

A Panel Data Analysis of Dividend Policy Determinants: A Study on Financial Sector of Bangladesh

Mohammad Shahidul Islam

Associate Professor, Department of Business Administration, BGMEA University of Fashion and Technology (BUFT), Dhaka, Bangladesh.

Email: shahidulislam28@yahoo.com

ABSTRACT :

A firm considers various determinants when approaching a dividend policy decision. To analyze the determinants of dividend policy in the context of Bangladesh, it is taken the data of various financial indicators of sample Banks. The panel data analysis technique is used for inferring the result. The result shows that the Lagged DPR, size, leverage have positive impact on the DPR. The decision maker, investors and other stakeholders should follow these findings.

Key words : Panel data analysis, fixed effect model, Random effect model, EPS, MM model, Lintner model.

1. INTRODUCTION :

Dividend may be defined as the distribution of created value to the shareholders. It may be form of 'Cash Dividend' or through distribution of stocks of the company which is known as 'Stock Dividend'. Dividend policy may be defined as the trade-off between the magnitude of retained earnings and distributed cash or securities. Dividend decision should not merely be taken to be a decision of appropriation of profits to the shareholders. There are several complex issues in it. As such the factors influencing the dividend decisions have always been put under scanner by the experts and researchers in the field of financial management. Dividend payment of a company is looked upon differently by different sets of people associated with the company. For the investors, dividends are not merely means of regular earnings but also an important input for determining the worth and credential of the firm. For managers, dividend payment might well determine the level of investment in profitable investment projects. Lenders look at it carefully because they feel that the more the dividend payment, the less will be the amount available for servicing and redemption of their claims.

Corporate dividend behaviour is looked upon in many ways by the experts in the area of financial literature. Several theories evolved explaining corporate dividend

behaviour. One such theory is known as 'Signaling Theory'. According to this theory, a firm uses dividend policy as a mechanism to signal outsiders regarding the stability and growth prospect of the firm. Aharony and Swary (1980), Asquith and Mullins (1983) etc. are the proponents of the signaling theory of dividend decision. However, recent studies have not supported this hypothesized relationship between dividend changes and future earnings (e.g., DeAngelo, DeAngelo and Skinner (1996), Benartzi, Michaely and Thaler (1997)). Another theory in respect of corporate dividend policy goes by the name of 'Incumbency Rent Theory'. Fudenberg and Tirole (1995) are the proponents of this theory. According to this theory if managers enjoy private benefit from being in control, they individually and rationally, smooth dividends. So, in bad times, they pay out too much dividends to lengthen their tenure and in good times, the managers are not to be worried about their tenure in office and naturally opt for lower dividend payment. Again, there is the 'Agency Theory' of dividend payment. According to this theory, dividend policies address agency problems between corporate insiders and outside shareholders. This theory suggests that, unless profits are paid out to shareholders, they may be diverted by the insiders for personal use or committed to unprofitable projects that provide private benefits for the insiders. As a consequence, outside shareholders have a preference of dividends over retained earnings. There is still another theory in the name of 'Tax Clientele Theory'. This theory is based on comparative tax treatment associated with cash received on account of current dividend and cash to be received in the future as capital gains arising out of change in share price. This theory uses the relative tax advantage of paying dividend now or retaining the excess cash for future capital gains in explaining the dividend behaviour of firms. This theory suggests that the tax on dividend (i.e., tax on current income) is greater than or equal to the tax on capital gains (i.e., tax on future income). Again, tax on dividend is to be paid now while tax on capital gains is to be paid in future. Thus, according to this theory the optimal dividend policy is no or very low dividend payment. Brennan (1970), De Angelo (1991), etc. are the proponents of this theory of dividend decision. Even after such a long period of time since corporate dividend behaviour emerged as one of the well-researched areas in financial management, dividend decision is still one of the thorniest puzzle in corporate finance. Least to say, factors affecting such a decision remain to be one of the areas where academicians and researchers are introspecting and have to do a lot. In this backdrop, the present study looks into the pattern of dividend payments in Bangladeshi context and analyzes the factors determining such payment of dividends.

