Determinants of Dividend Policy in Banking Sector of Pakistan: An Empirical Study

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Abstract: This paper explores the determinants of dividend policy of firms in the banking industry of Pakistan. Dividend decisions of a bank basically depend on its profitability, retained earnings, cash and cash equivalents, earnings per share, corporate taxes and leverage. Present study is an attempt to find out the key determinant predictors and their impact on cash dividend payout and Total Payout ratio and test the significance of financial theories on banking sector of Pakistan during the period between “2006-2010”. We applied the Balanced Panel Data Regression with Fixed Effects Model to verify the Null hypothesis. Among all of the independent variables PAT, SLACK, EPS, CTA and TDA reported significant results and the determinants of dividend policy. We found the support of Profitability theory, Packing order theory, free Cash flow theory and Agency cost theory and we found no support of Tax effect in banking sector of Pakistan.

Keywords: Cash Payout, Stock Payout, Dividend Policy

JEL Classification: G00, G11, G18

1. Introduction

The Corporate Dividend Policy has a long history, as the Frankfurter and Wood (1997) observed that the dividend policy was bound up with the development of corporate finance itself.

In the earlier sixteenth century, in Great Britain and Holland, the captains of sailing ships on track started selling of financial claims to the investors. At the end of each voyage, the capital and the profits were distributed according to their investments. Each venture ensured the distribution of profit to the investors at the end of its life (Baskin, 1988).

That was the emergence of business as “going concern” and made a fundamental practice of the business to decide, what percentage of business profit should be distributed to the owners, produced the first dividend

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payment in the history and the ownership structure of the companies evolves into the joint stock companies type of business.

In the middle of seventeenth century, the success of this form of business opened the doors for other businesses. Importance placed by the investors on dividend policy gave birth to another issue in modern corporate finance and paying the regular and constant dividend remained the vital for the managers for the duration of the 19th century (Frankfurter & Wood, 1997).

In corporate finance, the finance managers in wide-ranging face two operational decisions in their organizations: the investment (capital budgeting firm long term investment plans) and the financing decisions (the financing of the long-term investment plans). A third decision is when the firm earns profit, should the firm distribute all profit or what portion of profit to the shareholders’ as dividend or should it be ploughed back into the operations of the firm? By keeping in mind the goal of the firm, which is the shareholder’s wealth maximization?

The paper is organized as fallows, the objective of the study have been described in Section 2, Section 3 contains the literature review on the present topic, Section 4 contains the methodology, Section 5 reports the results and summarizes, concludes and policy recommendation extract from our empirical analysis.

2. Literature Review

The literature about the dividend policy of banking sector is scarce; due the unique characteristics of banking system, the major part of dividend policy in banking sector empirically studies found had been excluded from the sample of financial sector (Lintner, 1956; Razeff, 1982; Alli et al., 1993; Fenn & Liang, 2001). The prose of dynamics and drivers of dividend policy related to Lintner (1956), after that the work was advanced by Fama and Babiak (1968), The dividend policy addressed the decision of the finance managers about the distribution of the profits to the shareholders, or reinvestment in to the operations of the business (Allen & Micheally, 2002). MM theory, was given by Miller and Modigliani (1961), concluded that dividend policy was irrelevance in the perfect markets and does not affect the firm value as shareholders prefer capital gains to dividends. Gordon (1963) and Walter (1963) have given Bird in the Hand Theory. According to them, cash in hand was the major determinant of dividend policy.
Esteban and Perez (2001) explored the role of dividend policy in European banking sector, concluded that profitability, stability of the earning, growth rate, investment opportunities, financial, governing structure in the organization are also the drivers of dividend policy in European banking industry. Baker and Wurgler (2004) supported Catering Theory, in which they stressed that to cater the investor by paying smooth dividends. According to the Jensen and Meckling (1976), it was argued that the clash among the shareholders and management of the firm roofed Agency Theory.

