

Theories and Factors Followed for Setting Dividend Policy: Empirical Evidence from Pakistani Banks

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Article History:

ABSTRACT

Received:

19 Jun, 2018

Revised:

25 Aug, 2018

Accepted:

28 Sep, 2018

Purpose: The main purpose of this study is to examine dividend theories and factors followed by banks in Pakistan for setting dividend policy from 2005 to 2015.

Methodology/Design: Panel regression is used on annual data to check the impact of different factors on dividend policy of 24 Pakistani banks.

Findings: The results of study reveal that banks in Pakistan follow the dividend smoothing hypothesis, life cycle theory, signaling theory and pecking order theory while setting dividend policies. The results also highlight that profitability; investment opportunities, last year dividend, growth and loan deposit ratio have significant influence on dividend policy of Pakistani banks.

Implications: In the light of these results, it is recommended that management of banks needs to look into these factors while formulating dividend policy of their respective banks. By catering these factors they are in a position to set optimal dividend policy which not only fulfills banks' growth and investment needs, but also satisfy investors' need of return.

Limitations: This study uses only listed commercial banks of Pakistan. All other i.e. specialized banks are excluded in this study.

Keywords: Dividend policy, banking sector, Pakistan Stock Exchange (PSX), Bank Specific Actors, Macroeconomic Factor,

1. Introduction

Every successful business earns profit. Now a question arises that how much of this profit should be distributed to shareholders in the form of dividend and how much should be retained in business for future needs. This decision is guided by dividend policy. There are two main schools of thoughts regarding the impact of dividend policy on firm value. First advocates the irrelevance of dividend and second supports the relevance of dividend. Miller and Modigliani (1961) explained that dividend policy has no impact on the value of firm in the perfect capital market. But afterwards a lot of researchers opposed this dividend irrelevance theory, and stated that a large number of factors cause capital market imperfect i.e. taxes, agency cost, transaction cost, etc.

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(Lintner, 1956; Gordon, 1959; Walter, 1963; Black, 1976; Jensen & Meckling, 1976; John & Williams, 1985; Myers & Majluf, 1984; DeAngelo & DeAngelo, 2007). Even though a lot of research in this area has been conducted, but still phenomena are not clear. Brealey and Myers (2003) showed the dividend phenomenon among the top 10 unresolved issues in corporate finance. Black (1976) explained this puzzle in following words, “The harder we look at the dividend policy picture, the more it seems like puzzle, with pieces that just don’t fit together”(p. 8). Dividend policy influences financing and investing decisions of firm. When a cash dividend is distributed among shareholders, it effects on liquidity of firm. Dividend payments decrease retained earnings for investments and cause need for external financing. So, it influences on capital structure and cost of capital of firm. Dividend payout also positively influence market price of stock (Watson & Head 2004). Therefore dividend policy should be set in such a manner that fulfills shareholders as well as firm’s needs. According to Khan and Khan (2007), during the third Phase of financial sector reforms (2002- 2004) the focus of the State Bank of Pakistan (SBP) was on the consolidation and improvement in the structure process of the banking sector. Banks were encouraged to make independent subsidiaries to work as mutual funds, asset management companies, venture capital, foreign exchange companies, etc.

The special focus was given to Automation and Prudential Regulations. Banking audit, monitoring and corporate governance is given due importance and is taken great care. There is an empirical gap in literature in the aftermath of these reforms in banking sector of Pakistan. So the purpose of this study is to examine dividend theories and factors followed by banks in Pakistan for setting dividend policy from 2005 to 2015. The study provides different variables which have an impact on dividend policy of banking sector of Pakistan. It also checks which dividend payment theories are applicable on the Pakistani banking sector. Although, determinants of dividend policy of Pakistani banking sector is scrutinized by number of researchers (i.e. Gul, Mughal, Bukhari, & Shabir, 2012; Imran, Usman, & Nishat, 2013; Zameer, Rasool, Iqbal, & Arshad, 2013; Khan et al. (2017).