2. PRIOR EVIDENCES :

2.1. Prior Evidences: Foreign Context

Lintner (1956) has made a pioneering study to see various aspects of distribution of corporate earnings among dividends, retained earnings and taxes. He found that firms are primarily concerned with the stability of dividends and managers appear to believe strongly

that market puts a premium on firms with a stable dividend policy. He has also observed that earnings are the most important determinant of dividend decision. He has pointed out that most companies have a target payout ratio. If sudden surge in earnings occurs, firms adjust their dividends slowly. Moreover, firms have found to be more reluctant to cut dividends. He also argued that even if investment opportunities are abundant for a firm, then also the firm opts to pay dividend at a level which is more or less the same as that of the previous years. After that the firm judges the adequacy or otherwise of internal funds and accordingly it decided on resorting to outside funds to meet that investment requirement.

Collins, Saxena and Wansley (1996) have studied the role of insiders in determination of dividend policy of a firm. Study results indicate that payout ratio is negatively related to firm's past and future expected growth rate of earnings, its level of systematic risk and its insider holdings. They also found that regulatory status plays more important role in the determination of strength of association between insider holding and payout ratio in the case of utilities than in the case of financial firms.

Souza (1999) examined the effects of agency cost, market risk, and investment opportunities on an international firm's dividend policy. He used assets and previous sales growth and market to book value of stock with its investment chances use as the substitute for the agency cost, investment chances, market threat accordingly. He used the three hundred forty nine companies as a sample worldwide for finding the relationship among dividend payout, agency costs, investment chances, market threat. He used past three years' sales growth and market to book value of stock, as an alternative for the firm's investment chances in the near future. The dividend payout variable used in his study, with 3 years straight average taken from 1995 to 1997, while the institutional holdings, beta value, growth, and market and book values all pertain to the year 1997. He obtained dividend payout, beta and growth data from Data Stream, while institutional ownership is obtained from World Scope Disclosure. Multiple regression analyses are used for explaining association among the dividend payout, agency costs, investment chances, market threat payout ratio, where as dividend is dependent variable while beta, past three years' sales growth, percent age of assets, with market-to- book value are independent variables. Outcome of this research maintain the previous research outcome because it show agency cost and market threat is negatively effect on dividend payments, but it not maintain the outcome about negative impact of investment chance on dividend, according to this research investment chances has significant impact on dividend payout policy with respect to international point of view.

Gugler (2003) observed that state-controlled firms are characterized by dividend smoothening, very high payout and strong reluctance to cut dividends while family-

controlled firms are not subject to dividend smoothening, have a low payout and are least reluctant to cut dividends. According to him, this finding applies more to firms having good growth prospects (positive R&D spending). But, in case of firms with low investment opportunities (no R&D spending), target payout ratio tends to be much higher irrespective of who controls the corporation (state control or family control).

Bathala and Rao (2004) inferred that firms with high dividend yields have lower costs of capital. They found that large firms are associated with higher dividend yields. Again, dividend yields of financial and public utility companies are found to be larger than that of other types of companies. The factors like current ratio, geometric mean of annual changes in Economic Value Added, insiders' total shareholding as a percentage of total shares outstanding are found not to play any significant role in determining dividend yield of a firm.

Hedensted and Raaballe (2007) found that the characteristics of dividend payers are: Positive earnings, high ROE (net earnings to book equity), low volatility in ROE, high retained earnings, large firm size, and whether the firm paid out dividends in the previous year. MV/BV, leverage and owner structure play no role in whether a firm pays dividends or not.

Amidu (2007) examined whether dividend policy influences firm performance in Ghana. The results show positive relationships between return on assets, dividend policy, and growth in sales. Surprisingly, study reveals that bigger firms on the GSE perform less with respect to return on assets. The results also reveal negative associations between return on assets and dividend payout ratio, and leverage. The results of the study generally support previous empirical studies. The main value of this study is the identification of how dividend policy affects performance of firms listed on the Ghana Stock exchange.

Anil and Kapoor (2008) attempted to empirically analyze the determinants of dividend payout ratio of Indian Information Technology sector. The paper also focuses on identifying whether various factors available as per literature influence dividend payout ratio in IT sector in India in existing scenario or not. Statistical techniques of correlation and regression have been used to explore the relationship between key variables. Thus, the main theme of this study is to identify the various factors that influence the dividend payout policy decisions of IT firms in India.

Kang (2009) investigated why firms in different countries have established different dividend policies using firm-level data from Australia, France, the U.K., and the U.S. Since the dividend payout ratio (DPR) usually lies between zero and one, the multiple logistic regression models for DPR is constructed on the basis of stylized dividend factors and

new proxy variables on dividend policy. The results of the paper indicate that an explanation of different dividend policies across countries requires not only consideration of various dividend determinants but also their joint impacts. Firms in different countries have statistically different dividend policies, because each country has different country specific factors (i.e., managers' attitudes, investors' preferences, and economic conditions), institutional factors (i.e. tax system and corporate governance system), and firms' financial structures (i.e. firm size, growth rate, and risk level). Further, each country has different dividend determinants and the impact of dividend determinants on its dividend policy varies across the sample countries.

