.5	2042.685	1.9643	95	97.15	56.01	69.31
Minimum	0	-580.63	0	-90.2	-194.1176	-100	0	0	1.04	0.01	0
Std. Dev.	5676.3	402.6063	5676.3	37.84031	386.7204	296.407	0.284284	26.94	30.7754	12.54986	23.68249
Skewness	6.015	4.94913	6.015	-0.445079	4.651309	6.383537	6.161726	1.791	0.33515	2.03223	0.900248
Kurtosis	39.765	32.653	39.765	4.136299	25.10095	43.43409	41.28311	4.628	1.68287	6.632723	2.245036
Jarque-Bera	3055	1995.301	3055.2	4.080299	1173.939	3670.741	3302.323	30.9	4.36831	59.43302	7.6235
Probability	0	0	0	0.130009	0	0	0	0	0.11257	0	0.022109
Observations	49	49	49	47	49	49	49	48	48	48	48

#### Table 5 DESCRIPTIVE STATISTICS FOR 2006

#### Table 6 FULL DESCRPTIVE ANALYSIS

	0000	DEBT		DIVIDEND	DIVIDEND	DIVIDEND	EARNING	-	EOPE	NET	SALES
	CORP	EQUITY	λΟΙΤΥ ΟΙΚ	DIVIDEND	GOWTH	TOASSET	GROWTH	п	FORE	EARNINGS	GROWTH
Mean	10.467	742.9	14.62	306.359	1332.47	730.918	9.13739	1430	37.13	663.8542	654.7168
Median	5.865	0	0.001	0.245921	0	0	0	114.756	31.81	8.865481	0
Maximum	59.02	42916.88	95	64767.56	116687.6	42916.88	2042.685	65791.3	99.99	99643	99643.5
Minimum	0	-7017.804	0	-28791.3	-34482.61	-7017.804	-100	-12798	0	-106376.4	-106376
Std. Dev.	13.01826	4290.63	26.8858	5722.197	11156.03	4256.779	140.4095	6363.21	30.5388	14817	14814.42
Skewness	1.817073	7.94682	1.6853	5.906551	7.457147	8.014237	12.54599	7.3521	0.41082	0.92298	0.923564
Kurtosis	5.918467	75.8693	4.29254	73.02676	70.91408	77.12862	181.9245	64.2343	1.79715	30.53384	30.5444
Jarque-Bera	220.8654	56552.52	132.488	51273.52	49153.38	59436.96	331876.5	40319.5	21.5731	7742.118	7748.075
Probability	0	0	0	0	0	0	0	0	2.10E-05	0	0
Observations	244	244	244	244	244	248	244	244	244	244	244

# Table 7: Relationship Between Ownership Structure and Dividend Policy (Modified Full adjustment Model)

The dependent variable is growth in dividends.  $div_{it} - div_{i(t-1)} = \alpha + \beta(ear_{it} - ear_{i(t-1)} + \beta_f (ear_{it} - ear_{i(t-1)}) * fore + \beta_i (ear_{it} - ear_{i(t-1)}) fii + \beta_d (ear_{it} - ear_{i(t-1)}) * dir + \beta_c (ear_{it} - ear_{i(t-1)}) * corp - div_{t-2} + \varepsilon_{it}$ The Panel Data estimation technique is used.

The \* indicates that the significance level at 1%, \*\* indicates significance at 5% and \*\*\* indicates significance at 10%

Variable	coefficient	t-Statistic
С	-15.76	-2.94*
EG	-2.30	-1.88**
EGFORE	0.004	0.59
EGFII	0.003	1.47***
EGDIR	0.004	1.71**
EGCORP	0.057	1.32
EGCORPDIV	3.05	2.29*
R-squared	27.89%	
F-statistic	19.05	

### Table 8: Relationship Between Ownership Structure and Dividend Policy (Modified Full adjustment Model)

The dependent variable is growth in dividends.

 $div_{it} - div_{i(t-1)} = \alpha + \beta(ear_{it} - ear_{i(t-1)} + \beta_f(ear_{it} - ear_{i(t-1)}) * fore + \beta_i(ear_{it} - ear_{i(t-1)}) fii + \beta_f(ear_{it} - ear_{i(t$ 

 $\beta_d (ear_{it} - ear_{i(t-1)}) * dir + \beta_c (ear_{it} - ear_{i(t-1)}) * corp - div_{t-2} + \varepsilon_{it}$ 

The Panel Data estimation technique is used.

The \* indicates that the significance level at 1%, \*\* indicates significance at 5% and \*\*\* indicates significance at 10%

Variable	Coefficient	t-Statistic
С	-15.68	-3.08*
EARR	-2.32	-3.63*
FII*EEARR	0.003	1.32***
FORE*ERR	0.004	0.82
CORP?*EARR	3.50	4.69*
DDIR*EARR	0.004	1.47***
EGCORPDIV	1.001	2.14*
R-squared	32.12%	
F-statistic	20.99	

### Table 9: Relationship Between Ownership Structure and Dividend Policy (Modified Full adjustment Model)

The dependent variable is growth in dividends.

 $div - int_{it} = \alpha_1 + \beta_0 + (ear - int)_{it} + \beta_1 (ear - int)_{i(t-1)} + \beta_2 (div - int)_{i(t-1)} + \beta_3 (debt - equity)_{it}$ 

 $+\beta_{4}(sale-int-gr)_{ii}+\beta_{i1}(fii)+\beta_{i2}(fii)^{2}+\beta_{f1}(fore)+\beta_{f2}(fore)^{2}+\beta_{c1}corp+\beta_{c2}(corp)^{2}$ 

$$+\beta_{d1}(dir)+\beta_{d2}(dir)^2+\varepsilon_{it}$$

The Panel Data estimation technique is used.

The \* indicates that the significance level at 1%, \*\* indicates significance at 5% and \*\*\* indicates significance at 10%

Variable	Coefficient	t-Statistic
С	0.02	1.68**
EG	0.001	2.17*
EG(-1)	0.002	1.84**
DT(-1)	0.78	8.39*
DE	-0.02	-3.10*
SG	0.001	-1.28
CORP	4.00	3.46*
CORP2	0.001	4.12*
FII	0.001	1.71**
FII2	-0.002	-1.98**
FORE	0.001	0.14
FORE2	-0.003	-0.68
DH	-0.0003	-1.75**
R-squared	0.92	
F-statistic	26.82	

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