However, this paper makes its contribution in several ways. First it uses some variables which are not previously used for Pakistani banking sector e.g. total deposits to total assets ratio and GDP growth rate are variables used by Misra (2015) on Indian banking sector, Loan deposit ratio is used by Olowe and Moyosore (2014) on the Nigerian banking sector, Fahim et al. (2015) on financial sector of Pakistan, Ahmed (2015) on UAE banking sector and last variable Investment opportunities as independent variable is used by Ahmed and Javaid (2008), Hussain and Usman (2013) on corporate sector of Pakistan. Secondly, this study provides updated results by using the latest data of banks from 2005 to 2015 in the aftermath of third phase of financial reforms. Finally, to the best of our knowledge, we have not found any research conducted which specifically focuses on application of different dividend policies on the banks of Pakistan. So, results are compared with existing dividend theories to check which theories are applicable to the banking sector of Pakistan. The study is designed to fulfill the following two objectives; (1). To

investigate the dividend payment theories followed by Pakistani banks for setting dividend policy.
(2). To find the determinants/ factors affecting the dividend policy of Pakistani banks.

2 Literature Review

2.1 Dividend Theories

Past literature on dividend policy fails to reach at identical conclusion regarding dividend payment and still it remains puzzle. Miller and Modigliani (1961) considered dividend policy irrelevant in determining firm value in perfect capital market but they said value is affected from its earning power and underlying risk. But afterwards, researchers opposed this argument by stating that in real world, lot of imperfections exists i.e. taxes, transaction cost, agency cost, etc. which effect firm value.

Lintner (1956) and Gordon (1959) explained “bird in hand” theory by stating that investors prefer current amount of dividends which is certain than future capital gain which is uncertain. Elton and Gruber (1970) enlightened the clientele and tax effect on dividend. They said that investors in high tax range desire more on capital gain than investors in low tax range. Firms paying high dividends should attract investor of low tax range than firms paying low dividends. Black (1976) also described that in a market where dividend is taxed more than capital gain corporations avoids to pay dividend for maximizing their expected after tax return. Jacob and Michaely (2017) concluded that dividend taxation impact dividend policy.

Dividend serves as signal of firm’s performance. John and Williams (1985), Below and Johson (1996), Al-Shattarat, Atmeh, and Al-Shattarat (2013) explained that corporate insider have private information which they used for dividend announcement and thus impact on share prices. It is observed that announcement of increase in dividend results to increase in shareholder’s wealth (Azquith & Mullins, 1983). Management of companies acts as agent of shareholders. Conflict of interest of both parties is common dilemma. This conflict of interest give rise to agency cost i.e. cost incurred in monitoring management and manager’s risk aversion (Baker, 2009). This cost can be reduced by paying dividend to shareholders (Rozeff, 1982). Myers and Majluf (1984) presented pecking order theory by stating that firm should prefer internal source of funds for financing its profitable investment projects.

DeAngelo and DeAngelo (2007) provide the concept of life cycle of business. This theory was in line with Lintner (1956), Myers and Majluf (1984), Fama and French (2001). He stated that a firm young in age and have more investment opportunities retain more earnings than distributing it to shareholders. On the other hand, mature firms with stable earnings and having sufficient free cash flow distribute high dividends.

2.2 Determinants of Dividend Policy

Dividend policy affects firm value. Setting of optimal dividend policy increases shareholder’s as well as firm value. In literature, large numbers of factors are provided which

should be considered by management while setting dividend policy. Debate relating to determinants of dividend policy boosted up from work of Lintner (1956) when he took the interview of 28 managers in USA and identified that current earnings (profitability) and last year dividend are most important determinants for USA firms. The findings of Lintner (1956) were echoed by many researchers i.e. (Pruitt & Gitman, 1991; Baker & Powell, 2000; Baker, Powell, & Veit, 2002). Misra (2015) explored determinants of Indian banking sector. She included bank specific factors and also macroeconomic factors for this purpose. She concluded that total deposits to total assets and return on asset have negative impact on dividend payout while growth rate of real GDP positively affect dividend policy.