Gupta and Banga (2009) studied on the determinants of corporate dividend policy. A dividend decision of a firm is an outcome of various considerations. These considerations differ across time and industry. The study re-examines various factors that have a bearing on the dividend decision of a firm by using a two-step multivariate procedures. First, factor analysis is performed on the data to extract prominent factors from various variables and then multiple regressions is conducted such factors. Results of factor analysis indicate that leverage, liquidity, profitability, growth and ownership structure are the major factors. Regression on these factors shows leverage and liquidity to be the determinants of the dividend policy for Indian companies.

Tsuji (2010) explored the determinants of the dividend policy of firms in the Japanese electrical appliances industry. First, their empirical investigations reveal that in this industry, corporate managers do not cater to investors' demands in both their dividend initiation and continuation decisions. Instead, in the Japanese electrical appliances industry, the determinants of firms' dividend policies are value-weighted dividend yields, value weighted non payers' size, and value-weighted after-tax earnings-to-total-asset ratios. Moreover, cross-sectionally, this paper finds relations between corporate earnings and firm dividend payments in general. However, on an aggregate time-series basis, dividend payments tend to decrease company earnings in the Japanese electrical appliances industry, and this means rejection of the traditional signaling hypothesis.

Hussainey et.al. (2010) found a positive relationship between dividend yield and stock price changes and a negative relationship between dividend payout ratio and stock price changes. In addition, their results show that firm's growth rate, debt level, size and earnings explain stock price changes. The study supports the fact that dividend policy is relevant in determining share price changes for a sample of firms listed in the London Stock Exchange. The challenge for managements/accountants is to generally improve the quality of the financial statements (i.e. income statement) to avoid producing wrong information which could lead to wrong decisions by investors.

Mehdi Moradi , Mahdi Salehi and Honarmand (2010) studied on Dividend policy which involves extremely important financial decisions which serve as a basis of numerous theories. However, these theories have been developed in different fields, and according to some evidence this policy remains a kind of dilemma in the financial cycles of corporations. Thus they deal with them as one of the ten most crucial problems of corporations. The aim of this study is to elaborate a model which would enable us to examine the effects of dividends in relation to profitability, size, beta rate, the rate of retained earnings, P/E, and debt ratio. In other words, their aim is to find an answer to this question: Do these above mentioned factors affect the dividend policy in Iran or not? This research covers all listed companies in the Tehran Stock Exchange between 2000 and 2008. According to the results of the study there is a direct relationship between dividend and profitability. However, the results also reveal that there is a reverse relationship of these factors with P/E, beta rate and debt ratio. Furthermore, the results of the study show that there is no meaningful relationship between the dividend policy and a company's size and rate of retained earnings.

Kinfe (2011) aimed at investigating the factors determining dividend payout policy in Ethiopia bank industry. This study used a panel dataset of audited financial statement of banks between the years of 2006 and 2010. Seven hypotheses were investigated using OLS regression techniques. The models considered the impact of profitability, liquidity, leverage, firm size, growth, and lagged dividend per share on dividend payout ratios. Empirical results verified that the main characteristics of firm dividend payout policy were that dividend payments related strongly and directly to firm size and lagged dividend per share, but negatively to the liquidity ratio. However, there is no relationship of profitability, leverage, and growth as independent variables with dividend payout. The statistically significant variables may indicate that firms pay dividends with the intention of reducing the agency problem. Managers are reluctant to cut dividend. And, negative relation of liquidity with dividend may indicate inefficient of bank industry. The results of this study have delivered some insights on the determinant factors of dividend in Ethiopia.

Imran (2011) investigated the factors determine the dividend payout decisions in the case of Pakistan's engineering sector by using the data of thirty-six firms listed on Karachi Stock Exchange from the period 1996 to 2008. By employing various panel data techniques like fixed and random effects, the results suggest that the previous dividend per share, earnings per share, profitability, cash flow, sales growth, and size of the firm are the most critical factors determining dividend policy in the engineering sector of Pakistan.

Abassi and et al.(2012) found that the value of net profit, tax, earning per share and gross sales are significant and positively related to the dividend payout. The value of cost

of sales is significant and expenses are insignificant but both values are negatively related to the dividend.

