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Dividend Preferences: Evidence from Panel Data

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Abstract: The study aims to investigate the dividend preferences in Pakistani capital market and further deals with the investigation of cash dividend preference of poorly performing firms list on Karachi Stock exchange. The study utilized the financial data for 2001-2011 of listed Pakistani firms to examine the behavior of distribution of cash dividends. Panel regression statistical technique was used. From the analysis, it is originated that poorly performing firms having lesser portion of tradable shares pay dividends in cash. The study finds that the cash dividend distribution behavior of poorly performing firms and describes the preference of directors. Further, low performing firms prefer cash dividends as compared to stock dividends as long as they have large percentage of directors or financial institutions or block-holders' ownership of nontransferable shares. Furthermore, if a firm has mix of directors, financial institutions and block-holders' ownership of nontransferable shares then the firm also prefer cash dividends.

Key words: Non-tradable shares · Cash dividends · Cash channeling hypothesis · Panel Regression

INTRODUCTION

Dividend policy for a firm means whether to pay or not pay the dividend: whether to pay in cash, in stocks or both in cash and stocks and how frequently to pay. Debate among empirical conversations related to cash dividend exists. Even though the cash dividends decision influence the formation of capital [1]. The association between cash dividend announcements and share prices is not apparent [2-7]. Principal-agent relationship cost does matter in the cash dividend policy, however, through cash dividend policy managers attempt to reduce the Principal-agent relationship cost [8-11].

Karachi Stock Exchange is a developing market of the region with not a sound regulatory framework. Therefore, it is reasonable to say that as compare to firms listed on the developed markets of United States and Europe; the firms listed on KSE do not observe good corporate governance practices generally. Moreover, to protect shareholders from bad effect non-tradable shares held by directors and their spouses, financial institutions and external block-holders, good corporate governance is

necessary. Whenever the earnings of a firm fall down, the distribution of cash dividend does not serve to be long-term growth in the bottom line.

Why do firms listed on Karachi Stock Market pay dividends in cash with declining earnings? In this study, the firms involve heaving two kinds of shares tradable and non-tradable. Tradable shares, that constitute majority of the shares of a company. The directors, their spouses, financial institutions and government etc.etc usually hold the other one. However, in some cases directors hold majority of the total shares and are the controlling stockholders [12] described second type of shares, which are not listed on stock markets. Although the non-tradable shares occupied by organizations can be sold with, the consent of government, but such permissions are frequently based political government's policies and such permission is rarely granted.

This area of study almost unexplored for emerging economy where investors are poorly protected, the rate of cash in firms is minor for marginal holders. The main reason of research is to know about crash of non-tradable shares on payment policy of the poorly performing firms with duration of 2001-2011. The relative relationship of ownership structure (non-tradable shares) and dividend policies of poorly performing firms is very important to examine, that why poorly performing firms prefer distribution of cash dividend over stock repurchases and stock dividend.

Literature Review: A large literature is there that documents the association of the ownership structures and financial policies i.e. debt and dividend of firms. Until, a huge volume of literature has studied the informative aspect of cash dividends and different results have found. Some researchers have found an inconsequential relationship between payment distribution and earnings [13] have of the view that the distribution of as dividend can lose its ability to convey information regarding the firm's performance when the earnings and forecast of earnings are announced at the same time. Many researches focus on the indicating impact of cash dividends but some other instead of focusing on that, focus on a different and new perspective i.e., the tunneling perspective. They argue that cash dividends paid to benefit large or majority shareholder s, whose shares are not traded on stock market. In other simple words they argue that cash dividends are paid to benefit non-tradable shareholders like directors and financial institutions and block-holders etc. at the expense of the holding of general public i.e. Minority shareholders.

The empirical studies about the role of block-holders accentuate that block-holders are motivated to supervise and control management to defend their important investments [14]. Due to the large percentage holding in shares (equal and more than ten percent); the investors need to look over the management closely, that the managers do not engage in activities that are unfavorable to the wealth of shareholders. Furthermore, [15] find that with the existence of block-holders in a firm the operating performance in the long run improves. This evidence is reliable with the decrease in organization disagreement when there is an increase in block-shareholdings. Therefore, the existence of block-holders limits the ability of the directors and managers to act in their self-interest. In empirical literature, many authors find administrative right is connected with larger level of debt. It means that a firm having higher percentage of ownership have lower agency cost in terms of debt. To put in other words higher level of managerial ownership is associated with high agency cost of equity [10] found in his empirical study that managerial ownership act as a replacement for dividend as a benefit to reduce agency cost [16] argue that the financial decisions and the level of managerial ownership are mutually dependent. They found that there is a depressing consequence of higher level of administrative rights on a firm's debt and dividend levels.