Rozeff (1982) searched out data of USA firms and found that as a firm have more growth opportunities, it pays low dividend. Similarly Fama and French (2001), Amidu and Abor (2006), Gill et al. (2010), Al-Kuwari (2010), Imran (2011), Maladjian and Khoury (2014) found negative relationship and stated that rise in growth opportunities leads to fall in dividend payout of firm. Olowe and Moyosore (2014) searched on data of Nigerian banking sector to find determinants of dividend payout covering the period from 2006 to 2008. After pooled regression analysis they concluded that profitability have positive impact on dividend payout but found negative relationship with revenue growth, loan deposit ratio, retained earnings. Ahmed and Javid (2008) conducted study on 320 non-financial firms listed on Karachi stock exchange during 2001-06 for identifying determinants of dividend policy. They noted that negative relationship exists between leverage, investment opportunities and dividend payments. Imran (2011) explored positive impact of growth in sales, last period dividend and profitability on dividend policy while cash flows showed negative association with it in Pakistani corporate sector. Gul et al. (2012) observed that banks listed on Karachi stock exchange keep in mind the factors i.e. growth, firm size, profitability, leverage and firm risk when they have to decide regarding dividend payments. Alzomaia and Khadhiri (2013) investigated the determinants of dividend policy of Saudi Arabia firms and listed profitability, firm size and last year dividend as main factors. Imran et al. (2013) analyzed financial record of Pakistani banks and found positive influence of profitability, last year dividend on dividend policy and negative relationship is observed with liquidity. Yousaf and Ismail (2016) said that earnings, investment opportunities and debt are major factors in deciding dividend payout ratio for Malaysian companies.

Khan et al. (2017) analyzed the Pakistani banking sector by using data from 2008 to 2014. Finding favors firm size as important variable for dividend policy. Al-Najjar¹ and Kilincarslan (2018) studied the reports of 264 firms listed on ISE in turkey from 2003 to 2012. They summarized that more profitable, mature, and larger firms pay more dividend while firms with high growth and debt pay less dividend. Gohar and Alam (2018) found last year dividend and leverage as determinants of dividend policy of firms listed on PSX.

2.3 Hypotheses Development

Following research hypotheses are developed which are based on our research question.

H1: There is a positive relationship between profitability and dividend payout.

H2: There is a negative relationship between total deposits to total assets ratio and dividend payout.

H3: There is a negative relationship between growth and dividend payout.

H4: There is a negative relationship between loan deposit ratio and dividend payout.

H5: There is a negative relationship between investment opportunities and dividend payout.

H6: There is a negative relationship between leverage and dividend payout.

H7: There is a positive relationship between last year dividend and dividend payout.

H8: There is a positive relationship between GDP growth rate and dividend payout.

3 Research Methodology

3.1 Sample Design and Data Collection

All commercial banks listed on Pakistan Stock Exchange (PSX) during the 2005-2015 are included in study. Bank specific data is taken from audited annual reports of the respective banks from their official websites, Pakistan Stock Exchange (PSE), State Bank of Pakistan (SBP) while macroeconomic data is taken from Pakistan Bureau of Statistics (PBS). The banks included in study are Allied Bank Limited (ABL), Askari Bank Limited, AL Habib, Alfalah, The Bank of Punjab (BOP), BankIslami Pakistan, Habib Bank Limited (HBL), Faysal Bank Limited, Habib Metropolitan Bank Limited, Jahangir Siddiqi Bank (JS), Meezan Bank Limited, National Bank of Pakistan (NBP), Samba Bank, Silk Bank, Standard Chartered (Pakistan) Bank, Muslim Commercial Bank Limited (MCB), Bank of Khyber (BOK), United Bank Limited (UBL), ArifHabib Bank, National Investment Bank (NIB), Mybank, Pakistan Industrial Credit and Investment Corporation (PICIC), KASB Bank and Atlas bank limited.

3.2 Measurement of Variables

Dividend payout ratio as dependent is measured as cash dividend / Net Profit after tax (Gill et al., 2010). This shows how much of profit is distributed as dividend among shareholders. Profit is the main source for distribution of dividend and proxy return on assets is measured as Net Profit after tax / Total Assets (Amidu & Abor, 2006). Positive relationship is expected (Lintner, 1956). Total deposits to total assets ratio (TDTA) shows portion of deposits and other liabilities of business and this portion impact negatively on dividend payments (Misra, 2015). Growth opportunities available to firm also impact on retention and distribution of profit, measured as growth in interest and non-interest income / last year interest and non-interest income, the negative relationship is expected (Maladjian & Khoury, 2014). Loan deposit ratio (LDR) effects firm's liquidity and ability to pay dividend (Olowe & Moyosore, 2014) and measures as total loan and

advances/ total deposits (Fahim et al., 2015). Negative association is expected with loan deposit ratio (Kinfe, 2011).