Alzomaia and Al-Khadhiri (2013) studied to examine the factors determining dividend represented by Dividends per share for companies in the Saudi Arabia stock exchanges (TASI). In this study they run a regression model and used a panel data covering the period from of 2004 to 2010 for 105 non- financial firms listed in the stock market. The model investigate the impact of Earnings per share (EPS), Previous Dividends represented by dividends per share for last year , Growth, Debt to Equity (D/E) ratio, Beta & Capital Size on Dividends per Share. The results consistently support that Saudi listed non-financial firms rely on current earnings per share and past dividend per share of the company to set their dividend payments.

2.2 Prior Evidences: Bangladeshi Context

Jahur and Nazneen (2005) identified, in the context of companies operating in Bangladesh, some broad groups of factors affecting dividend decisions. These are: 1)Factor of dividends, yield and payout ratio, 2) Factor of profitability and capital structure,3) Factor of dividends and earnings volatility, 4) Factor of returns, profitability ratios and behaviour of share prices and 5) Factor of firm's profitability, changes in size and composition of firm's share capital size. Thus, they found enough empirical evidence in respect of the fact that corporate financial decision makers impart required considerations pertaining to capital structure decision, expansion and growth of the firms, profitability and earnings volatility and even behaviour of share prices.

Mollah(2008) investigated the behaviour of pay-out policy of Dhaka Stock Exchange (DSE) listed firms preceding and following financial crisis to see whether dividend policy appears as significant measure to protect the general shareholders' interest after the crisis in 1998. OLS models are tested on DSE data preceding (1988-1997) and following financial crisis (1999-2003), on which no other study has been conducted yet. The empirical results fail to trace noticeable improvements in pay-out policy after the market crisis and dividend policy does not appear as a significant measure to protect the shareholders' interest in the emerging market of Bangladesh.

Hossain& Ali (2010) studied on Determinants of Dividend Policy of a Private Commercial Bank in Bangladesh: Which is the Strongest, Profitability, Growth or Size? Bank profitability, growth, and size are measured as potential determinants of dividend policy during the same period of time. Statistical tools, such as multiple regression and correlation, are used to determine factors that have statistically significant impacts on the dividend policy of banks. The paper shows that while profitability appears to be a better

determinant of bank dividend policy than a bank's growth and size, yet it may not be concluded that profitability alone is a strong indicator of bank dividend policy over time in the capital market of Bangladesh.

Huda and Farah (2011) explored the determinants of the dividend policy of firms in the banking industry of Bangladesh. Dividend decision of a bank basically depends on its size, profitability, liquidity and retained earnings. The study is an attempt to find out the key dividend determinant variables and their impact over cash, stock and total payout ratio. Statistical techniques of simple and multiple regressions have been used to explore the relationships between variables. The investigation results show the predictor variables have a significant relationship with stock payout and an apparent relationship with cash payout. Amongst all the independent variables, Net Income turns out to be most influential indicator in elucidating dividend payouts.

Sumaiya (2013) studied to determine factors that have statistically significant impacts on the dividend policy of banks with multiple regression analysis and it is seen that bank profitability, growth, and size are not significant in explaining bank dividend policy in 2006. However, their role in explaining dividend strengthens with time till 2010.

Ahmed and Mukit(2014) identified the impact of various factors determining the firm's dividend paying behavior in the capital market of Bangladesh. They found that in Bangladesh profitability, corporate tax and market to book value ratios are the significant determinants of dividend payout ratio and operating cash flow per share, current ratio and debt to equity ratio are the insignificant determinants of dividend payout ratio.

3. PROBLEM STATEMENT :

Study of dividend payments has a very illustrious history. In 1956, John Lintner has laid the foundation for the modern understanding of dividend policy. According to him, dividends are sticky, tied to long-term sustainable earnings, paid by matured companies and smoothened from year to year. Later, Miller and Modigliani (1961) demonstrate that under the condition of perfect capital market and zero taxes, dividends do not affect the value of the firm (Dividend Irrelevance theory) and as such the shareholders are indifferent as to the payment of dividend and retention of profits. Consequently, managers are not to bother too much about the incidence and quantum of dividend payments. However, Gordon (1962) and Walter (1963), during the same time period, prove dividend to be relevant for the valuation of the firm and hence the shareholders are seen to be not at all indifferent as to the payment of dividend and retention of profits.