Data and Methodology: The data for analysis has taken from the companies' annual reports, Balance Sheet analysis issued by State Bank of Pakistan from the bank's website, business recorder's and Karachi Stock Exchange's data bank. The sample includes non-financial firms listed on Karachi Stock Exchange and dividend data for all the listed firms except for nonfinancial firms. The sampling period is 2001 to 2011. Earnings and dividend data for more than six hundred companies was collected. As the study takes in to account only the firms with declining earnings, the sample includes seventy-five non-financial firms. The sampling carried out based on two surroundings. The criterion for choosing a poorly performing firm borrowed from [17]. A firm, which fulfills the above criterion but did not pay dividend for at least one time in the sampling period, has not been consider for analysis as the study analysis. Thus after adjusting for earnings and dividend a sample of seventy-five listed firm have constructed.

Regression Model Specification: The Following regression model is used to examine the determinants of cash dividends in the poorly performing firms listed on Karachi Stock Market. This is similar to the model used by [17];

Cdiv_Assets_{it} =
$$\alpha + \beta 1$$
Dir_own_{it} + $\beta 2$ Fcf_Assets_{it} + $\beta 3$
EPS_{it} + $\beta 4$ Dt_Assets_{it} + $\beta 5$ ROA_{it} + $\beta 6$ Size_{it} + ε_{it} (1a)

Cdiv_Assets_{it} =
$$\alpha + \beta 1$$
 Fin_ins_{it} + $\beta 2$ Fcf_Assets_{it} + $\beta 3$ EPS_{it} + $\beta 4$ Dt_Assets_{it} + $\beta 5$ ROA_{it} + $\beta 6$ Size_{it} + ε _{it}
(1b)

Cdiv_Assets_{it} =
$$\alpha + \beta 1$$
 Block_own_{it} + $\beta 2$ Fcf_Assets_{it} + $\beta 3$ EPS_{it} + $\beta 4$ Dt_Assets_{it} + $\beta 5$ ROA_{it} + $\beta 6$ Size_{it} + ε_{it} (1c)

Cdiv_Assets_{it} =
$$\alpha + \beta 1$$
Dir_own_{it} + $\beta 2$ Fin_ins_{it} + $\beta 3$
Block_own_{it} + $\beta 4$ Fcf_Assets_{it} + $\beta 5$ EPS_{it} + $\beta 6$ Dt_Assets_{it}
+ $\beta 7$ ROA_{it} + $\beta 8$ Size_{it} + ϵ_{it} (1d)

In this study, we have four independent variables i.e., Director Ownership, Financial institutions ownership, Block-holders' ownership to examine the relation with the dependent variable which is Cash-Dividend-to-assets. Nevertheless, some other variables also affect the cash dividend, distribution behavior of a firm. To control for that effect the study include those variables in the model. The control variables are Debt-to-Assets, Free Cash Flow per Share, Free Cash Flow to Assets, Earning per Share, Size of the firm and Return on Assets.

RESULTS AND DISCUSSION

Table 1 reports the results of the Panel unit root test. There have been many tests used to test the existence of unit root in the panel form of data. The null hypothesis of the three Panel unit root tests that we have used in this study i.e. the [20] test, [20] test, [21] test is that the series have a unit root i.e. non-stationary. The panel data of seventy-five listed companies are duly examined by applying the LLC (Levin–Lin–Chu), ADF - Fisher Chi-square and PP - Fisher Chi-square tests. These tests are applied to check whether the series of CDiv_Assets, Dir_own, Fin_ins, Block_own, Fcf_Assets, EPS, Dt_Assets, ROA and Size of the firm contains a unit root i.e. whether panel data is non-stationary.