Investment opportunities as explanatory variable measured as accumulated Retained earnings to total assets and negative relationship is expected (Ahmed & Javid, 2008). Leverage is measured as total debt/ total equity (Zameer et al., 2013) and negative relationship is expected (Rozeff, 1982). Last year dividend (LYD) is considered and proved most important factor in literature and last year dividend per share is used in study. Positive relationship of last year dividend is expected with dividend payout (Lintner, 1956). In last GDP growth rate is used for measuring impact of macroeconomic factor on dividend policy and positive sign of association is expected (Misra, 2015). Summary of variables used, their measurement and expected sign is summarized in table 1 as under:

3.3 Model Specification

By applying panel data regression model in this study, following formula is generated.

$$DPR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 TDTA_{it} + \beta_3 GROWTH_{it} + \beta_4 LDR_{it} + \beta_5 IO_{it} + \beta_6 LEVERAGE_{it} + \beta_7 LYD_{it} + \beta_8 GDP + \varepsilon_{it}$$

Table 1: Summary of Measures

Variable Name	Definitions	Expectation
Dividend Payout Ratio	Cash Dividend / Net Profit after tax	
Profitability (ROA)	Net Profit after tax / Total Assets	Positive
Total Deposits to Total Assets	Total Deposits divided by Total Assets	Negative
Growth	(current year income – Last year income) / Last year income	Negative
Loan to Deposit Ratio	Total Loans and Advances / Total Deposits	Negative
Investment Opportunities	Accumulated Retained Earnings / Total Assets	Negative
Leverage	Total Debt / Total Equity	Negative
Last Year Dividend	Lagged dividend payment per share	Positive
GDP growth rate	Growth rate of GDP	Positive

4 Results and Discussion

Data used for study is analysed through descriptive statistics and panel multiple regression with random effect in order to check the relationship between dependent and independent variables. Descriptive statistics are provided in table 2.

Table 2: Summary of Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Minimum	Maximum
DPR	210	0.1988	0.2565	0.0000	0.8875
Profitability (ROA)	210	0.0042	0.0207	-0.0774	0.0399
TDTA	210	0.7368	0.1217	0.2114	0.9326
Growth	210	0.2683	0.3414	-0.2416	1.738
LDR	210	0.6156	0.1545	0.3108	1.097
IO	210	-0.0105	0.0653	-0.2799	0.0653
Leverage	210	0.8747	0.1271	0.0000	0.9842
LYD	210	1.7325	2.956	0.0000	14.00
GDP Growth rate	210	0.0416	0.0197	0.0036	0.0896

*Values rounded off to four decimal places

Table 2 indicates that each variable has 210 observations during the analysis period. Table shows that dividend payout ratio (DPR) of banks listed on PSX pays on average 19.88% of their earnings as cash dividend. Return on asset (ROA) used as proxy for profitability shows that banks generate return 0.42% this ratio explains that banks are not efficiently utilizing their assets for generating revenue.

Average of Total Deposits to Total Assets (TDTA) ratio is 74%. Growth in revenue (Growth) and Loan Deposit Ratio (LDR) have mean 26.83% and 61.56% respectively. Average value of Investment Opportunities (IO) is -1.05% and of leverage is 87.47%. Last year dividend (LYD) is paid on average Rs.1.73 per share with deviation of Rs. 2.95 per share and GDP variable shows that Pakistan's economy is growing at rate of 4.16% on average during last 11 years (2005-15).

4.1 Assumptions of Regression Model

In order to check impact of independent variables on dependent variable, regression test is run.

Table 3: VIF Test Results

Variable	VIF	Tolerance
ROA	1.80	0.5550
IO	2.07	0.4819
TDTA	2.71	0.3694
Leverage	2.39	0.4175
LYD	1.40	0.7144
Growth	1.51	0.6619
LDR	1.38	0.7231
GDP	1.41	0.6987
Mean VIF	1.84	

Application of regression test requires different assumptions which need to be fulfilled. Multicollinearity, autocorrelation, homoscedasticity and linearity/ normality of residuals are important assumptions which are tested. For multicollinearity assumption, Variance inflation factor (VIF) is run and results are presented in Table 3. Mean VIF value 1.84 is less than standard point 10 (Wooldridge, 2008). So, there is no problem of multicollinearity. Wooldridge test (2002) is used for checking the autocorrelation. Following results (Table 4) rejects H_0 which shows presence of autocorrelation.

Table 4: Wooldridge Test Results

Ho: no first-order autocorrelation	
F(1, 21)	39.37
Prob. > F	0.0000

Breusch Pagan test is conducted for checking homoscedasticity. Under mentioned result (Table 5) indicates rejection of H_0 . So heteroskedasticity is present in data.