Procianoy and Weber (2007), empirically investigated the drivers of dividend policy, and related with the dividend theories in Brazilian banking sector. They analysed the panel data of the bank’s quarterly financial statements from 2001 to 2006, used “Multivariate Data” study on dependent variables included dividend or equity interest and independent variables included rate of return, financial slack, debt, taxes and growth rate. They argued that the sharing of profit was more or less one third of the balance sheets, 75% of the total payments represented equity interest payments for the banks. They also found the support from Signalling, Packing Order Theories also found positive relationship with the slack of capital and negative relationship among debt and profit distribution. Akpomi and Nnadi (2008) investigated the impact of taxes on dividend policy in banking sector of Nigeria. “Standard Multiple Regression” Model was applied. They argued the significant correlation between dividend policy and corporate taxes; profit was the major determinant of dividend decisions, and positive correlation between profits, corporate taxes and dividends payments in Nigeria. A.Husam et al., (2010) reviewed the rationalization and main theories on dividend policy and in ending supported the statement given by Fisher Black “the harder we look at the dividends pitcher, the more it seem like a puzzle, with the pieces, that just do not fit together”(Black,1976) is still valid.

Chigozie (2010) they investigated the drivers of the dividend policy in Nigeria and applied “Factor Analytical Approach” and concluded three drivers together, earning with negative impact, current ratio and last year dividend have positive impact on dividend policy and these were significant. Broqi (2010), undertook an investigation on the relationship between capital adequacy and dividend policy in Italian banking sector,
concluded that the promotion of the capital conservation under the internationally agreed framework proposed by the Basel committee had a significant negative effect on dividend policies of the European banks specially in the period of economic downturn, when the capital decreased from the minimum capital requirement, retained earnings could be the primary source for maintaining the capital requirements for efficient and prudent banking system.

Hamid et al., (2011) explored the impact of taxes on the dividend decisions, concluded that tax rate was the determinant of dividend policy in Pakistani banking industry. Agyei and Yiadom (2011) empirically examined the panel data period 1999-2003 within Fixed and Random Effect Method, and they concluded profitability, debt, changes in dividends, collateral capacity, growth and age were significant, and the determinants of dividend policy while cash had a negative and not significant factor in banks working in Ghana. They also concluded that Profitability Theory, Agency Theory and life Cycle Theory supported the dividend policy; they found no support from Free Cash Flow Theory in Ghana. Huda and Farah (2011) investigated the key determinants of dividend policy in Bangladesh by using “Simple and Multiple Regression Techniques” it was argued that the size, liquidity, retained earnings and profitability and had a significant relationship with stock payout and cash payout. Zaman and Sumaiya (2011) empirically estimated the relationship among the dividend policy and stock return by applying Co-relation and Regression Analysis. They argued that the dividend policy is not the determinant in order to increase the excess market return in Bangladesh banking sector. Haddad et al., (2011) examined the dividend policy stability and dividend payout ratio of the banks listed in Amman Stock Exchange (ASE) throughout the period (2000-2006). They argued that the banks in Amman did not follow the stable dividend policies they have targeted payout ratios.

3. Research Methodology

The research methodology of this study is constructed around the dividend policy of banking sector in Pakistan. It includes the generation of research hypothesis, research design, and definition of the variables, limitations and expected problems in research.
3.1 Data Collection Procedure

This study is based on the secondary data collected from the Banking Supervision Department of State Bank of Pakistan, the annual reports of the commercial banks and the Security and Exchange Commission of Pakistan.

3.2 Selection of Sample

We selected the time period between 2006 to 2010, in which no merger and bank closures activities were held. During the selection of our samples and period for our research, we found that the foreign banks and specialized banks in the banking sector of Pakistan did not pay dividends in the sample period and finally the banks were selected on the basis of dividend payments whether regular or irregular in order to guard against selection bias (Kim & Maddala, 1992 and Deshmukh, 2003). To conduct the study only twenty-one (21) banks were qualified for our research out of thirty-seven (37) banks working in Pakistan from 2006 to 2010.

The Balanced Panel Data Regression was used with Fixed Effects Model (the period fixed effects dummy variables) to verify the Null hypothesis. In all specifications, TAX, Profitability, Cash and cash equivalents, retained earnings, Earning per share and Leverage were divided by Total assets (TOTA) in order to account for differences in size among the institutions and control for heteroscedasticity. While Fixed Effects Model and Descriptive analyses were performed on the Panel data for our research.