$$\Delta yi, t = \rho yi, t - 1 + \alpha o + \sigma t + \alpha i + \theta t + \epsilon i, t, i = 1, 2, ..., N, t = 1, 2, ..., T$$

 $\mathcal{E}t, \ t, \ t-1,2,...N, t-1,2,...$

If we select no time trend with panel-specific means in case of LLC test then growth of number of panels should be less than that of number of periods, so that the ratio of number of panels to number of times tends to zero. For each panel we have to fit an ADF regression in LLC test, so lag is selected on AIC criteria with at most 10 lags. For the estimation of long run effect, LLC method by default uses the kernel method Bartlett having 10 lags for $x_{t \text{ unit}}$ root. Autoregressive parameter's homogeneity is the base of LL test. Hence, pooled regressions are used in LL test.

Table 1 presents the empirical results from 2001-2011. The [20] bias-adjusted t statistic for CDiv Assets, Dir own, Fin ins, Block own, Fcf Assets, EPS, Dt Assets, ROA and Size of the firm is significant at 5% level. Therefore, we reject the null hypothesis and conclude that all the three the series are stationary. The ADF fisher chi-square value for CDiv Assets, Dir own, Fin ins, Block own, Fcf Assets, EPS, Dt Assets, ROA and Size of the firm is significant at 5% testing level. The ADF fisher chi-square value for CDiv Assets, Dir own, Fin ins, Block own, Fcf Assets, EPS, Dt Assets, ROA and Size of the firm is significant at all testing level. Therefore, these results strongly hint that CDiv Assets, Dir own, Fin ins, Block own, Fcf Assets, EPS, Dt Assets, ROA and Size of the firm have no unit root existence and can be used in the proceeding analyses.

Table 1: Panel Unit Root Tests					
Methods	Levin, Lin & Chu t*	ADF - Fisher Chi-square	PP - Fisher Chi-square		
Cdiv_Assets	-44.733**	30.402**	79.187**		
Dir_own	-13.2597**	123.655**	153.496**		
Fin_ins	-102.002**	132.572**	182.646**		
Block_own	-102.002**	132.572**	182.646**		
Fcf_Assets	-101.753**	130.432**	179.987**		
EPS	-100.572**	128.987**	177.786**		
Dt_Assets	-99.786**	126.876**	180.456**		
ROA	-98.453**	118.345**	175.675**		
Size	-101.564**	123.675**	170.786**		

Note: Cash Div-to-Assets is the ratio of total cash dividends to total assets; Dir_own is Directors' ownership and it measured by the percentage of shares hold by the directors in the total shares of the firm; Fin_ins is the financial institutions' ownership and it measured by the percentage of shares hold by the financial institutions i.e., Banks, Mudharaba and leasing companies in the total shares of the firm; Block_own is the block-holders' ownership and is measured by percentage of shares hold by a group or individual (at least 10%) in the total shares issued by a firm; Fcf_Assets is the ratio of free cash flow to total assets and is measured by the ratio of total fixed assets to free cash flow; Dt_Assets is the ratio of total debt to total assets and is measured by the ratio of total liabilities to total assets; EPS is earnings per share and is measured by is ratio of earnings to total number of shares outstanding; ROA is the return on assets and is measured by ratio of Earnings to total assets; SIZE is the size of firms in terms of total assets and is calculated by taking log of total assets of firm Null: Unit root (assumes common unit root process, Obs, 312)

Descriptive Statistics: Table 4.1 provides summary statistics of Cash Dividend to Assets, Director Ownership, Financial institutions ownership, Block-holders ownership, Free Cash flow to Assets, Earnings per Share Debt-to-Assets ratio, Return on Assets and firm size (LnAssets) of the sampled firms for the period 2001 to 2008.

The results reported in Table 4.2 shows the mean value of the firm size in terms of log of total assets asset is 8.443 and the standard deviation is 1.583 which is not very high which means that the sample contains both larger-sized firms and small-sized firms in the sample. The mean value of the Return of Assets is 0.120 and the standard deviation is 0.0815, which is quite lower and means that the sample firms do not differ much in terms of Return of Assets. The mean value of debt to assets is 0.548 with the standard deviation 0.210. The mean score of Earning per Share is 20.369 with a standard deviation of 34.133, which is very high and shows that the sample contains both the firms with high earnings per share and very low earnings share rather negative Earnings per Shares. The Free Cash flow to assets ratio has a mean value of 0.0975 and a standard deviation 0.075, which is quite lower. The block holder ownership has a mean value of 10.7 and a standard deviation of 0.0142. The mean values of director ownership and financial institutions ownership are 17.575 and 04.499 with standard deviations 18.796 and 2.739 respectively. Both these standard deviations are high that means that the sampled firms vary considerably in terms of director ownership and financial institutions ownership.