Table 5: Breush Pagan Test Results

Ho: Constant variance	
chi2(1)	13.84
Prob. > chi2	0.0002

Linearity is checked by through plot of residuals values and predicted values. Following PP plot (Figure 1) shows that there is no problem of linearity in data.

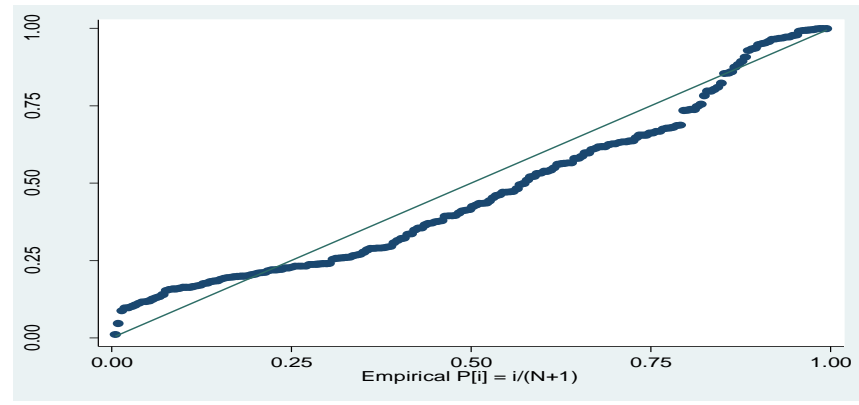


Figure 1: PP Plot of residuals and predicted values

Problem of heteroskedasticity and autocorrelation in data is solved by using special command (VCE Robust) at the end of regression command which is available in STATA version 11.

4.2 Selection of Regression Model

There are different models available for panel data which are used for regression. The most popular models are fixed effect models, random effect model and pooled effect model. First of all, Breusch and Pagan Lagrangian multiplier test (LM test) is run for selection between pooled or random effect models. The test result (Table 6) rejects the H_0 of the selection of pooled effect model.

Table 6: LM Test Results

H_0=Pooled effect model is appropriated	
chi2(1)	15.51
Prob. > chi2	0.0001

LM test results favor the use of random effect model. Now, hausman specification test is run for selection between fixed effect and random effect. Following results (Table 7) fail to reject H_0 . Which clarifies that Random effect is most suitable for analysis.

Table 7: Hausman Specification Test Result

H₀=Random effect model is appropriated	
chi2(8)	10.07
Prob.>chi2	0.2601

4.3 Regression Results

Regression results are reported in Table 8. According to results of this study profitability has a positive significant relationship with dividend pay-out and supported to life cycle theory which explains that mature firms with more profit can pay more dividends. Firms with high profits used it as signaling device for future performance. This result supports to dividend smoothing hypothesis of Lintner (1956).

The result is supported by past researchers i.e. Amidu and Abor (2006), Imran (2011), Arif and Akbar (2013). But disagree with the finding of Maladjian and Khoury (2014), Misra (2015), Ofori-Sasu et al. (2017) which found negative association with dividend payout. Total deposits to total assets ratio has a negative and insignificant association with dividend payout. This means that any change in this ratio has no impact on dividend payout. Growth in interest and non-interest income is found to have a negative and significant relationship with dividend payout ratio. Life cycle theory states that young firms have more growth opportunities but normally less profitable.

Table 8: Regression Model Results with Random Effect

Independent variables	Dependent variable = DPR		
	Coefficient	Std. Err.	p-value
Profitability (ROA)	1.14	0.63	0.07***
TDTA	-0.16	0.12	0.20
Growth	-0.07	0.03	0.01**
LDR	-0.30	0.12	0.01**
IO	0.38	0.20	0.06***
Leverage	0.07	0.09	0.41
LYD	0.05	0.01	0.00*
GDP growth rate	0.40	0.41	0.34
Constant	0.38	0.11	0.00
No. of Observations	210		
N0. Of Groups	24		
Wald Chi (8)	72.12		
Prob.>chi2	0.000		
R-Square	0.5229		