3.3 Econometric Model

The common model for panel data, to investigate the relationship among the regressors and regressant is theoretically written as follows:

\[ Y = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \ldots + \beta_k X_{kit} + \epsilon_{it} \ldots \ldots \ (1) \]

\[ CP_{it} = \alpha + \beta_1 TAX_{it} + \beta_2 PAT_{it} + \beta_3 CTA_{it} + \beta_4 SLACK_{it} + \beta_5 EPS_{it} + \beta_6 TDA_{it} + \epsilon_{it} \ldots \ldots (2) \]

\[ TP_{it} = \alpha + \beta_1 TAX_{it} + \beta_2 PAT_{it} + \beta_3 CTA_{it} + \beta_4 SLACK_{it} + \beta_5 EPS_{it} + \beta_6 TDA_{it} + \epsilon_{it} \ldots \ldots (3) \]
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Where, Y = dependent variable (Cash dividend Payout and Total dividend Payout during period t), $X_2$ = independent variable PAT (Profit after Taxes to Total Asset for Bank $i$ in time $t$), $X_3$ = independent variable CTA (Ratio of Cash and cash equivalent to Total Assets for Bank $i$ in time $t$), $X_4$ = independent variable SLACK (Accumulated retained earnings to Total assets for Bank $i$ in time $t$), $X_5$ = independent variable EPS (Earnings per share for Bank $i$ in time $t$), $X_6$ = independent variable TDA (The ratio of Total Debt to Total Assets for Bank $i$ in time $t$) and $\varepsilon_{it}$ = disturbance term

The variable TAX is the amount of income taxes paid on annual basis by the banks working in Pakistan used as proxy for tax influence on the profit distribution to the shareholders of the banks. PAT is the profit size of the banks is the major determinant of the dividend policy according to the “Profitability Theory”. The management of the banks recommended the dividend payout when banks earned enough profits. CTA is used as proxy of bank liquidity position.

The amount of retained earnings is used to demonstrate the banks financial slack (SLACK). Companies with low growth and few investment opportunities had greater aptitude to pay high dividends, there was negative relationship concluded by number of studies (Rozeff, 1982; Dempsey & Laber, 1992; Myers & Majluf, 1984; John & William, 1985; Lloyd et al., 1985; Jensen et al., 1992; Dempsey & Laber, 1992; Alli et al., 1993; Moh'd et al., 1995; Holder et al., 1998).

The earnings per share after tax (EPS) is used because dividend has been paid earning after the deduction of interest, taxes and depreciation and calculated as net earnings divided by number of shares. To compute the level of financial risk inherent in the operations of the banks. The total liabilities to total assets of the bank is used as proxy of risk (Leverage). Nazir et al. (2010), Jensen and Meckling (1976), Jensen (1986), Stulz (1988), Rozeff (1982), Higgins (1972), McCabe (1979), concluded that the leverage (Lev) also influences the dividend behaviour of the firm; if the level of the leverage is high its mean the firm is riskier in the cash flows.

3.3.1 Fixed Effects Model
In our study the cross sections included 21(N); total panel (balanced) observations are 105 and sample period: 2006 to 2010. The Fixed-Effects analysis can only support inference about the group of measurements, and the actual subject pool we looked at. The benefit of using the Fixed Effects Model is that it allows individual and /or time specific effects to be correlated with the independent variable. While the disadvantage of using the Fixed Effects Model is that the number of unknown parameter increases with the increase in the number of observations. The second disadvantage of using the Fixed Effects Model for estimation is that, it does not allow the estimation of the coefficients that variables are time-invariant (Neyman & Scott, 1948).

3.3.2 Hausman Specification

The Hausman test was formulated to test the choice between the Fixed Effects Model and Random Effect Model approaches. We applied the “Hausman specification test” to test the significance of Fixed Effects Model or Random Effects Model for our estimations. In Hausman test the null hypothesis is that REM is consistent and efficient Hausman test validates the results of Fixed Effects Model. The p-value is 0.00874, therefore we cannot reject H1. After confirming the Hausman test, Fixed Effect Model is robust to check the results after altering the assumptions of FEM.