The above table shows that Cash Dividend to Assets has a positive but weak and significant correlation the Director Ownership. It means the greater the percentage directors holding the greater the dividend they will pay and vice versa. The correlation of financial institutions ownership with the cash dividend to assets is positive i.e., the higher the percentage institutional ownership the more cash dividend tends to be distributed. The correlation of block-holders ownership is positive with cash dividend to assets and is significant too. Free cash flow to assets has a positive and significant relation with the dependent variable cash dividend to assets. Earnings per share are positively correlated with cash dividend to assets and the correlation is significant as well. Debt to assets ratio is negatively correlated with the dependent variable i.e., cash dividend and is significant at ten percent which shows that the lower the level of debt in the ownership structure the greater will be the amount of cash distributed as dividend. Return on Assets and size of firm both have a positive and significant correlation with the cash dividend to assets. The above correlation analysis shows that there is no multicollinearity among the variables used as the correlation coefficients are not much high. The study also considered another variable free cash flow per share but that was highly correlated with Earnings per share. There is no more the problem of multicollinearity in the regression.

In table 4.4 model (1a) at the 1% level, a positive and highly significant coefficient of directors' ownership (non-tradable shares) is found. That means those firms will pay more cash dividends than stock dividends, which have high portion of directors' ownership of nontransferable shares in the firm's total stock. These findings support the argument that the directors of the firm prefer cash dividends. The negative and significant coefficient of debt-to-assets is suggesting that

Table 4.2: Descriptive statistics

Variables	Mean	Std. Dev.
Cdiv_assets	0.0234	0.0342
Dir_own	17.575	18.796
Fin_ins	04.499	02.739
Block_own	10.738	0.0142
Fcf_Assets	0.0975	0.0757
EPS	20.369	34.133
Dt_assets	0.548	0.210
ROA	0.120	0.0815
Size	8.443	1.583
Observations	312	312

Table 4.3: Correlation coefficients

	Cd_Asts	Dr_Own	Fin_ins	Blk_own	Fcf_asts	EPS	Dt_asts	ROA	Size
Cdiv_asts	1								
Dir_own	0.007*	1							
Fin_ins	0.11**	0.14*	1						
Blk_own	0.08*	0.20*	0.14*	1					
Fcf_asts	0.06*	0.03*	-0.02*	.19*	1				
EPS	0.08*	0.005*	-0.05*	0.22*	0.20*	1			
Dt_asts	-0.06*	-0.06*	-0.05*	0.05*	44*	-0.03*	1		
ROA	0.36*	-0.03*	-0.07*	0.14*	0.10*	0.34*	20*	1	
Size	0.28*	0.020*	-0.03*	0.22*	.34*	.29*	.008*	.19*	1*

^{*}significant at 05 percent

Table 4.4: Panel Regression Results

	Model(1a)	Model(1b)	Model (1c)	Model(1d)
Constant	0.00687 (1.9792)	0.00721 (1.5257)	0.0234 (1.8542)	0.0108 (1.2457)
Dir_own _{it}	0.0432 (3.4593)*	-	-	0.1458 (4.8541)*
Fin_ins _{it}	-	0.1632 (5.654)*	-	0.2624 (10.254)**
Block_own _{it}	-	-	0.0548 (4.251)*	0.1596 (6.244)*
Fcf_Assets _{it}	0.1652 (8.657)**	0.1751 (11.124)**	0.0658 (3.458)*	0.2756 (10.784)**
EPS_{it}	0.1126 (3.145)*	0.1216 (4.859)*	0.2385 (13.457)**	0.1410 (6.214)*
Dt_Assets _{it}	-0.0515 (-4.4513)*	-0.0489 (-5.1529)*	-0.03564 (-4.2541)*	-0.3541 (-4.4513)*
ROA_{it}	0.2652 (12.214)**	0.1751 (9.045)*	0.1458 (7.254)*	0.2756 (9.831)**
$Size_{it}$	0.1526 (9.124)**	0.2652 (7.254)*	0.1496 (5.247)*	0.3212 (14.352)**
Adjusted R2	0.759	0.687	0.698	0.756
F-statistics	25.6913	8.463	38.4277	26.2284