From the above literature review, I have taken the factors, which influence on dividend decision. It is observed that the research work in this field is not sufficient in

Bangladesh. This issue motivates us to conduct the study in this field. Previous results also show that dividend rate is more or less explained by a good number of explanatory variables. But the explanatory power of these variables comes down considerably in the matter of their relation with dividend payout or dividend yield. The purpose of the study is to identify the determinants of dividend policy decision and its nature of influence on dividend decision in the capital market of Bangladesh.

4. RESEARCH QUESTIONS :

What are the determinants or factors of dividend decision in Banking Sector of Bangladesh?

5. OBJECTIVES :

- (a) To analyze the determinants of dividend policy in the context banking sector of Bangladesh.
- (b) To suggest a comprehensive dividend policy framework for improving the dividend policies

6. RESEARCH DESIGN :

6.1 Sample :

The study is based on secondary data obtained from published annual reports of sample banks, monthly review of Dhaka stock exchange and website of DSE. The sample includes listed banks of DSE. It is taken 22 banks from banking sectors as sample. The sample period is 20 years from 1994 to 2013 for study.

I have taken banks, which are enlisted before 2010 in DSE as population. From the population (30), it is taken 22 banks as sample through sample size determination techniques.

$$N(n) = \frac{N^2}{1+N(e)^2}$$

n = Sample size, N= Population size, e= level of precision)

6.2 Hypothesis :

H_0 : Dividend payout is not influenced by the factors: Lagged dividend payout ratio, Earnings per share, Cash flow, Sale growth, liquidity, Institutional ownership, Sponsor ownership, Individual ownership, Leverage, Risk, Age, Size, Relative tax, Return on assets, Investment Opportunity, Retained earnings to equity.

6.3. Variables used in study :

Dependent Variable: Dividend Payout Ratio (DPR)

Independent Variables : *Lagged dividend payout ratio, Earnings per share, Cash flow, Sale growth, liquidity, Institutional ownership, Sponsor ownership, Individual ownership, Leverage, Risk, Age, Size, Relative tax, Return on assets, Investment Opportunity, Retained earnings to equity.*

6.4 Model & Methods :

I have identified the dependent and independent variables and have chosen the proxies for the variables depending on the previous empirical evidences in this case. The study has run the pooled data and panel data regression based on the selected proxies. In this approach, more emphasis is given to the previous studies for identifying variables. Michaelsen (1961), Gerber (1988), Holder et al. (1998), and Saxena (1999) adopted this approach in their empirical studies.

This theoretical statement could be framed as:

$$DPR_{it} = \alpha + \hat{\alpha}_1 DPR_{it-1} + \hat{\alpha}_2 EPS_{it} + \hat{\alpha}_3 LEV_{it} + \hat{\alpha}_4 CF_{it} + \hat{\alpha}_5 SG_{it} + \hat{\alpha}_6 SIZE_{it} + \hat{\alpha}_7 LIQ_{it} + \hat{\alpha}_8 OWN(SPONSOR)_{it} + \hat{\alpha}_9 OWN(INST)_{it} + \hat{\alpha}_{10} OWN(IND)_{it} + \hat{\alpha}_{11} RISK_{it} + \hat{\alpha}_{12} AGE_{it} + \hat{\alpha}_{13} RELATAX_{it} + \hat{\alpha}_{14} RE/TE_{it} + \hat{\alpha}_{15} ROA_{it} + \hat{\alpha}_{16} INVEST OPPORT_{it} + u_{it}$$

Where,

Dependent Variable:

Dividend Payout Ratio = Cash dividend per share/Earning per share*100

Independent Variables:

DPR_{t-1} = Lagged dividend payout ratio

EPS (Earnings per share) = Net Profit/Total Shares

CF (Cash flow) = Net cash flow/ total number of share

SG (Sale growth) = (Sales_t-Sales_{t-1})/ Sales_{t-1} *100

SIZE (Size) = Log of Total Assets

LIQ(Liquidity) = Quick Ratio ((current assets-inventory)/current liabilities)

OWNIST (Institutional ownership) = No. of Share held by institution/total no. of share

OWNSPONSOR(Sponsor ownership) = No. of share held by sponsor/ total no. of shares

OWNIND(Individual ownership)= No. of share held by individual/ total no. of shares

LEV(Leverage)= Total liabilities/ total assets

Risk= standard deviation of daily stock return over 365 days (Volatility)

RELATAX (Relative tax) = Capital gain tax rate/ Dividend tax rate

ROA (Return on assets) = Net income/ Total asset

INVESTOPP (Investment Opportunity) = (Net fixed asset_t-net fixed asset_{t-1})/ net fixed asset_{t-1} *100