4. Empirical Results

The Panel Data Regression along with Fixed Effects Model is used and the results are provided in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>TAX</th>
<th>PAT</th>
<th>CTA</th>
<th>SLACK</th>
<th>EPS</th>
<th>TDA</th>
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Table 1: Model 1 Regression Analysis
The regression results show that all the variables are significant in explaining the dividend cash payout policy in banking sector of Pakistan except TAX, Cash and Cash Equivalents (CTA). The F-statistic value of our model is 7.8890 (Prob.F statistic 0.00) shows that our model is significant at 1% and all proxies of independent variables and dependent variable explaining each other. The value of R-squared is 46%, which is comparatively low due to irregular payments of cash dividend in banking sector of Pakistan. which indicates the variation in independent variable is explained by the independent variables.
In the 1st model the Dividend Cash Payout was taken as dependent variable and TAX, PAT, CTA, SLACK, EPS and TDA were taken as independent variables. Among all of the independent variables TAX and CTA reported insignificant results and PAT, SLACK, EPS, TDA reported significant and the determinant of Cash Dividend policy in the banking sector of Pakistan.

In our findings TDA with 2% prob. with the mean value of 89%, maximum value of 100.84% and minimum value of 50.23% is the highest influential variable in determining the Cash dividend Policy in banking sector of Pakistan followed by the PAT with 5% prob. with the mean value of 1.033% the maximum value of 26.94 and the minimum value of -10.43%, EPS with 8% prob. the mean value of 3.68% the maximum value of 24.47% and the minimum value of -41.29% and SLACK with 10% prob. the mean value 1.022% the maximum value of 50.62%and the minimum value of 3.02%. The results of our first model with Cash Payout as dependent variable, supported the Profitability Theory, Packing Order Theory and Agency Cost Theory and we found no support of Tax Theory and free Cash flow theory in banking sector of Pakistan.

Table 3: Model 2 Regression Analysis and Results

<table>
<thead>
<tr>
<th>C</th>
<th>TAX</th>
<th>PAT</th>
<th>CTA</th>
<th>SLACK</th>
<th>EPS</th>
<th>TDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>15.61</td>
<td>-0.924</td>
<td>1.901</td>
<td>0.494</td>
<td>-0.7852</td>
<td>1.065</td>
</tr>
<tr>
<td>Std.Error</td>
<td>10.628</td>
<td>2.045</td>
<td>0.770</td>
<td>0.302</td>
<td>0.601</td>
<td>0.615</td>
</tr>
<tr>
<td>t-Statistic</td>
<td>1.469</td>
<td>-0.451</td>
<td>2.46</td>
<td>1.635</td>
<td>-1.306</td>
<td>1.731</td>
</tr>
<tr>
<td>Prob.</td>
<td>0.145</td>
<td>0.65</td>
<td>0.01**</td>
<td>0.10*</td>
<td>0.19</td>
<td>0.08*</td>
</tr>
</tbody>
</table>

Level of Significance: * Significant at 10%, ** Significant 5%, *** Significant at 1%

Table 4: Model 2 Combine Results of Regression and Descriptive Analysis

<table>
<thead>
<tr>
<th>C</th>
<th>TAX</th>
<th>PAT</th>
<th>CTA</th>
<th>SLACK</th>
<th>EPS</th>
<th>TDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>15.617</td>
<td>-0.924</td>
<td>1.901</td>
<td>0.494</td>
<td>-0.785</td>
<td>1.065</td>
</tr>
</tbody>
</table>
The regression results show that all the variables are insignificant in explaining the total dividend payout policy in banking sector of Pakistan except PAT, CTA and EPS. The F-statistic value of our model is 10.81017 (Prob.F statistic 0.0000000) shows that our model is significant at 1% and all proxies of independent variables and dependent variable explaining each other. The value of R-squared is 54% which indicates the variation in independent variable is explained by the independent variables. The value of R-squared is less than and the value of Durbin-Watson test stat which shows that our model is Best Fit and there is no problem of autocorrelation.