^{*} Significant at 0.05 level, ** Significant at 0.01 level

Dependent Variable: Cash Dividend-to-Assets

as long as the debt level of firm is increasing then this trend may discourage the firms from paying more cash dividends. The reason behind this is the debt holders' monitoring efforts. The findings are consistent with [17].

In Table 4.4 model (1b) at the 1% level, a positive and highly significant coefficient of financial institutions' ownership (non-tradable shares), is found. That means those firms will pay more cash dividends than stock dividends, which have high portion of financial institutions' ownership of nontransferable shares in the firm's total stock. These findings support the argument that the financial institutions prefer cash dividends. The negative and significant coefficient of debt-to-assets is suggesting that as long as the debt level of firm is increasing then this trend may discourage the firms from paying more cash dividends. The reason behind this is the debt holders' monitoring efforts.

In Table 4.4 model (1c) at the 1% level, a positive and highly significant coefficient of block-holders' ownership (non-tradable shares) is found. That means those firms will pay more cash dividends than stock dividends which have high portion of block-holders' ownership of nontransferable shares in the firm's total stock. These findings support the argument that the block-

holders of the firm prefer cash dividends. The negative and significant coefficient of debt-to-assets is suggesting that as long as the debt level of firm is increasing then this trend may discourage the firms from paying more cash dividends. The reason behind this is the debt holders' monitoring efforts. One possible reason for this may be that the percentage holdings of financial institutions are not high i.e., below 05 percent on average. Under the rules of State bank of Pakistan (SBP), a bank can invest maximum 05 percent of its equity in the shares of a company. Therefore, it is because of the low percentage holdings the financial institutions do not participate in deciding cash dividends.

In Table 4.4 model(1d) at 1%, 5% and 1% levels, a positive and highly significant coefficients of directors, financial institution and block-holders' ownership (non-tradable shares) are found respectively. That means those firms will pay more cash dividends than stock dividends which have high portion of ownership of nontransferable shares(mix of directors, financial institutions and block-holders) in the firm's total stock. These findings support the argument that the directors, financial institutions and block-holders of the firm prefer cash dividends. The negative and significant coefficient

^{**}significant at 10 percent

of debt-to-assets is suggesting that as long as the debt level of firm is increasing then this trend may discourage the firms from paying more cash dividends. The reason behind this is the debt holders' monitoring efforts.

From the above four models estimations in Table 4.4 it is concluded that the low performing firms prefer cash dividends as compared to stock dividends as long as they have large percentage of directors or financial institutions or block-holders' ownership of nontransferable shares. Furthermore, if a firm has mix of directors, financial institutions and block-holders' ownership of nontransferable shares then the firm also prefer cash dividends. These findings are consistent with [17, 18]. The overall results from Pakistan firms sample support cash-channeling hypothesis.

CONCLUSION

The study use data on poorly performing firms listed on KSE to look at the objective of distributing cash dividend when these firms observe a decline in their earnings. Analyzing seventy-five nonfinancial firms for period of 2001-2011, the study found that cash distribution behavior of firm depends on the percentage long-term shareholding of directors, financial institutions and block-holders. It is because the shares, which the directors, financial institutions and block-holders hold, are non-tradable and they usually do not/cannot realize the capital gains. To benefit from their holding they pay out high cash dividends. The study advocates the cash channeling hypothesis of [17] i.e., the Pakistani listed firms with declining earnings and greater portion of shares with directors, financial institutions and block-holders pay cash dividends. Consistent with [17], the study finds positive and significant relation between non-tradable shares (holdings of directors, financial institutions and block-holders) and cash dividend distribution behavior of poorly performing Pakistani listed firms. The finding also support the tunneling perspective of [18] that the distribution of cash dividends can play a role to transfer resources of firm to benefit directors and top management at the expense of shareholders who hold low proportion of shares.

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