Significant at the 1%, 5%, and 10% levels

The result is supported by past researchers i.e. Amidu and Abor (2006), Imran (2011), Arif and Akbar (2013). But disagree with the finding of Maladjian and Khoury (2014), Misra (2015), Ofori-Sasu et al. (2017) which found negative association with dividend payout. Total deposits to total assets ratio has a negative and insignificant association with dividend payout. This means that any change in this ratio has no impact on dividend payout. Growth in interest and non-interest income is found to have a negative and significant relationship with dividend payout ratio. Life cycle theory states that young firms have more growth opportunities but normally less profitable. So these firms retain cash with them in order to finance favourable growth opportunities (Ross et al., 2011). Young firms should prefer to retain earnings in order to finance its growth opportunities (Myers & Majluf, 1984) because external source of finance is costly than internally generated funds (Rozeff, 1982). This negative relationship is in agreement with Rozeff (1982), Amidu and Abor (2006), Gill et al. (2010), Al-Kuwari (2010), Maladjian and Khoury (2014). But study findings are contradictory with the results of Naceur et al. (2006), Gul et al. (2012).

5. Discussion

The loan to deposit ratio has a negative and significant impact on dividend payout. It explains that as an increase in loan deposit ratio results in decrease in dividend payments. Olowe and Moyosore (2014) pointed out that high loan to deposit ratio reduces liquidity position of banks especially in form of cash. So it is not in a position to pay high dividend. It is argued that more deposits funds are used in lendings and less are retained for paying dividends. Result of this variable is same as found by Olowe and Moyosore (2014), Kinfe (2011). But result is conflicting with Fahim et al. (2015). The result for investment opportunities shows positive significant influence on dividend payout but this relationship was not expected. Positive relationship explains that as more profitable investment opportunities are available such that business earns more profit by investing in these projects which results high dividend payments.

Kim and Jang (2010) said that firms having more investment opportunities pay high dividend in order to invite new investors. He also stated that firm pay high dividend also for enhancing goodwill of business. Same phenomenon is explained by signaling theory. Positive relationship between investment opportunities and dividend policy is proved by Aivazian et al. (2003), Kim and Jang (2010), Yousaf and Ismail (2016). But this result is contradicted with the findings of Ahmed and Javid (2008), Hussain and Usman (2013). Insignificant association between leverage and dividend payout is found in regression result and also got unexpected sign. It means that debt financing has no impact on dividend payments. Study conducted on Pakistan's banking sector by Zameer et al. (2013) and Khan et al. (2017) also concluded that leverage has no relationship with dividend payout of Pakistani banking sector. But finding of study with regard to leverage is disagreeing with findings of scholars such as Rozeff (1982) and John and Muthusamy (2010) because these scholars found significant negative impact of leverage. Positive significant

result clears that Pakistani banks pay more attention to previous dividend payment because they want to maintain stability in dividend payment. Lintner (1956) provided that managers try to keep dividend stable and increase only when they are sure to maintain it and managers also avoid dividend cuts. Because any change in dividend is treated as a signal for the future performance of the firm. Result of last year dividend is supported by Lintner (1956), Pruitt and Gitman (1991), Baker and Powell (2000), Baker et al. (2002), Ahmed and Javid (2008). But Yousaf and Ismail (2016) proved no relationship between lagged dividend and dividend payout. The macroeconomic factor such as GDP growth shows a positive but insignificant relationship with dividend payout. This means that GDP growth of Pakistan does not affect the dividend payment decision of banks. Yukun Yao (2014) found positive and Misra (2015) and Ofori-Sasu (2017) found negative but significant impact of this variable on dividend payout.

The purpose of the study is to find determinants of dividend policy and also to check that which dividend policies are followed by the banking sector of Pakistan while setting dividend policy. Results of this study show that profitability has a positive impact on dividend supporting life cycle theory and signaling theory. Negative significant impact of growth on dividend payout depicts that young firms have more growth opportunities and retain funds for financing this growth instead of paying dividends. This association supports the life cycle theory and Pecking order theory but contradicts with agency theory. Loan deposit ratio has a negative correlation with dividend payout. It indicates that when banks grant more loans, it reduces liquidity of banks which results in payment of low dividend. The variable 'Investment Opportunities' shows positive impact on dividend payout. This means that by investing in profitable projects, profits of banks increase which lead to rise in dividend payments. The last year dividend has significant positive association with dividend payout. It shows that for paying dividend in current period, Pakistani banks focus on previous dividend payments. So they maintain stability in dividend payout. This supports the dividend smoothing hypothesis. Regression results show that Total Deposits to Total Assets ratio, leverage and GDP growth rate has no significant relationship with dividend payout. Management of banks can use results of this study for setting optimal dividend policy which not only fulfills banks' growth and investment needs but also satisfy investors' need of return.

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