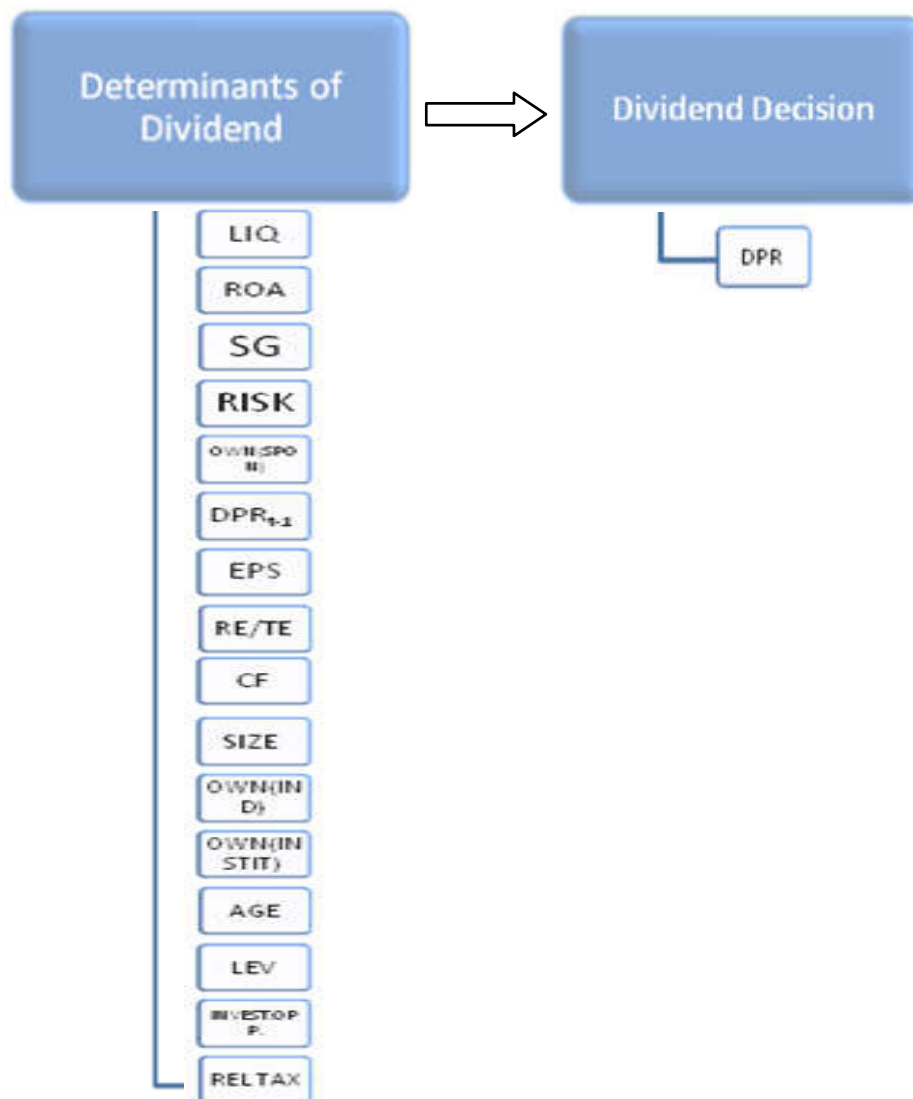
RE/TE (Retained earnings to total equity ratio)= (Retained earnings/ total shareholders' equity)*100

Firm age (AGE)= Natural log of No. of years of listing on the stock exchange

METHODS :

Descriptive statistics and panel data analysis are used to analyze the results.

6.4 Conceptual Framework :



7. PANEL DATA ANALYSIS : FINANCIAL SECTOR :

The Hausman test

Table : 1
Hausman test

hausman fixed random				
	---- Coefficients ----			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fixed	random	Difference	S.E.
-----+-----				
LaggedDPR	.047470	.1810952	-.1336250	.0260035
EPS	-.0098632	-.0137096	.0038465	.0187579
Ownspons	.0108198	-.0599922	.070812	.2991853
Ownindivid~1	.0977698	-.0156527	.1134225	.2742136
Risk	-.0812109	-.0435148	-.0376961	.0846373
CF	-.0071415	-.0086699	.0015284	.0032883
SG	-.0043674	-.0062192	.0018519	.0085202
Size	3.090687	8.580607	-5.48992	7.388649
Lev	1.502218	1.703926	-.2017074	.4084503
RETE	-.1923066	-.4311597	.2388531	.2540661
ROA	.9413639	-.0917882	1.033152	1.25011
Investment~y	-.0152238	-.0155631	.0003393	.009865
Age	8.706042	-.0326057	8.738648	9.911322