In the 2nd model the Dividend Total Payout was taken as dependent variable and TAX, PAT, CTA, SLACK, EPS and TDA were taken as independent variables. We utilized the Balanced Panel Date Regression with Fixed Effect to verify the Null hypothesis, all of the independent variables PAT, CTA and EPS reported statically significant results and TAX, SLACK and TDA reported insignificant results. In our findings, PAT is statically significant at 1.5% prob. with the mean value of 12.99% (9.6% contributed by the Cash Payout and 3.39% contributed by the Stock Payout).

The maximum value of 125% and minimum value of 0% is the highest influential variable in determining the Stock Dividend Policy in banking sector of Pakistan followed by the EPS is statically significant at 8.6% prob. with the mean value of 3.68% the maximum value of 24.47 and the minimum value of -41.29%.CTA is statically significant at 10% prob. with the mean value of 10.73% with the standard deviation 4.97 and the maximum and minimum values 28.05% and 3.02% respectively.

The results of our second model with Total Payout as dependent variable supported only Profitability theory and Free Cash Flow theory and we
found no support of Tax theory, Packing Order Theory, Agency Cost Theory in banking sector of Pakistan.

5. Conclusions and Recommendations

Among all of the independent variables TAX and CTA reported insignificant results and PAT, SLACK, EPS, TDA reported significant results and the determinants of Cash Dividend policy in the banking sector of Pakistan. In our findings, TDA with 2% prob. with the mean value of 89%, maximum value of 100.84% and minimum value of 50.23% is the most influential and significant predictor in determining the Cash dividend Policy in banking sector of Pakistan. Followed by the PAT with 5% prob. with the mean value of 1.033% the maximum value of 26.94 and the minimum value of -10.43%, EPS with 8% prob. the mean value of 3.68% the maximum value of 24.47% and the minimum value of -41.29% and SLACK with 10% prob. the mean value 1.022% the maximum value of 50.62% and the minimum value of 3.02%.

The results of first model with Cash Payout as dependent variable supported the Profitability Theory, Packing Order Theory and Agency Cost Theory and we found no support for Tax Theory and Free Cash Flow Theory in banking sector of Pakistan. The relationship of cash dividend with the interpreter variables could have been shown better scenario, if the banks shall pay cash dividend on regular basis. Our 2nd model represented the actual dividend policy taken by the banks in the banking industry of Pakistan between the periods 2006 to 2010.

The study combined the Cash payout and Stock payout and made our 2nd depended variable “Dividend Total Payout” was taken as dependent variable and TAX, PAT, CTA, SLACK, EPS and TDA were taken as independent variables. All of the independent variables PAT, CTA and EPS reported statistically significant results and TAX, SLACK and TDA reported insignificant results. In our findings, PAT is statistically significant at 1.5% prob. with the mean value of 12.99% (9.6% contributed by the Cash Payout and 3.39% contributed by the Stock Payout). The maximum value of 125% and minimum value of 0% is the highest influential variable in determining the Stock dividend Policy in banking sector of Pakistan followed by the EPS is statically significant at 8.6% prob.
with the mean value of 3.68% the maximum value of 24.47 and the minimum value of -41.29%. CTA is statically significant at 10% prob. with the mean value of 10.73% with the standard deviation 4.97 and the maximum and minimum values 28.05% and 3.02% respectively. The results of our second model with Total Payout as dependent variable supported only Profitability Theory and Free Cash Flow Theory and we found no support of Tax theory, Packing Order Theory, Agency Cost Theory in banking sector of Pakistan.


It was observed that profitability appeared to be the most significant determinant of dividend policy in the banking sector of Pakistan. Due to the vulnerability of bank’s profitability and due to the economic changes in Pakistan; it is not viable for banks to formulate a dividend policy that follows a constant payout but a minimum rate for dividend payments according to one year money market deposit rate can safeguard the interests of the risk averse investors in the market, and also, Agency Problem can be dealt with to a certain degree.
References