b = consistent under Ho and Ha; obtained from xtreg				
B = inconsistent under Ha, efficient under Ho; obtained from xtreg				
Test: Ho: difference in coefficients not systematic				
chi2(13) = (b-B)'[(V_b-V_B)^(-1)](b-B)				
= 10.24				
Prob>chi2 = 0.6744				

From the table 1, It is observed that the probability is 0.6744(more than 0.05), so, I have accepted the null hypothesis that individual effect are random and that RE provides consistent estimates.

RANDOM EFFECT (RE) :

Linear Random effects models are estimated via Generalized Least Squares (GLS). If there are no omitted variables (or if the omitted variables are uncorrelated with the variables that are in the model) then a random effects model is preferable to fixed effects because (a) the effects of time-invariant variables can be estimated, rather than just controlled for, and (b) standard errors of estimates tend to be smaller. Random effects assume that the entity's error term is not correlated with the predictors which allows for time-invariant variables to play a role as explanatory variables.

In random-effects I need to specify those individual characteristics that may or may not influence the predictor variables. The problem with this is that some variables may not be available therefore leading to omitted variable bias in the model.

Table : 2
Random Effect Model

Random-effects GLS regression	Number of obs	=	219
Group variable: Company	Number of groups	=	21
R-sq: within = 0.5920	Obs per group: min =		4
between = 0.4424	avg =		10.4
overall = 0.5603	max =		19
	Wald chi2(13)	=	21.12
corr(u_i, X) = 0 (assumed)	Prob> chi2	=	0.042

DPR	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
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EPS	-.0137096	.0155353	-0.88	0.378	-.0441583	.016739
Ownspons	-.0599922	.3300933	-0.18	0.856	-.7069631	.5869787
Owningindividual	-.0156527	.3093882	-0.05	0.960	-.6220424	.590737
Risk	-.0435148	.3024164	-0.14	0.86	-.6362401	.5492104
CF	-.0086699	.0095989	-0.90	0.366	-.0274834	.0101436
SG	-.0062192	.0277021	-0.22	0.822	-.0605143	.0480758
Size	8.580607	4.271738	2.63	0.021	-1.75181	
18.91302						
Lev	1.703926	.725527	2.35	0.019	.281919	
3.125933						
RETE	-.4311597	.3798163	-1.14	0.256	-1.175586	.3132665
ROA	-.0917882	1.154157	-0.08	0.937	-2.353895	2.170319
Investmentopportunity	-.0155631	.0298948	-0.52	0.603	-.0741558	
.0430296						
Age	-.0326057	5.714706	-0.01	0.995	-11.23322	11.16801
_cons	-87.39509	66.27322	-1.32	0.187	-217.2882	42.49804
-----+						
sigma_u	10.597082					
sigma_e	46.247752					
rho	.49884730	(fraction of variance due to u_i)				

modifiedBhargava et al. Durbin-Watson = 1.9508						
Baltagi-Wu LBI = 2.0119057						

COEFFICIENT OF MULTIPLE DETERMINATION (R²):

The summary of the model is shown in table 2. The R² shows the amount of variance of DPR of explained by Lagged DPR, EPS, SIZE, AGE, INVT.OPP, LEV, OWNSPONS, OWNINDIVIDUAL, RISK, CF, SG, RETE, and ROA. The value of R² of the model is 0.592(within) which indicates that the independent variables explain 59.2% of the dependent variable (DPR). This represents satisfactory result for interpreting the model.

SIGNIFICANT OF THE MODEL: WALD CHI -SQUARE TEST :

In table 2, The Wald Chi-square value represents the significance of the model. The wald chi-square value of model is 21.12(p=0.042) which is statistically significant. It is interpreted that the model significantly improves the ability to predict the outcome variable (dependent variable). The Wald chi-square provides significant explanation of variation in the DPR of financial sector.

SIGNIFICANT OF THE VARIABLES/MODEL PARAMETERS:

The result of model parameter is shown in table 2. In the model, the Coefficient values of Lagged DPR, Size, and leverage are 0.181, 8.58, and 1.70 respectively. It infers that the Lagged DPR, Size, Leverage have positive impact on the DPR.

The t test associated with coefficient value is significant then that predictor is making a significant contribution to the model (if the value is less than 0.05). The smaller the value of significance, p value (the larger the value of t) is the greater the contribution of that predictor (independent variable). From the table 2, it is observed that the t value of Lagged DPR, Size, Leverage, are 2.51(p=.035), 2.63(p=.021), 2.35(p=.019), respectively which are significant at 5 percent level of significant. The p values of the independent variables Lagged DPR, Size, leverage, are less than .05 which also indicates the significance of the variables. So, finally it is concluded that among the independent variables Lagged DPR, Size, leverage have positive impact on the DPR.

7. SUMMARY OF FINDINGS :

Model: $DPR_{it} = -87.39 + 0.181DPR_{it-1} - 0.13EPS_{it} + 1.7LEV_{it} - 0.008CF_{it} - 0.0062SG_{it} + 8.58SIZE_{it} - 0.059OWN(SPONSOR)_{it} - 0.015OWN(IND)_{it} - 0.043RISK_{it} - 0.032AGE_{it} - 0.431RE/TE_{it} - 0.091ROA_{it} - 0.019INVEST OPPORT_{it} + u_{it}$

DPR_{t-1} (Lagged dividend payout ratio):

This result indicates that the lagged dividend payout ratio is statistically positively significant. The higher coefficients and associated t-statistics of DPR_{t-1} in the research imply the greater importance of past dividend in deciding the dividend payment. For taking dividend decision the previous year dividend is considered.

This result is similar to various studies. According to Pandey (2001), past dividend paid by the companies is highly significant to the current dividend payout ratios for all industries in the Kuala Lumpur Stock Exchange (KLSE). Previous year's dividend payment have been regarded as the primary indicator of a firm's capacity to pay dividends (Lintner, 1956), because it is assumed that the management will maintain a stable dividend policy. Ahmed and Javid (2009) examined the dynamics and determinants of dividend payout policy of 320 non-financial firms.

SIZE (Size) :

The coefficient of size is positively significant. The positive relationship between dividend payout policy and firm size is also supported by a growing number of other studies (Eddy and Seifert, 1988; Jensen et al., 1992; Redding, 1997; Holder et al., 1998; Fama and French, 2000; Manos, 2002; Mollah 2002; Travlos et al., 2002; Al-Malkawi, 2007).

As mentioned previously, larger firms pay a higher cash dividend for several reasons. First, large firms face high agency costs as a result of ownership dispersion, increased complexity, and the inability of shareholders to monitor firm activity closely. Hence, such firms pay a larger dividend to reduce agency costs (Jensen and Meckling, 1976; Lloyd et al., 1985). Second, as a result of the weak control in monitoring management in large firms, a large dividend payout increases the need for external financing, which, in turn, leads to the increased monitoring of large firms by creditors. This may be a quality that is attractive to the shareholders (Sawicki, 2005). Another explanation for this positive association might be related to large firms' easier access to capital markets, and their ability to raise funds with lower issuance costs for external financing. Consequently, large firms are better able than small firms to distribute higher dividends to shareholders (Holder et al., 1998).

LEV (Leverage) :

The coefficient of leverage is positively significant. Because, the, firms with high leverage ratios have high transaction costs, and are in a weak position to pay higher dividends to avoid the cost of external financing. In some industries payout and leverage ratios are positively related while in other industries the relationship is negative. Mollah et al. (2001) examined an emerging market and found a direct relationship between financial leverage and debt-burden level that increases transaction costs.

8. RECOMMENDATIONS :

Panel Data Analysis reveals that the Coefficient values of Lagged DPR, Size, and leverage are 0.181, 8.58, and 1.70 respectively. It infers that the Lagged DPR, Size, Leverage have positive impact on the DPR. The companies should follow continuous dividend policy practices with a view to boosting investor morale as well as keeping stock market as safe harbor for investment and financing. The dividend decision makers should consider the lagged DPR, Leverage, and size of the Bank for giving dividend to the shareholders. The decision maker, investors and other stakeholders should follow these findings.

9. CONCLUSION :

The purpose of the study is to identify the determinants of dividend decision of listed banks in DSE. . It infers that the Lagged DPR, Size, Leverage have positive impact on the DPR. These findings will help the investors, dividend decision maker and other related parties in the capital market of Bangladesh. It is very difficult to collect the data of large periods. The future researcher can study on other listed and non listed financial sectors.

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